МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
Державний Університет Інформаційно-Комунікаційних технологій
Кафедра Англійської мови

А.А. Ніколаєва, О.С. Донцова, О.А. Петров

Навчальний посібник
Workbook for the Coursebook
English for Telecoms and IT

Англійська мова професійного спрямування.
Телекомунікації та інформаційні технології.

Електронне мережне навчальне видання
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Електронне мережне навчальне видання

АНГЛІЙСЬКА МОВА ПРОФЕСІЙНОГО СПРЯМУВАННЯ. ТЕЛЕКОМУНІКАЦІЇ ТА ІНФОРМАЦІЙНІ ТЕХНОЛОГІЇ.

Укладачі:	**А.А. Ніколаєва,** старший викладач кафедри Англійської мови Державного університету інофрмаційно-комунікаційних технологій. О.С. Донцова, старший викладач кафедри Англійської мови Державного університету інофрмаційно-комунікаційних технологій. О.А.Петров, старший викладач кафедри Англійської мови Державного університету інофрмаційно-комунікаційних технологій, (м. Київ).
Відповідальний редактор	
Рецензенти	А.С. Шевченко, кандидат філологічних наук, доцент кафедри романської філології Київського національного лінгвістичного університету.

Навчальний посібник призначений для навчання англійської мови студентів ІТ спеціальностей закладів вищої освіти.
Мета посібника – розширити коло актуальних тем, та урізноманітнити комплекс вправ основного курсу англійської мови, які складають основу розвитку навичок професійноорієнтованої комунікації.
Навчальний посібник для практичних занять містить 8 розділів, у кожному з яких подано вправи на закріплення лексичного матеріалу, граматичного матеріалу професійно орієнтованої тематики ІТ галузі. Автентичні тексти представляють фаховий, науковий та пізнавальний інтерес для студентів. Усі розділи включають блоки, що орієнтовані на формування професійно орієнтованих англомовних компетентностей у читанні, аудіюванні, говорінні та письмі.
У додатку є список посилань.

Contents

ПЕРЕДМОВА

Основною метою навчання англійської мови студентів ІТ спеціальностей є володіння професійною термінологією в обсязі, необхідному для ефективного спілкування, а також для отримання англомовної інформації в контексті глобалізації та діджиталізації. Курс англійської мови для студентів Державного університету інформаційно-комунікаційних технологій розрахований на поступове ґрунтовне оволодіння англійською мовою за фаховим спрямуванням за принципом «від простого до складного», під час якого опановують необхідні навички аудіювання, читання, говоріння та письма.

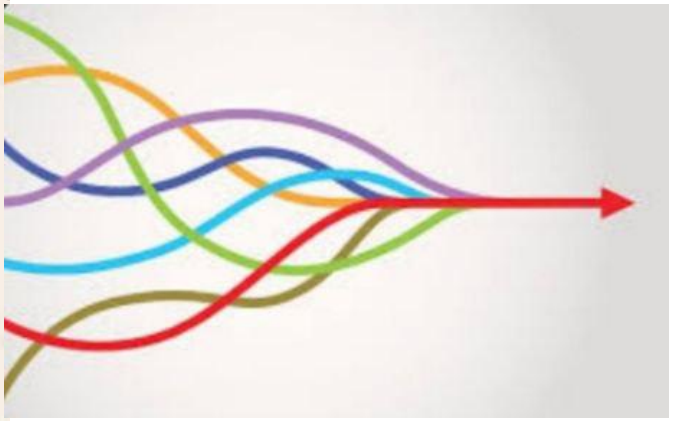
Навчальний посібник Workbook for the Coursebook English for Telecoms and IT Англійська мова професійного спрямування Телекомунікації та інформаційні технології складено відповідно до вимог Робочої Програми навчальної дисципліни «Іноземна мова (англійська)» для студентів ІТ спеціальностей І Бакалаврського рівня і охоплює розширений діапазон ІТ термінології та широкий спектр актуальних тем, що пов'язані з навчанням та майбутньою професією.

Метою посібника є формування професійно орієнтованих компетентностей в аудіюванні, говорінні, читанні та письмі, підвищення ефективності організації навчання англійської мови в аудиторний та поза аудиторний час, а також поглиблення знань професійно творчого та критичного мислення у ІТ майбутніх фахівців.

Навчальний посібник містить 8 розділів, які охоплюють професійно орієнтовану тематику ІТ галузі. Автентичні тексти професійно орієнтованої тематики представляють фаховий, науковий та пізнавальний інтерес для студентів. Усі розділи включають блоки, що орієнтовані на формування професійно орієнтованих англомовних компетентностей у читанні, аудіюванні, говорінні та письмі.

Різноманітність та достатня кількість вправ дозволяють викладачу ефективно організувати аудиторну і поза аудиторну роботу студентів. Виконуючи вправи, студенти вчаться застосовувати різноманітні навчальні і комунікативні стратегії, що дозволяє їм бути гнучкими, організованими та швидко приймати рішення.

UNIT 1 CONVERGENCE



Exercise1

Vocabulary

Match each word or phrase in column A with a meaning in column B.

Column A	**Column B**
1. honest	a) changing the traditional way that an industry operates, especially in a new and effective way;
2. technology fair	b) the set of necessary tools, clothing, for a particular purpose;
3. disruptive	c) the income that a government or company receives regularly;
4. advertising	d) telling the truth or able to be trusted, not able to cheat or lie;
5. revenue	e) to engage in a contest or rivalry in order to win or achieve a goal.
6. equipment	f) an event that showcases the latest advancements, products and services in technology;
7. compete	g) a business that makes things known generally in public in order to sell them;

Exercise2

Vocabulary

Use a word or phrase from the box in each gap to complete the text.

usage online overtake use predict literate industrial technologies implant

Technology is changing so fast that it is impossible to ……..(1)
What is going to happen even as soon as next year. More and more representatives of generation 'X' are becoming computer (2)…….. and spending more of our lives (3)……. Artificial Intelligence (4)……is still rising, and the number of people who (5)……. Chat GPT will soon (6)…… the number of those who don't. (7) …….. technology is really exciting. Scientists are developing new (8) …….. every day.
A great number of people might get an (9) …… one day. In fifty year's time we are going to be living with (10) …….

Exercise3

Vocabulary

Fill in the blanks with the appropriate words related to Convergence in IT and Telecoms.

1. Convergence refers to the merging of _____ and _____technologies.
2. With convergence, traditional _____networks an_____ technologies integrate into a single platform.
3. This integration allows for seamless _____ and _____ of information across different communication channels.
4. Convergence has revolutionized the way we _____ and _____data, making communication more efficient.
5. With the convergence of _____ networks and _____ technologies, we can now access a wide range of services on a single device.
6. The convergence of IT and Telecoms has opened up new possibilities for _____ and _____ in the digital age.

7. The emergence of Voice over IP (VoIP) is an example of how convergence has transformed _____telecommunications.

8. The future of convergence in IT and Telecoms holds promises of even greater _____and _____.

9. Our university will install iris _____ in the library.

10. We are more likely to use _____ payment systems instead of cash.

Exercise 4

Grammar

Fill in the gaps with the appropriate form of the verb.

1. Most IT students ____ (study) programming languages.
2. The professor ____ (teach) computer networks.
3. The university ____ (offer) various IT courses.
4. Our class ____ (start) at 9 AM every day.
5. Students often ____ (work) in groups on coding projects.
6. The IT department ____ (organize) workshops and seminars regularly.
7. Our college ____ (provide) state-of-the-art computer facilities.
8. Students usually ____ (use) laptops during lectures.
9. The IT curriculum ____ (include) both theoretical and practical subjects.
10. The university library ____ (have) a vast collection of IT-related books.

Exercise 5

Grammar

5.1 Fill in the gaps with the appropriate form of the verb.

1. Our IT department _____ (develop) a new software platform for convergence this month.
2. Nowadays telecom companies _____ (invest) heavily in convergent technologies.

3. Students at our university _____ (study) the latest trends in IT convergence .

4. Research teams _____ (conduct) experiments to test the performance of converged networks at the moment.

5. He _____ (not cope) well at university. I'm worried about him.

6. Your cat is fat. ____ he ____ (eat) too much recently?

7. How long _____ she _____ (write) short stories?

8. I _____ (run) marathons since my twentieth birthday.

9. He _____ (live) here for six months.

10. Many corporations _____ (turn) their attention to alternative forms of energy.

5.2 Complete the sentences with the Present Simple, Present Perfect or Present Continuous form of a verb from the brackets:

1.The company 1)_____ (develop) a new converged communication system.

2.We 2) _____ (study) the impact of convergence on business operations.

3.We 3) _____ experience the impact of convergence on business operations.

4. IT professionals often 4)_____ (maintain) network security protocols.

5. Currently, the telecom industry 5) _____(go) to highlight ongoing advancements in 5G technology.

6. Over the past decade, there 6) _____ (be) a significant expansion in cloud computing services.

7. Engineers at the forefront of convergence technologies frequently7) _____ (discuss) the integration of diverse communication platforms.

8. The Internet of Things (IoT) 8)_____ (transform) how devices interact, emphasizing the cumulative impact over time.

9. In contemporary IT discussions, experts commonly 9) _____(explain) fundamental concepts, such as coding syntax.

10. As telecom networks evolve, professionals 10) _____ (underscore) ongoing efforts in deploying high-speed connectivity solutions.

11. Companies in the IT sector _____ frequently _____ (convey) their achievements in research and development.

12. The standard procedures in software development 12) _____ (be) debugging code.

13. The dynamic nature of cybersecurity measures continually 13)_____ (adapt) to emerging threats in the IT landscape.

Exercise 6

Grammar

6.1 Read the answers, then write the questions.

1 **What do you do?**

I'm a software engineer.

2 _____

The employees are working from home. They aren't commuting..

3 _____

They should adapt quickly or die.

4 _____

The office usually starts work at 8.00 a.m.

5 _____

Yes, we have to survive on our advertising revenue!

6 _____

She goes to a technology fair every month.

6.2 Complete the conversation with the correct form of the verbs in the box.

say do speak have tell turn give work create ~~talk~~

A I'm (1) **talking** to Anna Grey today. She is in charge of a big company. Anna, do you (2) _____ meetings every day?

B No, I don't. But I (3) _____ instructions every morning.

A And how many languages do you (4) _____ ?

B English and a bit of German.

A Who (5) _____ the planning in your company, Anna?

B Me! I love planning – Many entrepreneurs deal with new technology nowadays.

A Do you (6) _____ with manufacturers ?

B Yes – sometimes. Although it's risky to (7) _____ a real threat to the big corporations .

A (8) _____ me something about modern forms of energy?

B Sorry, what did you (9) _____ ?

A What kind of alternative forms of energy 10) _____ you _____ your attention to?

B It's a really good question…..!

Exercise 7

Reading

7.1 You are going to read the text devoted to Employment patterns in the modern world. For questions 1-10 complete the following sentences by filling in the blanks with the appropriate words or phrases.

Employment patterns change , as many jobs are automated and new jobs come into existence to serve new technologies. Some organisations follow the virtual company model, where a small core of key employees is supported by contractors on a project by project basis, bringing together the right people regardless of where they live. The desks they use have multiple flat screens, voice interfaces, computer programs with human-like faces and personalities, full-screen videoconferencing and sound positioning. All this is without any communication cables since the whole system uses high capacity infrared links. The many short-term contractors may not have enough space in their homes for an office and may go instead to a new breed of local telework centre.

Of course, workers are fully mobile, and we could see some people abandon offices completely, roaming the world and staying in touch via satellite systems. Even in trains and planes there may be infrared distribution to each seat to guarantee high bandwidth communication. One tool they may have in a few years is effectively a communicator badge. This will give them a voice link to computers across the network, perhaps on their office desk. Using this voice link, they can access their files and email and carry out most computer-based work. Their earphones will allow voice synthesizers to read out their mail, and glasses with a projection system built into the arms and reflectors on the lenses will allow a head-up display of visual information. Perhaps by 2010, these glasses could be replaced be an active contact lens that writes pictures directly onto the retina using tiny lasers.

1. In the technology era, traditional _____ patterns have been disrupted by advancements in automation and artificial intelligence.

2. The rise of _____ jobs, such as software development and data analysis, has been a prominent feature of the technology era.

3. Remote work and _____ employment opportunities have gained popularity, providing flexibility for employees.

4. The demand for _____ skills, such as coding and digital marketing, has increased significantly in the technology era.

5. The gig economy, characterized by short-term contracts and freelance work, has become more prevalent in the technology _____.

6. The _____ of job automation has led to concerns about the future of certain industries and the displacement of workers.

7. Lifelong _____ has become essential in the technology era, as skills quickly become obsolete and new ones emerge.

8. Businesses are increasingly adopting _____ work options, enabling employees to collaborate and communicate virtually.

9. The technology era has created both _____ and _____ opportunities for workers, depending on their adaptability and skills.

10. As technology continues to advance, it is crucial for individuals to continually _____ and update their skill sets to remain relevant in the job market

7.2 You are going to read the text related to Convergence. For questions 1-10 find the best answers.

Convergence refers to the coming together or merging of different technologies, industries, or forms of media into a single integrated platform or system. It involves the integration of previously separate technologies, functionalities, or industries, resulting in new capabilities, products, or services.

In the context of technology, convergence often refers to the combination of various functions or devices into a single multifunctional device. For example, smartphones are a convergence of mobile phones, cameras, music players, and computers, offering a wide range of capabilities in a single device.

Convergence can also occur in industries where traditionally separate sectors start to overlap or collaborate. This can lead to the development of new business models, partnerships, and products. For example, the convergence of technology and healthcare has led to the rise of digital health solutions and telemedicine.

In the media and entertainment industry, convergence involves the integration of different forms of media, such as film, television, music, and gaming, through digital platforms like streaming services. This allows consumers to access a wide range of content on multiple devices.

Overall, convergence is driven by technological advancements, changing consumer preferences, and the need for more efficient and integrated solutions. It has the potential to reshape industries, transform user experiences, and create new opportunities for innovation.

7.3 Answer the following questions:

1. What is convergence in the context of technology?
2. How does convergence impact the functionality of devices?
3. Can you provide an example of convergence in the media industry?
4. What are the benefits of convergence in different industries?
5. Are there any challenges or drawbacks associated with convergence?
6. How does convergence affect business models and market dynamics?
7. What role does innovation play in driving convergence?
8. How does convergence impact user experience and convenience?
9. Is convergence a continuous process or does it reach a point of saturation?
10. How does convergence enhance or change the way we interact with technology?

Exercise 8

Speaking

8.1 Answer the questions:

- What technologies are telecom companies investing in?
- What impact is convergence having on the job market for IT professionals?

- Can you discuss a case study or example of successful convergence in the media industry and its impact on audience engagement and revenue generation?

- How can university students prepare for careers in an increasingly converged media environment, and what skills are essential for success in this field?

8.2 Role-play

1.Have you ever had a job? What qualities do you need for it?

2. You are going to find out and give information about jobs. Don't look into each other's role cards. Student A has to answer Student B's questions and provide information, and Student B has to ask for the information that is missing. Role-play the situation and give the feedback.

Role card 1A

You are a Human Resources Manager for a company that produces new technology for the computer industry. Read about these three jobs that are available at your company. Then answer your partner's questions.

Trainer

The successful candidate will be responsible for training new staff in company practices, giving workshops and writing a training program. He/She will be decisive, a good communicator and a good leader.

Inventor

We are looking for an inventor, who will work as part of a team to create new technology for the computer industry, and help develop existing technology. The ideal person must be able to think outside the box and hard-working.

Sales representative

We need someone to work in our sales team, finding new customers and selling new technology to our existing customers. He/She must be competitive, a real risk-taker and ambitious.

Role card 1B

You are interested in working for a company which produces new technology for the computer industry. You know that these three jobs are available, and you want to find out more information. Ask your partner – the Human Resources Manager – questions to get the missing information. Then decide which job you will apply for.

Trainer

Main duties:

Personal qualities needed:

Inventor

Main duties:

Personal qualities needed:

Sales representative

Main duties:

Personal qualities needed:

Exercise 9

Writing

Write an answer to one of the questions:

1.How would you define the concept of convergence in the context of media and technology? What are the key technological advancements that have contributed to the convergence of media and communication platforms? How has convergence influenced the way we consume and interact with media content?

2. In what ways has convergence transformed the business models and strategies of IT organizations? What are the potential future trends in convergence, and how might they shape the IT landscape in the coming years?

Write your answer in 120-180 words in an appropriate style. You must use grammatically correct sentences with accurate spelling and punctuation in a formal style.

Exercise 10

TECK TUTORIAL

Be ready to reproduce the lexical minimum related to CONVERGENCE:

1. Convergence: *The merging or integration of different technologies, media, or systems into a unified or interconnected whole.*

2. Integration: *The process of combining or incorporating different components or elements into a cohesive system.*

3. Connectivity: *The state or ability of devices, systems, or networks to connect and communicate with each other.*

4. Interoperability: *The capability of different systems or devices to exchange and interpret data or information smoothly and effectively.*

5. Digitalization: *The conversion of analog or physical information into a digital form, enabling easier storage, processing, and transmission.*

6. Cloud computing: *The delivery of computing services, including storage, processing power, and software, over the internet, rather than relying on local servers or personal devices.*

7. Internet of Things (IoT): *The network of interconnected physical devices, vehicles, appliances, and other objects embedded with sensors, software, and connectivity, enabling them to exchange and collect data.*

8. Virtual reality (VR): *An artificial, computer-generated simulation or environment that immerses a user in a virtual, interactive experience.*

9. Augmented reality (AR): *The overlaying of digital information or virtual elements onto the real-world environment, enhancing the user's perception and interaction with their surroundings.*

10. Big data: *Large and complex datasets that cannot be easily managed or analyzed using traditional data processing tools and techniques, often requiring advanced algorithms and technologies to extract meaningful insights.*

11. Disruptive: *Refers to a significant and often groundbreaking change or innovation that alters established patterns, processes, or industries, typically resulting in a transformative impact.*

12. Biotechnology: *The application of biological processes, organisms, or systems to develop and create products or technologies for various purposes, including healthcare, agriculture, and industry.*

13. Nanotechnology: *Involves the manipulation and control of materials at the nanoscale (typically 1 to 100 nanometers), enabling the development of new materials and devices with unique properties and applications.*

14. Cognitive Technology: Encompasses technologies designed to mimic or enhance human cognitive functions, such as learning, problem-solving, and decision-making. This can include artificial intelligence, machine learning, and advanced data processing.

15. Retaining: In the context of your query, this term is not specific. If you can provide more details or context, I can offer a more accurate definition.

16.Surveillance: The systematic monitoring of activities, behaviors, or information for the purpose of control, management, or security.

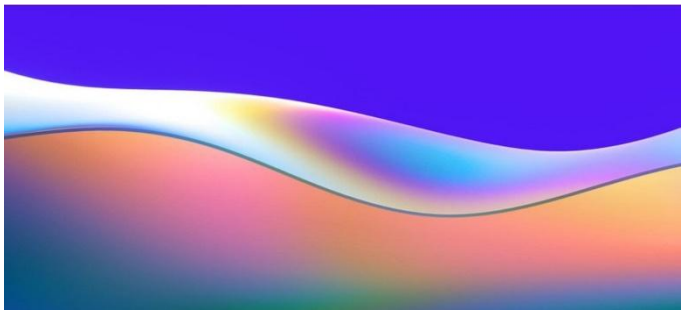
17.Virtual Reality Escapism: A form of entertainment or recreation that involves immersing individuals in a simulated environment, allowing them to escape from the real world and experience a virtual one.

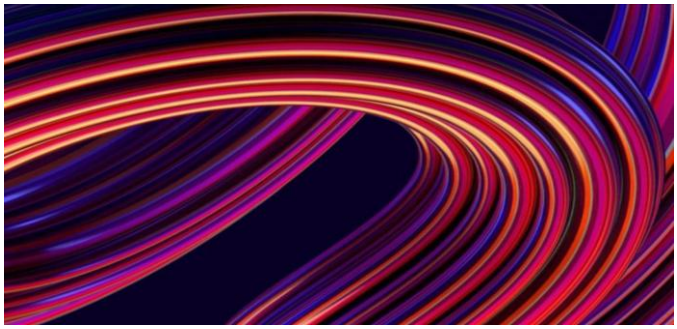
18. Connectivity: The state of being connected or interconnected, often referring to the ability of devices, systems, or people to communicate and share data with each other.

19.Thought Recognition: The technology or process of identifying and interpreting human thoughts or mental activities, often through the use of neuroscientific or neurotechnological methods.

20.Intelligence: In the context of your query, it could refer to artificial intelligence (AI), the simulation of human intelligence in machines, enabling them to perform tasks that typically require human intelligence, such as learning, reasoning, and problem-solving.

UNIT 2 MOBILITY





Exercise 1

Vocabulary

Match each word or phrase in column A with their meaning in column B.

Column A	**Column B**
1. predict	a) the ability of a computer to recognize neural patterns in the brain as a form of input ;
2. enormous	b) to sell goods to the public in shops, on the internet etc. usually in small amounts;
3. manufacture	c) to say that an event or action will happen in the future;
4. functionality	d) able to work as intended or able to succeed;
5. available	e) able to be bought or used;
6. human	f) the process of producing goods;
7. thought recognition	g) a person;
8. viable	h) extremely large;
9. manufacture	i) the tasks that a computer, software program, or piece of electronic equipment is able to do;
10. retail	j) extremely large;

Exercise 2

Vocabulary

Complete the sentences with the following words:

mobile	**system**	**software**	**data**	**cloud**
geographic	**short**	**employees**	**wireless**	**device**

1. Mobile _____is a portable garget like smartphones or tablets.
2. _____network is the technology that allows devices to connect without physical cables.
3. BYOD (Bring Your Own Device) is the Policy allowing _____ to use personal devices for work.
4. Mobile App is the _____ designed for smartphones or tablets to perform specific tasks.
5. Mobile Operating _____ is the software that runs on mobile devices, e.g., Android, iOS.
6. Bluetooth is the wireless technology for exchanging data between devices over _____ distances.
7. Geolocation is the Technology identifying the real-world _____ location of a device.
8. Mobile Security is aimed to protect mobile devices and _____ from threats.
9. Cloud Mobility is the Ability to access data and applications from anywhere via the _____ .
10. Mobile Development is the Process of creating software for _____ devices.

Exercise 3

Reading

3.1 You are going to read the text *The Evolving Landscape of Mobility in IT and Telecommunications*

In recent years, the intersection of Information Technology (IT) and telecommunications has witnessed a paradigm shift, primarily driven by the rapid advancements in mobility. This transformation is reshaping the way businesses operate, individuals communicate,

and technology evolves. Here, we explore the multifaceted impact of mobility on IT and telecommunications.

1. Mobile Connectivity as a Catalyst

Mobile devices have become ubiquitous, acting as a catalyst for seamless connectivity. The rise of 5G technology further amplifies this trend, providing faster data speeds and lower latency, thus enhancing the overall efficiency of IT and telecommunications networks.

2. Workforce Mobility and Remote Collaboration

The concept of the traditional office is evolving with the increasing prevalence of remote work. Mobility in IT facilitates remote access to critical systems, ensuring that employees can collaborate effectively from anywhere, leading to enhanced productivity and flexibility.

3. Internet of Things (IoT) Integration

The proliferation of mobile devices has paved the way for extensive IoT integration. From smart homes to industrial applications, the synergy between IT and telecommunications allows for the seamless exchange of data, creating an interconnected ecosystem.

4. Security Challenges and Solutions

As mobility expands, so do security concerns. The dynamic nature of mobile networks poses challenges in ensuring data privacy and protecting against cyber threats. IT and telecommunications professionals are now tasked with developing robust security measures to safeguard sensitive information.

5. Edge Computing in a Mobile World

The decentralization of computing power with edge computing is gaining prominence. Mobile networks play a crucial role in enabling edge computing, allowing for faster processing of data closer to the source. This has implications for latency-sensitive applications and real-time decision-making.

6. Augmented Reality (AR) and Virtual Reality (VR)

Mobility enhances the potential of AR and VR technologies. Telecommunications networks support the delivery of immersive experiences, impacting industries ranging from gaming and entertainment to healthcare and education.

7. Eco-Friendly Solutions

The environmental impact of IT and telecommunications is under scrutiny. Mobility solutions contribute to eco-friendly practices by enabling remote work, reducing the need for physical infrastructure, and optimizing resource utilization.

8. Regulatory Landscape and Privacy Concerns

The evolving landscape of mobility in IT and telecommunications is accompanied by regulatory challenges. Striking a balance between innovation and privacy protection remains a key focus, influencing the development of policies and standards.

In conclusion, the fusion of mobility with IT and telecommunications is shaping a dynamic and interconnected future. As technologies continue to evolve, businesses and individuals must navigate the challenges and opportunities presented by this transformative synergy to stay competitive in the digital era.

In pairs, discuss the questions:

1. How does the rise of 5G technology contribute to the efficiency of IT and telecommunications networks?
2. How is workforce mobility influencing the traditional concept of the office, and what benefits does it bring to collaboration?
3. What role does the synergy between IT and telecommunications play in the integration of Internet of Things (IoT) across various domains?
4. What security challenges arise with the expansion of mobility, and how are IT and telecommunications professionals addressing them?
5. How does edge computing benefit from the decentralization of computing power in a mobile world, and what applications does it impact?
6. In what ways does mobility enhance the potential of Augmented Reality (AR) and Virtual Reality (VR) technologies across different industries?

7. How do mobility solutions contribute to eco-friendly practices in IT and telecommunications, and what specific benefits are highlighted?
8. What are the regulatory challenges associated with the evolving landscape of mobility in IT and telecommunications?
9. How does the text suggest businesses and individuals should navigate the challenges and opportunities presented by the fusion of mobility with IT and telecommunications?

3.2 Read the article and be ready to retell the main points related to Geo-marketing

Geo-marketing involves targeting potential customers based on their geographic location. Geotargeting, a key aspect of geo-marketing, uses location data to customize marketing efforts. Its significance lies in its ability to deliver personalized, relevant content to specific demographics, boosting engagement and conversion rates.
Benefits:
1. Targeted Advertising: Geotargeting allows tailored advertisements to reach audiences in specific regions, increasing relevance and effectiveness.
2. Enhanced Customer Experience: Personalized content based on location enhances the customer experience, increasing satisfaction and loyalty.
3. Cost-Efficiency: By focusing efforts on specific areas, marketing budgets are used more efficiently, avoiding unnecessary spending.
4. Insightful Analytics: Geo-data provides valuable insights into consumer behavior, helping refine marketing strategies.

Challenges:
1. Privacy Concerns: Gathering location data raises privacy issues, requiring careful handling and compliance with regulations like GDPR.
2. Data Accuracy: Ensuring accurate location data can be challenging, impacting the effectiveness of geotargeting campaigns.
3. Technical Complexities: Implementing geotargeting requires sophisticated technology and expertise, posing challenges for some businesses.

4. Dynamic Nature of Location: People move, areas change, making it crucial to continually update and adapt geo-marketing strategies.

Successfully navigating these challenges while leveraging the benefits can lead to highly effective marketing campaigns tailored to specific geographical audiences.

Exercise 4

Vocabulary

Location Based Services

Match the words on the left with their corresponding definitions on the right:

1. E-commerce	a. The process of making a purchase using a mobile device.
2. Digital wallet	b. Online shopping conducted via mobile devices or apps.
3. Mobile payment	c. Software applications for use on smartphones or tablets.
4. Mobile apps	d. A virtual storage for credit card information.
5. M-commerce	e. The buying and selling of goods and services over the internet.

Exercise 5

Fill in the blanks with the appropriate words from the word bank below:

Word bank:

- geolocation

- landmarks

- navigation

- weather tracking

- check-in

1. A _____ is a technology that utilizes the geographical information of a mobile device to provide location-specific services.
2. LBS can help users find nearby _____, such as restaurants, cafes, and shops.
3. One popular type of LBS is _____, which allows users to navigate from one location to another using maps and directions.
4. _____ is a feature of LBS that allows users to know the current weather conditions in their location.
5. Another common use of LBS is _____, where users can check in to various places and share their location with friends.

Exercise 6

Speaking

Work in pairs or small groups. Discuss the following questions:

a) Start by brainstorming geomarketing and its significance in today's business landscape.

b) Explain different methods and technologies used in geomarketing, such as geotargeting, geofencing, GIS (Geographic Information Systems), GPS data, etc.

c) Discuss how geomarketing helps businesses in identifying target markets, improving customer engagement, optimizing advertising efforts, and making informed decisions regarding store locations or expansion strategies.

Exercise 7

GRAMMAR

7.1 Fill in the blank with the correct preposition:

1. I rely _____ location-based services to find nearby restaurants.
2. The app provides real-time information _____ the user's location.
3. Her phone automatically detects her location _____ GPS.
4. The delivery service uses geolocation _____ track the package.
5. My favorite feature of the app is the ability to check _____the nearest gas stations.
6. The GPS device provides accurate information _____ your current location.
7. The application will notify you when you are _____ the vicinity of your favorite coffee shop.
8. The map shows the exact coordinates _____ the restaurant.
9. You can track the delivery of your package _____ real-time.
10. The app offers personalized recommendations _____ nearby attractions.

7.2 Fill in the blanks with suitable words:

1. Retailers _____ to adapt to the changing consumer demands.
2. The use of mobile apps has become a _____ in the retail industry.
3. Customers _____ the convenience of mobile payments.
4. Retailers _____ to invest in mobile technologies to stay competitive.
5. Retailers need to _____ their websites to be mobile-friendly.
6. Mobile technology has _____ customer expectations.
7. Mobile apps offer a _____ shopping experience.
8. The integration of mobile technology has _____ the retail landscape.
9. Consumers _____ the convenience of mobile ordering and delivery.
10. The manager _____ a new smartphone to improve their shopping experience.

7.3 Choose the correct word to complete the sentence:

1. Location-based services are becoming increasingly _____ in our daily lives.
   a) relying b) relied c) reliable
2. The app uses _____ to provide directions.
   a) coordinates b) coordinators c) coordination
3. The map application allows users to _____ their exact position.
   a) locate b) location c) locating
4. She checked __ to see if there were any available parking spots nearby.
   a) location-enabled b) location-based c) location-tracking
5. The app sends ___ alerts when there are special offers at nearby stores.
   a) user b) users' c) user's
6. The geolocation technology allows users to access services _____ their specific location.
   a) on b) at c) in
7. The app uses Wi-Fi and Bluetooth signals to determine the user's position __ the map.
   a) in b) at c) on
8. Users can set preferences __ their favorite places for personalized recommendations.
   a) for b) against c) to
9. The augmented reality feature overlays digital information _____ the physical environment.
   a) onto b) under c) through
10. The app relies _____ GPS data to provide accurate directions to users.
    a) at b) on c) with

Exercise 8

8.1 Reading

You are going to read the text devoted to Contactless Payment and Biometric Scanning . For questions 1-10 complete the following sentences by filling in the blanks with the appropriate words or phrases.

Contactless Payment and Biometric Scanning

In the realm of modern finance, contactless payment methods have revolutionized the way transactions are conducted. Utilizing near-field communication (NFC) technology, contactless payment allows users to make purchases swiftly and securely by tapping their cards or smartphones against a reader. This convenience has gained widespread adoption, fostering a seamless transactional experience for consumers globally. As the world has become more and more digital, the way we pay for things has changed too. Contactless and Biometric payments are becoming increasingly popular as they offer a fast, secure, and convenient way to pay for goods and services without having to touch a card or enter a PIN.

Contactless payments work by using short-range wireless technology to make a payment simply by tapping your card or mobile device on a reader. Biometric payments use your unique physical characteristics, like your fingerprint or facial features, to confirm your identity and process a payment. Some forms of biometric payments also use voice recognition or iris scans.

While these methods of payment offer many benefits, there are also potential security risks that come with the use of these technologies. Fraudsters may try to exploit the systems, stealing personal information and using it for fraudulent purposes.

As technology continues to evolve, it is important for individuals and organizations to understand the benefits and risks associated with contactless and biometric payments to ensure safe and secure transactions.

8.2 Answer the following questions:

1. What are Contactless and Biometric payments?
2. What is the advantage of contactless and biometric payments?
3. How do Contactless payments work?
4. What are the unique physical characteristics biometric payments use to confirm identity?
5. What is the potential security risk that comes with the use of these technologies?
6. How can fraudsters exploit these systems?
7. What are some potential benefits of using contactless and biometric payments?

8. How do we ensure safe and secure transactions while using contactless and biometric payments?
9. Why is it important for individuals and organizations to understand these technologies?
10. How is technology changing the way we pay for things and what are some long term implications?

8.3 Case Studies

Address the challenges and ethical considerations associated with collecting and using location-based data in marketing, such as privacy concerns, data accuracy, and potential misuse.

Exercise 9

Writing

emerging trends and advancements in geomarketing, like augmented reality (AR) applications, IoT (Internet of Things) integration, or predictive analytics based on location intelligence.
Remember to structure the content logically, provide examples and statistics where applicable, and conclude with a summary of the importance of geomarketing in the contemporary business environment.

Exercise 10

10.1Be ready to reproduce the lexical minimum related to the Unit :

TECK TUTORIAL

Geomarketing refers to the integration of geographical intelligence into various aspects of marketing. It involves analyzing geographic data to understand and target specific markets.

Be ready to reproduce the lexical minimum related to geomarketing:

1. ***Geographic Information System:*** (GIS): GIS is a system designed to capture, store, manipulate, analyze, manage, and present spatial or geographic data.
2. ***Location-Based Services:*** (LBS): LBS uses location data to provide services or information to users based on their geographical location.
3. ***Geotargeting:*** Geotargeting is the practice of delivering content or advertisements to a specific audience based on their geographical location.
4. ***Spatial Analysis***: Spatial analysis is the process of examining the locations, attributes, and relationships of geographic features to uncover patterns and trends.
5. ***Demographic Segmentation***: Demographic segmentation divides the market into groups based on characteristics such as age, gender, income, and education, which can be analyzed geographically.

6. ***Heatmap***: A heatmap is a graphical representation of data where values in a matrix are represented as colors. In geomarketing, heatmaps are used to visualize the intensity of data at geographic locations.
7. ***Geo-Fencing***: Geo-fencing is a technology that creates a virtual boundary around a geographical area, enabling businesses to send notifications or offers to users' devices when they enter or exit the defined area.
8. ***Location Intelligence***: Location intelligence involves the use of spatial analysis and business intelligence tools to gain insights into geographic patterns and make informed business decisions.
9. ***Mobile Geotargeting***: Mobile geotargeting delivers location-specific content or advertisements to users' mobile devices based on their current location.
10. ***Trade Area Analysis***: Trade area analysis assesses the potential customer base within a specific geographic area, helping businesses understand market demand and competition in that area.

Exercise 10.1

Be ready to reproduce the lexical minimum related to CONTACTLESS PAYMENT AND BIOMETRIC SCANNING:

Contactless payment - payment made without physical contact between the payment device and the seller's payment terminal. Biometric scanning - using unique physical characteristics, such as facial recognition or fingerprints, for identification purposes.

1. ***Mobile payment*** - payment made on a mobile device, such as a smartphone or tablet.
2. ***Near-field communication (NFC)*** - *technology that allows two devices to communicate wirelessly when they are within close proximity.*
3. ***Digital wallet*** - *an electronic wallet that stores payment card information, enabling users to make purchases without physically presenting their card.*
4. ***Authentication*** - *the process of confirming the identity of a user, device, or action using security measures, such as passwords or biometric scanning.*
5. ***Tokenization*** - *the process of substituting sensitive payment information, such as a card number, with a unique token to protect the original data from being exposed.*
6. ***Encryption*** - *the process of converting data into a code to prevent unauthorized access.*
7. ***Fraud detection*** - *the use of artificial intelligence or machine learning algorithms to identify and prevent fraudulent transactions.*
8. ***Transaction limit*** - *the maximum amount that can be spent using contactless payment methods or biometric scanning without requiring additional security measures.*

Exercise 10.2

Speaking

Case Studies

Provide real-world examples of companies or industries that have effectively utilized geomarketing to enhance their marketing strategies. For instance, how a retail chain used location data to identify prime store locations or how a food delivery service employed geotargeting for personalized promotions.

Exercise 10.3

Job fair is a common way for companies to recruit new staff. Have you ever been to a job fair? You are going to get a role card: Student A is an exhibitor, Student B is a job seeker. Prepare the information you need (job seekers ask questions about the job and answer the questions about themselves.

Role card 1

You are an exhibitor at a jobs fair. You are looking to recruit suitable people to train and work for your company. Competition between companies at the jobs fair to recruit new people is high, so think about how you can persuade people to work for you.

First decide on the following information:

Position available: _____

Main duties/tasks of the position

Qualifications needed: _____

Experience required: _____

Personal qualities you are looking for: _____

Typical hours: _____

Role card 2

You are looking for a new job and have decided to go to a jobs fair, where different companies are looking to recruit people for positions in their companies. You want to find the best job possib

First decide on the following information:

Type of job you are looking for: _____

Qualifications you have: _____

Experience you have: _____

Your top three personal qualities:

_____

	working outside	working in an office	working with people	caring for people	using
	computers	physical work	challenging work	being creative	selling thi
	managing people	training people	being competitive	other (say which)	

_____ Which **three** of the following are important to you, and why?

When you are ready, visit the companies and ask questions about the positions available. Choos one you would like to apply for.

UNIT 3 SOFTWARE

Exercise1

Vocabulary

Match each word or phrase in column A with a meaning in column B.

Column A	**Column B**
1.bespoke software	**a)** the process of implementing or introducing a new system, product, service, or initiative across an organization.
2.off-the-shelf software	**b)** custom-built software tailored to meet needs or requirements of an individual or organization.
3.roll out	**c)** mass-produced, ready-to-use software application, programs that are developed and made

	available for general public or specific industry
4.bug	**d)** data or result that a computer system or device produces or delivers after processing input.
5. steady state	**e)** a flaw, error, or a fault in software code or defect in software or hardware that causes it to malfunction or behave unexpectedly.
6. specification	**f)** the condition in which a system or network remains relatively constant or stable over time.
7. outcome	**g)** refers to a detailed description or set of requirements outlining how a particular software, hardware component, or project should function or be constructed.

Exercise 2

Vocabulary

2.1 Match the following words with their definitions:

Bespoke	**Bugs**	**Robust**	**specification**
Cutover	**Modular**	**sign off**	**Rollout**

a. A document outlining the requirements and functionalities of a software product.

b. Custom-made software designed to meet specific needs of a particular company or organization.

c. The process of moving from an old system to a new one.

d. A software design approach that involves breaking down a program into smaller, more manageable components.

e. A software program that is designed to withstand errors and function reliably even under stressful conditions.

f. The process of approving or finalizing a project.

g. Errors or flaws in a software program that prevent it from functioning properly.

h. refers to the process of introducing and implementing a new system, software, hardware, which often includes testing, training, and ensuring a smooth transition from the existing system to the new one.

2.2 Fill in the blanks with the correct word from the given list:

cutover ***modular*** ***bugs*** ***robust***

specification ***bespoke*** ***bugs***

1. A software program should be __ enough to handle unexpected situations.
2.The development team should adhere to the project _____ to ensure that the software meets the required standards.
3. Our company provides ____ software solutions that address specific business needs.
4.Before launching the new software, the team needs to conduct a ____ process to check for any potential errors.
5.To ensure smooth deployment, the team needs to plan and execute the ____ process carefully.
6.The developers need to break down the software program into smaller, more manageable components, using a ___ design approach.
7. The testing team should report any issues or ____ they encounter during the testing phase.

Exercise 3

Reading

3.1 Read the text related to the software development process and answer the questions below.

The software development process is a systematic approach used by professionals to design, create, test, and deploy software applications or systems. It typically involves several stages, including:

1. Requirements Gathering: Understanding and documenting what the software needs to do based on user and stakeholder input.

2. Planning: Creating a roadmap outlining the project scope, timelines, resources, and budget.

3. Design: Creating the architecture and technical specifications based on the requirements gathered earlier.

4. Implementation/Coding: Writing the actual code for the software based on the design specifications.

5. Testing: Thoroughly testing the software to identify and fix bugs, ensuring it behaves as expected.

6. Deployment: Releasing the software to users or the production environment**.**

7. Maintenance: Providing ongoing support, fixing bugs, and adding new features as needed.

These stages are often iterative, allowing developers to revisit previous steps as necessary. Various software development methodologies, such as Agile, Waterfall, and DevOps, provide frameworks for organizing and managing these processes efficiently.

3.2 In pairs discuss the questions related to the software development process outlined in the text:

1. How crucial is the stage of ***Requirements Gathering*** in ensuring the success of a software development project?

2. What are the key elements that make up an effective software development plan during the ***Planning*** phase?

3. How does the ***Design*** phase impact the overall performance and scalability of the software being developed?

4. In what ways does the ***Implementation/Coding*** phase influence the efficiency and maintainability of the software?

5. What strategies or techniques are commonly employed in the ***Testing*** phase to ensure comprehensive software quality?

6. Could you elaborate on the significance of a smooth and efficient ***Deployment*** process for software projects?

7. How does the ***Maintenance*** phase contribute to the long-term success and sustainability of a software application or system?

8. How do iterative approaches in the software development process allow for adaptation and improvement throughout the project lifecycle?

9. Can you compare and contrast ***Agile***, ***Waterfall***, and ***DevOps*** methodologies, highlighting their distinct advantages and limitations?

10. What are some best practices or tools commonly utilized within the various software development methodologies to enhance productivity and collaboration among team members?

Exercise 4

Grammar

4.1 Fill in the blanks with the correct form of the verbs in brackets (Present Simple or Will + base form) to form Conditional Type 1 sentences related to software.

1. If the software update (be) ___ available tomorrow, I will install it immediately.
2. What will happen if you (not back up) ___ your data regularly?
3. If the program crashes, the system (display) ___ an error message.
4. If you (follow) ___ the instructions carefully, the installation process will be smooth.
5. The software (not function) ___ properly if you don't have the necessary system requirements.

4.2 Rewrite the sentences using the correct form of the verbs in brackets to form Conditional Type 1 statements.

1. If you do not enter the correct password, the system won't grant access.
   - If you ___ the correct password, the system ___ access.
2. What happens if you forget to save your work?
   - What ___ if you ___ your work?
3. The software won't function properly unless you update it regularly.
   - If you don't update the software regularly, it ___ properly.
4. I'll help you if you encounter any issues during the installation.

- If you ___ any issues during the installation, I ___ you.

5. The program crashes if the memory is insufficient.

- If the memory ___ insufficient, the program ___.

Exercise 5

Complete the sentences with by, until, in, on, at, or – (no preposition):

1. Fill in the blanks with the appropriate preposition:

1.The package will be delivered _____ 6 o'clock.

2.We have to finish this project ____ Friday.

3. She'll wait for you ____ 5 pm.

4. The meeting is scheduled for 9 am _____ Monday.

5. They arrived ____ the airport in the morning.

6.They plan to leave town _____ next week.

7. She will return ____ the evening.

8.The book arrived _____ Monday.

9. They celebrated their anniversary _____ year.

Exercise 6

Complete the sentences with a word from the box.

---

up out away at on ~~down~~ off back (x2)

---

1 You need some sleep. Lie **down** for an hour.

2 Will you pay me _____ next week?

3 Look _____ the stars! They're beautiful tonight.

4 He's planning to move _____ home in a couple of years.

5 I'm cold. I'm going to put _____ a jacket.

6 Please leave. Get _____ of my house.

7 I'd like to order this food to take _____ .

8 You'll get too hot – take _____ your coat.

9 I want my children to grow _____ in England.

Exercise 7

7.1 You are going to read the text devoted to . For questions 1-10 find the best answers.

Software can be categorized into several types based on their functionality and purpose. Here are some common types of software:

System Software: Manages and operates computer hardware. Examples include operating systems like Windows, macOS, and Linux, as well as device drivers and utility programs.

Application Software: Designed to perform specific tasks for users. It includes various categories such as:

- ***Productivity software***: Office suites, word processors, spreadsheets, and presentation software.
- ***Media software*****:** Image editors, audio and video players/editors, and graphic design software.
- ***Entertainment software*****:** Video games, multimedia applications, and virtual reality software.
- ***Communication software:*** Email clients, web browsers, and instant messaging applications.

Programming Software**:** Tools used by developers to create, debug, and maintain other software. Examples include text editors, compilers, and integrated development environments (IDEs).

Embedded Software**:** Resides within hardware and controls the device's functionalities. It's commonly found in devices like smartphones, household appliances, and automobiles.

Enterprise Software**:** Aimed at organizations to manage their operations. This includes Customer Relationship Management (CRM) systems, Enterprise Resource Planning (ERP) software, and business intelligence tools.

Web-based Software**:** Applications that operate through a web browser. This includes web apps, online retail platforms, social media platforms, and cloud-based services.

***Artificial Intelligence (AI) Software*:** Utilizes machine learning, natural language processing, and other AI techniques to perform tasks such as data analysis, automation, and decision-making.

These categories encompass a wide range of software that cater to various needs and functions in our digital world.

7.2 For questions 1-10 find the best answers.

1. How do operating systems like Windows, macOS, and Linux differ in their functionalities and user experiences?
2. Could you elaborate on the role and significance of device drivers in system software?
3. What are the key advantages and limitations of using web-based software compared to traditional desktop applications?
4. How does AI software differ from traditional programming software in terms of its approach and functionality?
5. Can you provide examples of embedded software used in specific everyday devices and explain their functions?
6. What security measures and protocols are typically implemented in antivirus software to protect against different types of threats?
7. How do database management systems (DBMS) differ from file management systems in terms of data organization, retrieval, and scalability?
8. What are the primary differences between open-source and proprietary software, and how do these differences impact their development, usage, and community support?
9. In what ways do graphic design software tools, such as Adobe Photoshop or Illustrator, utilize different techniques to manipulate and enhance images or create digital artwork?

10. Could you explain the functionalities and benefits of project management software in overseeing and coordinating complex tasks and resources within a team or organization?
11. How do video editing software applications handle various formats, effects, and transitions to produce high-quality edited content?
12. What are the main components and functionalities of enterprise resource planning (ERP) software, and how does it integrate different business processes within an organization?
13. How do mobile operating systems like iOS and Android differ in their architectures, security models, and app development approaches?
14. What distinguishes virtualization software from emulation software, and how do they enable the running of multiple operating systems on a single machine?
15. How does version control software facilitate collaborative development among software developers by managing changes, revisions, and branches in code repositories?

Exercise 8

Speaking

- ***Discuss with your partner the software applications you find most useful for your studies and daily life as a student. Consider categories such as productivity, note-taking, research, communication, and entertainment.***
- ***Explain why you find each application useful.***
- ***Discuss any specific features or functions of these applications that enhance your student's experience.***

Exercise 9

Writing

Write an essay discussing the importance of agile methodology in the field of software development. In your essay, address the following points:

- *What is agile methodology and its key principles?*
- *The advantages of using agile methodology in software development.*
- *Real-life examples of successful software projects that have utilized agile methodology.*
- *Challenges and potential drawbacks of agile methodology in software development.*
- *The future of agile methodology and its impact on the software development industry.*

Write your answer in 120-180 words in an appropriate style. You must use grammatically correct sentences with accurate spelling and punctuation in a formal style.

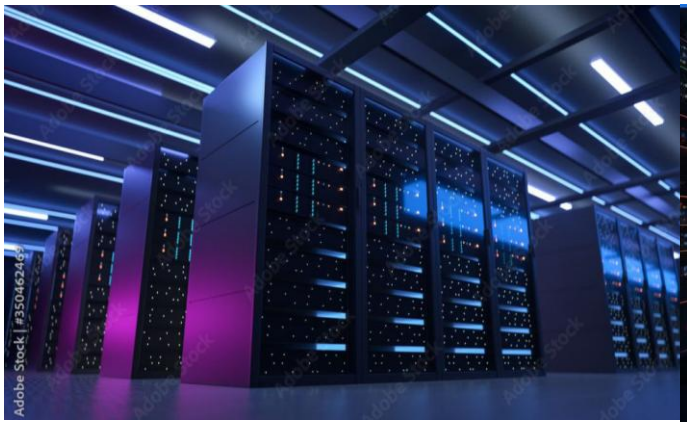
Exercise 10

Be ready to reproduce the lexical minimum related to Software Development and Project Management:

1. ***Algorithm:*** A step-by-step procedure or formula used for solving a problem or accomplishing a task within a computer program.
2. ***API (Application Programming Interface):*** A set of protocols, tools, and definitions that allows different software applications to communicate with each other.
3. ***Debugging***: The process of identifying and fixing errors or defects within a software program.
4. ***Framework:*** A pre-built structure or set of tools and libraries used to facilitate the development of software applications.
5. ***IDE*** (Integrated Development Environment): A software application that provides comprehensive facilities to computer programmers for software development, combining code editor, debugger, compiler, and other tools.
6. ***Version Control***: A system that manages changes to source code over time, allowing multiple developers to collaborate and track modifications made to the codebase.
7. ***Agile:*** A methodology in software development that promotes iterative development, collaboration, and flexibility in adapting to change throughout the development process.

8. ***Repository***: A central location where source code, documents, and other files are stored and managed using version control systems like Git.
9. ***Scrum***: A framework within the Agile methodology that defines roles, events, and artifacts in software development, emphasizing teamwork, accountability, and iterative progress.
10. ***Deployment***: The process of releasing a software application or code into a production environment where it can be accessed and used by end-users.

UNIT 5 DATA CENTRES AND SECURITY




Vocabulary

Exercise1

Match each word or phrase in column A with a meaning in column B.

Column A	**Column B**
1.data centre	**a)** an executive-level position responsible for overseeing and managing various aspects of a department.
2. power supply	**b)** a centralized facility used to house computer systems, servers, networking equipment.
3. compartment	**c)** limitations, rules or regulations, permited or prohibited withing a specific context.
4.security procedures	**d)** a system comprising cameras, monitors and recording devices used for surveillance.
5.downtime	**e**) provision of electrical energy to devices or system to enable their operation.
6.availability	**f)** essential or crucial to an organisation's core functions or objectives**.**
7.senior manager	**g)** the state or condition of being accessible, usable, functioning as expected.
8.mission critical	**h)** a set of documented actions, protocols, or

guidelines designed to ensure the protection of system against unauthorized access.

9.CCTV **i)** a designated and often secure space or area withing a larger structure, designed to segregate or protect specific equipment.

10.restrictions **j)** the period when the system, service or operation is unavailable or not functioning correctly.

Exercise 2

Use a word or phrase from the box in each gap to complete the text.

power supply facilities downtime accessibility data centres storage primary infrastructure data agreements

A data centre is an important hub for storing and managing vast amounts of information, functioning as the nerve center of modern technological operations. These (1)……. rely heavily on a stable (2)…….to ensure uninterrupted functioning. To safeguard against potential disruptions, data centres often employ compartmentalized setups, segregating critical systems to minimize the impact of (3)……..

Connectivity is another vital aspect, ensuring seamless communication and (4) …….to data across networks. Redundancy measures are strategically implemented within (5)……., deploying backup systems and duplicate resources to maintain operations even in the event of hardware failures or unexpected outages.

Data centers are made up of three (6)……. types of components: compute, 7)……. and network. However, these components are only the top of the iceberg in a modern DC. Beneath the surface, support 8) ……. is essential to meeting the service level 9) ……. of an enterprise 10) ……. center.

Exercise 3

Fill in the Blanks:

1. Redundancy in a _____ ensures uninterrupted operations even if one component fails.
2. A _____ is a facility that houses networked computers and storage used by organizations to organize, process, store, and disseminate large amounts of data.
3. Downtime refers to the period during which a _____ is not operational or accessible.
4. Accessibility in data centers is crucial to ensure users can _____ their data and applications easily.

5. A stable _____ is essential to maintain continuous operations in a data center.
6. A _____ refers to an interruption or failure in a network system that leads to service unavailability.
7. The data center's backup generators ensure uninterrupted power feeds in case of _____.
8. To maintain data security, the server room is designed with strict _____ between different sections.
9. The cooling system malfunction led to a server _____ resulting in a temporary shutdown.
10. The data center architecture includes multiple _____ to isolate and contain any issues that may arise.

Exercise 4

Grammar

Fill in the gaps with the appropriate form of the second conditional sentences:

1. If data centers ***(not employ)*** robust encryption methods, unauthorized access ***(can compromise)*** sensitive information.
2. Without regular software updates, data centers ***(be)*** more vulnerable to cyber attacks.
3. If data centers ***(use)*** outdated security protocols, they ***(risk)*** exposing valuable data to potential breaches.
4. Should data centers ***(fail)*** to implement multi-factor authentication, hackers easily ***(may infiltrate)*** the system.
5. If data centers regularly ***(not conduct)*** security audits, they **(*overlook)*** potential vulnerabilities.
6. ***(be)*** data centers to neglect firewall configurations, the chance of malicious software entry significantly ***(increase).***
7. If data centers ***(fail)*** to invest in cutting-edge security measures, they ***(become)*** prime targets for cyber threats.
8. Without continuous monitoring, data centers ***(risk)*** remaining unaware of ongoing security breaches.
9. If data centers ***(lack)*** proper access controls, sensitive information ***(can fall)*** easily into the wrong hands.
10. If data centers ***(not encrypt)*** data transmission, they ***(expose)*** critical information during transfers.

Exercise 5

Match scenarios in 1-5 with solutions in a-e to make second conditional sentences:

1. If data centers didn't have robust security measures,
2. If unauthorized access to sensitive information occurred,
3. If companies didn't invest in cutting-edge encryption technologies,
4. If a breach in the data center's security protocols happened,
5. If employees didn't follow strict access protocols,

a. data could be compromised, leading to severe consequences.
b. sensitive information would be at risk of exposure.
c. there would be a greater vulnerability to cyber threats.
d. the integrity of the stored data would be compromised.
e. there might be a higher likelihood of security breaches.

Exercise 6

Watch a video and answer the questions:

https://youtu.be/zDAYZU4A3w0?si=FopGI1bD7QJ53dkP

1. What is Sandeep's role at Google?
2. Why does Sandeep mention the need for appropriate security clearance before entering the data center?
3. How does Noah describe the role of Site Reliability Engineers (SREs) at Google?
4. What measures are in place to handle unexpected failures in Google's systems, according to Noah?
5. What tools does Google use to manage its fleet and infrastructure, as mentioned by Sandeep?
6. How does Virginia describe the network design at Google's data centers?
7. What is the purpose of Google's private backbone network, B4?
8. How does Google handle the destruction of used hard drives to ensure data security?
9. What is the power usage effectiveness (PUE) of Google's data centers, as mentioned by Brian?
10. Where does the power for Google's data centers come from, and what is Google's approach to environmental sustainability, according to Brian?

Banking and Information Security

Exercise 7

Work in pairs or in small groups: ***Comment on*** *the* ***Types of Banking Security using the following lexis:***

- ***Authentication Methods:***
  - Passwords, biometrics, two-factor authentication.
- ***Encryption and Data Security:***
  - SSL, TLS, data encryption, secure connections.
- ***Fraud Prevention:***
  - Phishing, identity theft, malware attacks, and how to identify them.
- ***Transaction Security:***
  - EMV technology, tokenization, secure payment methods.

Exercise 8

Match a word or phrase in column A with a meaning in column B.

A	B
1. infect	a) the set of characteristics and information that uniquely identifies a person, often used for authentication and verification purposes.
2. identity	b) a method used by hackers to spread malware across a network by exploiting vulnerabilities.
3. ping sweep	c) a focused , personalized cyber attack aimed at a specific individual or group, often using personalized information
4.worm	d) a cybersecurity professional who uses their skills to test and improve security systems, often hired by organizations to find vulnerabilities.
5. spyware	e) a software tool or program designed to intercept and analyze network traffic, particularly to detect unauthorized or

	malicious activities.
6. spear phishing	f) malicious software that infiltrates a computer system to gather sensitive information such as passwords or credit card numbers.
7. a white-hat hacker	g) to contaminate or spread malware to a computer or system.
8. a sniffer	h) a systematic technique used to discover devices on a network and their status.

Exercise 9
Speaking

9.1 ***With a partner use the internet to find the information about some recent banking security incidents and their impact. Point out some recent banking security breaches and how they occurred.***

9.2 ***Work in pairs and discuss*****:** ***How organizations can effectively identify, assess, and mitigate risks to their information security, considering both internal and external threats.***

9.3 ***Read the text and check your answers*****:**

Key Aspects of Information Security:

- Confidentiality: Ensuring that sensitive information is accessible only to authorized individuals or systems.
- Integrity: Maintaining the accuracy and trustworthiness of data and preventing unauthorized modifications.
- Availability: Ensuring that information and systems are accessible and usable by authorized users when needed.
- Authentication: Verifying the identity of users or systems attempting to access information or resources.
- Authorization: Granting appropriate permissions to authenticated users to access specific resources.
- Encryption: Transforming data into a coded format to protect it from unauthorized access.

1. Password Strength: Evaluate the strength of your passwords using online tools or guidelines. Change any weak passwords to stronger ones following best practices.

2. Phishing Awareness: Read about common phishing techniques. Identify potential phishing emails or messages in your inbox and list the red flags indicating they might be phishing attempts.

3. Data Backup: Review your data backup strategy for your important files. Ensure you have a regular backup routine in place and test the restoration process.

4. Software Updates: Check the devices and software you use. Ensure they have the latest security updates installed. If not, update them promptly.

5. Two-Factor Authentication (2FA): Enable 2FA on your important accounts if you haven't already. Practice setting it up on a service that supports it.

Remember, information security is an ongoing process, and staying informed about the latest threats and best practices is crucial for maintaining a secure environment for your digital assets and information.

9.4 Answer the following questions:

1. What are the three key aspects of information security mentioned in the overview?
2. Explain the difference between authentication and authorization.
3. List three actions recommended to enhance information security mentioned in the text.
4. Define encryption and its role in information security.
5. Why is being informed about the latest threats and best practices important in the context of information security?

5.Role-play the following scenarios:

Student A – Managing enquiries

You work in the customer service department of a national bank, CTB. You deal with customer complaints and problems.
A customer is going to phone you regarding a cloned cash card. Their money was stolen but the bank has not refunded it yet.

- Ask for personal and bank account details as well as security passwords.
- Apologise that the computer system is really slow today.
- Explain that the customer has not received a refund because the bank has not received a police crime reference number yet.
- Explain refunds take a minimum of ten working days.
- Explain customers should not normally have to pay overdraft charges in these circumstances. You can ask your supervisor to refund the charges immediately.

Start the conversation with: *Hello, this is CTB. This is* (name) *speaking. How can I help you?*

Student B – Making enquiries

Your cash card was cloned and over $1500 was taken from your account. The bank accepted it was not your fault and promised to refund the money. Three weeks later they have not done this and you are now paying overdraft charges.

- Explain the situation to the customer service representative.
- Find out why the money has not been refunded and when you will receive it.
- Explain that you have already given the bank the police crime reference number.
- Explain that you need money desperately as you have to pay your rent this week.
- Find out why you are paying overdraft charges. It is not your fault that your account is overdrawn.

Phone Customer Service now!

Exercise 10

WRITING

Write an essay (following the writing tips bellow:

How can organizations balance the need for innovative technologies with ensuring robust security measures are in place to protect against evolving cyber threats, especially with the proliferation of IoT devices and cloud services?

WRITING TIPS

- *The introduction should be at the start of your essay to introduce the topic.*
- *Make sure you split your essay into paragraphs with different arguments in each paragraph.*
- *Include all the information in a logical order.*
- *Include a short conclusion. This can detail your personal opinion, or the most important point in the essay.*

UNIT 6 Services

Exercise1

Match each word or phrase in column A with a meaning in column B.

Column A	Column B
1. buyback	a) an agreement that outlines the terms, conditions and expectations between the service provider and the client, establishing a clear framework;
2. dedicated	b) a written document or a spoken message that describes the findings of an individual or a group;
3.fix	c) to repair or correct something, resolve issues promptly;
4. ping test	d) reclaiming or or repurchasing hardware or equipment as part of a service agreement;
5. monitor	e) anticipating and addressing problems before they occur, ensuring a smoother operation;
6. proactive	f) comprehensive range of offerings designed to support and maintain a client's IT infrastructure;
7.on-premises support:	g) to repair or correct or resolve issues promptly;
8. service	h) a proactive measure to assess the

	responsiveness and connectivity of a network, helping to prevent potential issues;
9. the managed service agreement	i) technical assistance or services, provided directly at the client's location to manage and maintain systems.
10. a report	j) exclusive resources or infrastructure for a specific client, enhancing reliability and performance;

Exercise 2

Use a word or phrase from the box in each gap to complete the text.

freelancers start-ups advertising acquire competitors artificial market

In the bustling world of services, a savvy entrepreneur decided to (1)…… comprehensive database to stay ahead of his (2) …….. With a keen eye on effective (3) ……. he aimed to elevate his property as the go-to service provider. Being a proud proprietor, the individual navigated the dynamic landscape, embracing both established businesses and nimble (4)…….

In this diverse ecosystem, (5) ……. with specialized skills added a unique flair to the service spectrum. Using the power of 6) ……. intelligence, the entrepreneur managed to adapt to the evolving 7) ……. trends.

Exercise 3

Choose the correct word or for each sentence. The first letters have been given to help you :

1. M_ _ _ _ _ _ S_ _ _ _ _ _: a comprehensive outsourcing model where a third-party provider assumes responsibility for managing and delivering a specific set of services to a client.
2. R_ _ _ _ _ _ _ S_ _ _ _ _ _: a type of support where actions are taken in response to issues or problems as they arise, rather than anticipating and preventing them beforehand.
3. P_ _ _ _ _ _ _ _: taking initiative to prevent issues or challenges before they occur, often applied to services or management strategies to enhance efficiency.
4. S_ _ _ _ _ of E_ _ _ _ _ _ _ _: The process of providing necessary tools, machinery, or devices as part of a service or contractual agreement.

5. C_ _ _ _ _ _ _ T_ _ _ : the duration specified in a contractual agreement, indicating the period during which the terms and conditions of the contract are applicable.

6. A_ _ _ _ _ _ _ M_ _ _ _ _ _: an individual designated to oversee and coordinate activities, responsibilities, and deliverables within the scope of a project or service.

7. P_ _ _ _ _ _ _ _ _ _ M_ _ _ _ _ _ _ _ _: the systematic observation and measurement of activities, processes, or systems to ensure they meet defined standards and objectives.

8. A G_ _ _ _ _ _ _ _: a promise or assurance, often backed by specific terms, that a particular outcome or level of performance will be achieved.

9. S_ _ _ T_ _ _ _ _: Identifying patterns or developments in data, behavior, or market dynamics that can be crucial for making informed decisions or predictions.

10. L_ _ -_ _ _ _ S_ _ _ _ _ _: A service that is provided at a relatively economical price, often emphasizing efficiency and cost-effectiveness without compromising quality.

Exercise 4

Grammar

Fill in the gaps with the appropriate form of the adjective in brackets

1. Our managed services are _____ (efficient) than those offered by the leading competitors in the industry.

2. The efficiency of our support team is really good or even (good) than the industry standards for managed services.

3. While our pricing is competitive, it's almost _____ (expensive) some premium managed service providers in the market.

4. Among the various plans, the plan with _____ (high) monthly fee offers the most features.

5. Choosing a more suitable subscription can lead to _____ (good) value for your needs.

6. Despite the long service contract, customers appreciate this gold package as _____ (reliable).

7. In a competitive market, the (fast) response time can make a significant difference.

8. The security features of the premium package are deemed (important) among all available options.

Exercise 5

Work in pairs. Make comparative and superlative form of the adjectives given related to the levels of managed services.

1. Managed services are (cost-effective) than traditional IT support options.
2. This new solution is (easy) to use than the previous system.
3. Our company provides a (comprehensive) range of managed services than our competitors.
4. Managed services off (good) scalability for growing businesses.
5. The new software platform is (fast) and (reliable) than the older version.
6. Our managed services are designed to be (efficient) and user-friendly.
7. This provider has (experienced) team in managed services.
8. Managed services can be (disruptive) to daily operations than in-house IT management.
9. Our managed services offer (high) level of security for your data.
10. This company has (good) reputation for managed services in the industry.

Exercise 6

Negotiating

6.1Work in pairs or in small groups: *Comment on the importance of researching and preparing before entering a negotiation.*

1.What do you think are the key qualities or skills that make a successful negotiator in IT?
2. Can you share an example of a negotiation challenge you've faced in the past and how you approached it?
3. In your opinion, what are the main differences between negotiation in a business context and negotiation in personal relationships?

6.2 *Read the text and check your answers*:

Negotiations are intricate processes that require skill and finesse. Active listening is crucial in negotiations, as it allows parties to truly understand each other's perspectives and concerns. By remaining attentive and engaged, negotiators can build trust and rapport.

Flexibility is essential in negotiations, as it enables parties to explore various options and alternatives. Being open to different solutions can lead to a more fruitful outcome for all involved.

Body language plays a significant role in negotiations, as it can convey confidence, receptiveness, and understanding. Maintaining positive and open body language can help create a conducive atmosphere for constructive discussions.

Confidence is key in negotiations, as it exudes a sense of assurance and conviction. Confidence in one's position and the ability to articulate it effectively can influence the direction of the negotiations.

Overall, successful negotiations require active listening, flexibility, attentive body language, and a confident demeanor to navigate the complexities and dynamics of reaching mutually beneficial agreements.

6.3 *Work with a partner. Are the following statements true or false according to the text?*

1. Negotiations require skill and finesse, and active listening is crucial for understanding perspectives and concerns.

2. Flexibility is optional in negotiations, being confident and direct allows parties to reach a more profitable outcome.

3. Body language plays a significant role, conveying confidence and receptiveness, contributing to a conducive atmosphere for discussions.

4. Confidence is key in negotiations, exuding assurance and conviction, influencing the direction of the negotiations.

5. Successful negotiations encompass active listening, flexibility, attentive body language, and confidence to reach mutually beneficial agreements.

6. 4 Answer the following questions:

1. What role does active listening play in negotiations?
2. Why is flexibility considered essential in the negotiation process?
3. How can body language impact negotiations?
4. What are the benefits of maintaining open and positive body language during negotiations?
5. Why is confidence considered a crucial element in negotiations?
6. How does active listening contribute to building trust and rapport in negotiations?
7. What does flexibility enable parties to do in negotiations?
8. In what ways can body language convey important messages during negotiations?
9. How does confidence contribute to the negotiation process?
10. What are some advantages of being open to different solutions in negotiations?

Exercise 7

Work in pairs. In each of the underlined sentences the underlined word is wrong and you should take it in turns to read out a sentence. Your partner has to identify and change the incorrect word .

Worksheet A

1 **Read out the sentences for your partner to correct the underlined words.**

1 I am a very good employee – I let my workers leave early.
2 When Imeet upwith my team-mates after University,we speak English together to get more practice.
3 I'm a partner of several clubs in my home town.
4 I am a great boss so I do as I am told.
5 I think a good mentor is always ready to listen to his or her employees.
6 My godfather is such a wonderful woman.
7 I was very lucky to have such a talented member to guide me.
8 My groupmates always train very hard so they are ready for the match.
9 I enjoy doing English activities in class with my pupil.
10 I am engaged to my godmother.

Are the sentences true or false for you? Discuss with your partner.

Worksheet B

1 Read out the sentences for your partner to correct the underlined words.

1 I like team sports, but success often depends on your groupmates.
2 I am a partner of a book club.
3 My member helps me complete tasks.
4 My team-mates all did better than me in the test.
5 I owe my success to my pupil.
6 My employee is very strict.
7 My godmother is such a wonderful man.
8 I am engaged to my godfather.
9 I work very hard at my studies – I am a good mentor.
10 My fiancé guided me through childhood.

2 Are the sentences true or false for you? Discuss with your partner.

Exercise 8

Match a word or phrase in column A with a meaning in column B.

1. accept	a) process of discussing and reaching an agreement aiming to resolve a disagreement or to make a deal.
2. afford	b) a settlement of differences in which each side makes concessions or sacrifices to reach a mutual agreement.
3. competitive	c) period of time during which something is postponed or held back, causing it to occur later than expected.
4. monthly fee	d) to need something, or to make it necessary for someone to do something.

5. negotiation	e)an idea or proposal put forward for consideration, often aimed at providing a solution or offering guidance.
6. confirm	f) to establish the truth, accuracy, or validity of something, often by providing evidence or additional information.
7. suggestion	g) recurring payment that is made once a month in exchange for a specific service or product.
8. require	h) relating to a situation in which individuals or organizations strive to outperform others, often in terms of quality, price, or performance.
9. a delay	i) to have enough financial resources to be able to purchase or pay for something.
10. compromise	j) to receive or take something that is offered or given, often with agreement or approval.

Exercise 9

Complete the sentences with a preposition from the box.

on (x3) to (x3) **in (x3)** **with by** **between**

1.What's the difference_____*lend* and *borrow?*
2. There's been a big change _____the weather recently.
3. I think you need to improve your attitude _____ work. Just be more positive!
4. How much do you spend on food every week _____average?
5.The trouble_____you is that you don't listen to anybody.
6. I can't get access _____ my Internet bank account at the moment.
7. Sally didn't break your camera_____purpose. It was an accident!
8. Congratulations_____your job offer! When is the start?
9. Be careful what you say to Adam, he's____a bad mood today.
10.There's been a huge increase_____ trade recently.
11. I don't think there's really an alternative _____ travelling by air.
12.There are no rules for prepositions – you just have to learn them_____heart.

How can I help you?
Making enquiries/Managing enquiries

Work in pairs.Have you ever called to a customer service or a call centre? Are these calls generally positive or negative?

In the following activity you are going to make and respond to enquieries.

The role-play begins with with Student A phoning Student B about a power cut.

Student A – Making enquiries

There is a power cut on your street and you have had no electricity for twelve hours. You phoned the power company just after it happened and were told to phone back later in the day after they had investigated the problem. You are now phoning for a second time.

- Find out when the power will be switched on again.
- Find out what the problem was and if it will happen again.
- Find out why there are not any engineers working on the problem now (there were some this morning).
- Find out what compensation you can expect to receive.
- Explain how inconvenient it has been and how unhappy you are with the situation.

Phone Customer Service now!

Student B – Managing enquiries

You work in the customer service department of a national power company, EGON Power.
A customer experiencing a power cut is going to phone you for the second time about the problem.

- Ask for their personal details and account number.
- Apologise for the fact that the computer system is really slow today.
- Explain that the problem is complex and will take up to three days to repair as special equipment is needed.
- Explain that engineers only work for eight hours and then another team arrives.
- Compensation is paid after thirty-six hours with no power.

Start the conversation with: *Hello, this is EGON Power, I'm* (name). *How can I help you?*

Exercise 10

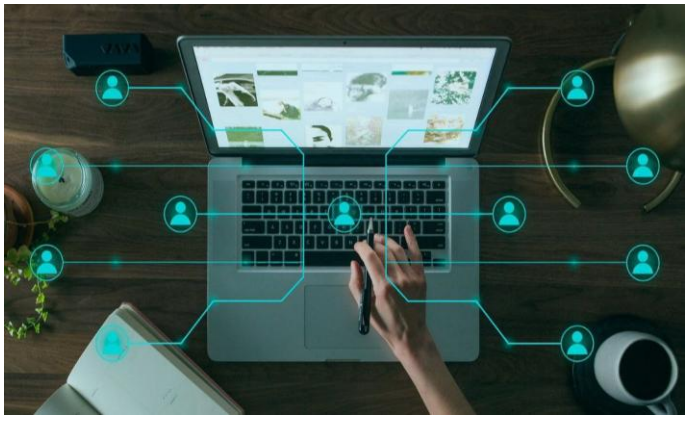
Writing

Write a proposal for negotiating a new IT contract with a potential service provider*. *In your proposal, address the following points:

1. Introduction: Introduce your company and its IT needs, highlighting the significance of the new contract.
2. Requirements: Outline the specific IT services and support your company requires, including details on software, hardware, security, and maintenance.
3. Expectations: Clearly define the key performance indicators (KPIs) and service level agreements (SLAs) you expect the service provider to meet.
4. Budget: Discuss your budget constraints and the financial aspects of the negotiation, including any flexibility in the budget for the right service package.
5. Flexibility: Emphasize the importance of flexibility in the contract to accommodate potential future changes or expansions.

Your proposal should be professionally written, clearly structured, and persuasive in presenting the case for the negotiation of the new IT contract. Be sure to use appropriate language and terminology related to IT services and negotiation.

UNIT 7 MEDIA



Exercise1

Match each word or phrase in column A with a meaning in column B.

Column A	**Column B**
1.available	a) to notify or make someone aware of potential danger or problems.
2.target audience	b) contrary to the established legal regulations; illegal.
3.manufacturer	c) to encourage people to like, buy, use, do, or support something
4.media	d) reacting or taking action based on the messages conveyed in advertisements.
5.against the law	e) specific group of people at which a product or marketing message is aimed.
6.respond to advertising	f) accessible or obtainable; present and ready for use.
7.warn	g) various communication channels, such as television, radio, newspapers, and the internet, used for mass communication.
8.advertise	h) the entity or company responsible for producing goods or products.
9. promote	i) to publicize a product, service, or idea through various channels to attract attention or interest.

Ex.2 Vocabulary

Complete the sentences with the following words:

available	advertising	strategies	availability	crucial
promote	misleading	law	showcase	appealing

1. The confectionery shop decided to a) …….. its new range of sweets to improve sales.
2. A variety of rental options are b) ……. for businesses looking to expand their media presence.
3. Direct c) ……. through social media platforms has proven being effective for reaching a wider audience.
4. It is against the law to falsely advertise a product or make d) ……. claims in marketing campaigns.
5. The company used creative e) ……. to rent advertising space in prominent locations.
6. The marketing team implemented a campaign to improve sales by highlighting product f) ……..
7. Some argue that direct advertising to children for certain products should be against the g) ……...
8. The online platform allows businesses to easily rent digital advertising space to 8) h)…….. their services.
9. The confectionery industry often relies on visually i) ……. advertisements to attract customers.
10. Availability of accurate information is j) …….. when deciding to rent advertising space for a campaign.

Exercise 3

Match the words 1-8 with their corresponding definitions a-h :

1.broadcast **5. to receive**

2.antenna **6. liquid crystals display**

3.TV-licence **7.pay per view**

4.schedule **8. transmission**

a. A device for receiving television or radio signals.
b. The act of sending out radio or television signals for broadcasting.
c. A license required in some countries to legally own a television set.
d. A system where viewers can pay to watch specific programs or events.
e. A display technology commonly used in flat panel televisions.
f. The process of watching a television program or a movie.
g. A planned program of events or programs on television or radio.
h. The action of getting or accepting something that is sent or given.

Exercise 4

Grammar

A Choose the correct form (gerund or infinitive) for each sentence:

1. I enjoy _____ television shows. (watch /watching)
2. The technician needs to _____ the TV signal. (demodulate / demodulating)
3. The company plans to _____ the new series online. (distribute / distributing)
4. It is important to _____ the license fee. (pay / paying)
5. The satellite _____ a clear signal. (decode / decoding)
6. Would you like _____ an on-demand streaming service? (to subscribe / subscribing to)
7.The bandwidth is used to _____ the video. (compress / compressing)
8. The network _____ high-definition programs. (stream / streaming)
9.It is necessary to _____ a TV _____. (decode / decoding)
10.The government charges a _____ to fund public broadcasting. (license fee / licensing)

B

Choose the correct form (gerund or infinitive) for each sentence. The first letters have been given to help you :

1. I decided to s_ _ _ _ _ _ _ to a cable service for access to more channels.
2. The technician is responsible for d_ _ _ _ _ _ _ _ _ _ and decoding the TV signals.
3. The company plans to d _ _ _ _ _ _ _ _ their content through various platforms.
4. C _ _ _ _ _ _ _ _ _ the video files is a necessary step for efficient transmission.
5. The p_ _ _ _ _ _ offers a wide range of channels for entertainment.
6. The viewer can easily d_ _ _ _ the encrypted transmission.
7. The spectrum of available f_ _ _ _ _ _ _ _ _ determines the quality of the transmission.
8. The government collects a monthly l_ _ _ _ _ fee to fund public broadcasters.
9. Many people enjoy s_ _ _ _ _ _ _ their favorite shows online.
10.The s_ _ _ _ _ _ _ _ _ gives access to exclusive content and features.

Verb patterns

Going to work in Africa

1 Read the conversation between Alan and Betty.
<u>Underline</u> the correct verb pattern.

GOING TO WORK IN AFRICA

Alan I'm thinking of (1) *apply / <u>applying</u>* for a job in East Africa, in Tanzania.

Betty Really? I used (2) *living / to live* there.

A I know, I remember you (3) *saying / to say*. I'd like (4) *asking / to ask* you about it, if that's OK.

B Go ahead. I'll do my best (5) *remembering / to remember*. I was there for two years but that was ten years ago.

A So, what was it like?

B It was a great experience. I liked everything except the climate. I didn't enjoy (6) *working / to work* in the heat.

A Ah, I can't help (7) *worrying / to worry* about the heat. Was it really difficult (8) *keep / to keep* cool?

B Not if you are lucky enough (9) *having / to have* air-conditioning, but we just had fans. And we were on the coast, near Dar es Salaam and it's really hot and humid there. Where is your job based?

A A town called Arusha.

B Oh, very nice. That's much cooler, inland, near Mt Kilimanjaro. I'll never forget (10) *climbing / to climb* Kilimanjaro.

A Oh, I'd love (11) *doing / to do* that and go on safari. Did you manage (12) *travel / to travel* round much?

B Oh yes, we went to most of the big game parks -you know, like the Serengeti Plain and the Ngorongoro Crater - that was so huge it made me (13) *feel / to feel* very small and the wildlife was fantastic. Once, on the Serengeti, a whole family of monkeys decided (14) *playing / to play* on the roof of our car. We didn't dare (15) *moving / move*.

A Which animals did you like best?

B Actually, I think it was the giraffes, I loved (16) *watching / watch* the way they raise their long necks to eat. Oh, and the lions, of course. Do you know that in Lake Manyara National Park the lions actually climb trees?

A Really? It all sounds so exciting. I'm definitely going to apply for the job. It's been great (17) *talk / talking* to you.

B Give me a ring and let me (18) *know / to know* how you get on.

3 Complete this résumé of the conversation with the verb in brackets in the correct form.

Alan is thinking of (1) applying (apply) for a job in Tanzania. He asks Betty (2) _____ (tell) him about it because she used (3) _____ (live) there. She tries (4) _____ (remember) what it was like. She says she found it difficult (5) (work) in the heat and the problem with (6) _____ (live) on the coast was that it was very hot and humid. However, she really enjoyed (7) _____ (go) on safari and loved (8) _____ (visit) the game parks. She saw lions (9) _____ (sleep) in trees and once lots of monkeys started (10) _____ (play) on the roof of her car. Betty helped Alan (11) _____(make) up his mind about the job and he's decided (12) _____ (apply) for it. He's promised (13) _____(ring) Betty and let her (14) _____ (know) if he gets it.

Reading

Exercise 6

A

You are going to read the text related to in the television in the modern world.

Television has been a staple of entertainment and information for decades, but its future is being reshaped by technological advancements and shifts in consumer behavior. As streaming services, on-demand content, and alternative viewing platforms continue to rise in popularity, traditional television is facing challenges and opportunities in adapting to the changing landscape.

The future of television seems to be centered around a more personalized viewing experience. With the proliferation of streaming services and smart TV technology, viewers have access to an unprecedented amount of content tailored to their preferences. This trend is likely to continue, with more emphasis on interactive and customizable features that cater to individual tastes.

Furthermore, the development of high-quality, immersive viewing experiences, such as virtual reality and augmented reality, holds promise for the future of television. These technologies have the potential to completely transform how audiences engage with content, blurring the lines between traditional television and interactive, sensory experiences.

As television evolves, the role of advertising will also undergo significant changes. With the ability to target specific audiences and measure engagement more accurately, advertisers will continue to shift their strategies towards digital and data-driven approaches.

However, challenges in the form of content piracy, data privacy concerns, and the need to adapt to rapidly evolving technological standards will necessitate ongoing innovation and adaptation within the television industry.

For statements 1-10 mark the sentences “True”/ “False”.

1.Traditional television is not facing any challenges in adapting to the changing landscape.
2.The future of television is expected to be more personalized, with a focus on tailored content.
3.Virtual reality and augmented reality are not mentioned as potential factors in transforming the future of television.
4. Streaming services and smart TV technology do not contribute to the proliferation of content tailored to individual preferences.
5.The role of advertising in television is not expected to undergo significant changes in the future.
6. Advertisers are likely to shift their strategies away from digital and data-driven approaches.
7.Content piracy, data privacy concerns, and technological standards are not mentioned as challenges for the television industry.
8.The future of television will include more interactive and customizable features.
9.The rise of streaming services and alternative viewing platforms is contributing to the changing landscape of television.
10.The text does not mention the potential for high-quality, immersive viewing experiences like virtual reality.

Read the text again. For questions 1-10 find the best answers:

1. What are some technological advancements that are shaping the future of television?
2. How are streaming services and on-demand content affecting traditional television?
3. What are some potential developments in personalized viewing experiences?
4. How do virtual reality and augmented reality technologies impact the future of television?
5. In what ways is the role of advertising changing in the television industry?

6. What are some challenges that television faces in the evolving media landscape?
7. Can you describe how data privacy concerns relate to the future of television?
8. What are the potential benefits and drawbacks of personalized viewing experiences?
9. How might the shift to digital and data-driven advertising strategies impact the television industry?
10. What potential opportunities do you see for the future of television with regards to technological innovation?

Media Start-up

Exercise 1

1.Work in pairs or in small groups

With a partner use the internet to find the information about some successful and unsuccessful startup launches. The group can discuss the key factors that contributed to the success or failure of these startups and analyze what strategies and decisions were crucial in the launch phase.

to think about

- market needs,
- potential target audiences
- unique selling propositions for their ideas.

In recent years, the IT industry has witnessed a burgeoning of startups, driven by technological innovation and a growing demand for digital solutions. These startups are disrupting traditional business models and reshaping industries with groundbreaking technologies. With a focus on agility and innovation, IT startups are spearheading the development of cutting-edge software, cloud-based services, and disruptive technologies such as artificial intelligence and blockchain. These companies are attracting top talent, securing venture capital funding, and accelerating the pace of digital transformation across various sectors. Despite the inherent risks and challenges, the entrepreneurial spirit and pioneering vision of IT startups continue to drive the industry forward, creating new opportunities and shaping the future of technology.

2.Match the following words with their definitions:

1.Burgeoning	**5. Pioneering**
2.Disrupting	**6. Agility**
3.Pioneering	**7. Venture capital**
4.Accelerating	**8. Entrepreneurial**

a. A type of financing for early-stage companies that have high growth potential.
b. The ability to move quickly and easily.
c. Leading the way in a particular field or activity.
d. Increasing the speed or rate of progress.
e. Developing rapidly.
f. Introducing a new idea or way of doing something.
g. The process of creating disturbances in the way that something is normally done.
h. Showing the willingness to take risks in order to make a profit.

Exercise 1

Fill in the blanks with the correct form of the given words:

1. IT startups have _____ (disrupt) traditional business models.
2. These companies frequently _____ (attract) top talent from around the world .
3. Venture capital is essential for _____ (accelerate) the growth of startups.
4. The industry is witnessing the _____ (burgeon) of innovative technologies.
5. Agility is key to _____ (spearhead) technological advancements.
6. The pioneering vision of startups is _____ (shape) the future of technology.
7.The _____ (entrepreneur) spirit drives these startups forward

Exercise

Complete the sentences with the *-ing* form of the verbs in the box.

walk	**give up**	**wonder**
mend	**work**	
help	**wake up**	**find**
watch	**live**	

1. I can't help wondering what life in Africa will be like.
2. _____ too much TV is bad for your eyes.
3. I'll repair your laptop for you. I'm good at ____things.
4 ._____a really good job these days is really difficult.
5. My children are afraid of _____in the dark, so we keep a light on at night.
6. Did you know that _____is one of the best forms of exercise?
7. Thank you for _____me. I really appreciate it.
8. _____ in a big city can be very stressful.
9. _____smoking is easy. I've done it hundreds of times!
10. I earned a lot of money by_____overtime.

Infinitives with or without to

Complete the sentences with the infinitive form of the verbs in the box.

buy pay follow join stay be carry learn hurt show

1. We can't afford _to pay_all our monthly bills.
2. It's impossible_____these instructions.
3. Let me____you how to do it.
4. I'm so sorry, I didn't mean_____your feelings.
5. The supervisor made the employees _____after work.
6. I want my children_____to play a musical instrument.
7. My boss persuaded me____the latest mobile phone.
8. Can you help me_____this box upstairs?
9. I've invited Mr Smith_____us after the meeting.
10. My parents have always encouraged me _____ independent.

6 Complete the table with the words in the box.

card program call number programme deal
virus laptop waves man news

business	

computer	
phone	
radio	

7 Complete the sentences with compound nouns from exercise 6.

1 Many people are worried about the latest _____which is infecting hundreds of computers every day.

2 It was very nice to meet you. Do you have a _____ with your address on it?

3 Do you listen to _____ on the computer? You can get all the channels online.

4 I wrote my own _____ to play poker on my laptop.

5 You had a _____ while you were out. Could you call them back on this number?

Student A

You work in a large office and you have found out that your boss, Student B, is leaving for another job abroad. You've also heard that your colleague, Marco, has been promoted and is going to replace Student B. You are really unhappy as nobody likes Marco and everyone loved working for Student B. You meet Student B at the coffee machine and have a chat.

Start: Hi. Congratulations on the new job. You must be really excited about it.

a Well, it's hard to **look on the bright** side when your new boss is going to be Marco. Anyway, you never liked him.

b No. Anyway, I guess we'll just have to do the best we can.

c Disappointed!? He told me he was **filled with despair**. The company only made Marco boss to save money. They know nobody likes him and loads of people will quit.

d Wow, that sounds promising! When can I start?

e Yes, we've all had our **ups and downs**. What were the company thinking when they appointed him? I'm really not looking forward to working for him.

f Yes, I'd **look on the bright side** if I were you. You know it's going to be absolutely terrible here without you.

Speaking Exercise

Coffee machine chat

Work in pairs. Student A and B work in the same company, but Student B, who is a very popular boss, is leaving the office for a better job in Spain and is going to be replaced by an unpopular colleague, Marco. Student A is talking to Student B at the coffe machine about how bad things are going to be after Student B's departure. Put the conversation in the correct order. Student A starts.

Student B

You are the boss of a large office but you are leaving this job to work for a bigger company in Spain. You have also heard that your colleague, Marco, has been promoted and is going to replace you. Everyone is really unhappy as nobody likes him and everyone loved working for you. You meet your colleague, Student A, at the coffee machine and have a chat.

g Come on, don't be so sad. Try to look at the positives of having a new boss.

Finish: Anyway, must dash. I've got a desk to tidy out! See you later.

h You're not alone. I think all your colleagues **have mixed feelings** about it, too. Jack said he was disappointed about the decision.

i Yes, I'm really **looking forward to** working in Spain and some new challenges. I'm really positive about the future.

j That's better, you're sounding a bit more **upbeat** now. If you're interested, I may be able to get you a job with me.

k I wouldn't say that, I have **mixed feelings** about him but he's good at his job. Sure, we've had a few problems over the years.

l I'm not sure that's true, but it's difficult not to be **filled with despair**. Anyway, whatever the reasons are, a decision like this is not progress or good for the company.

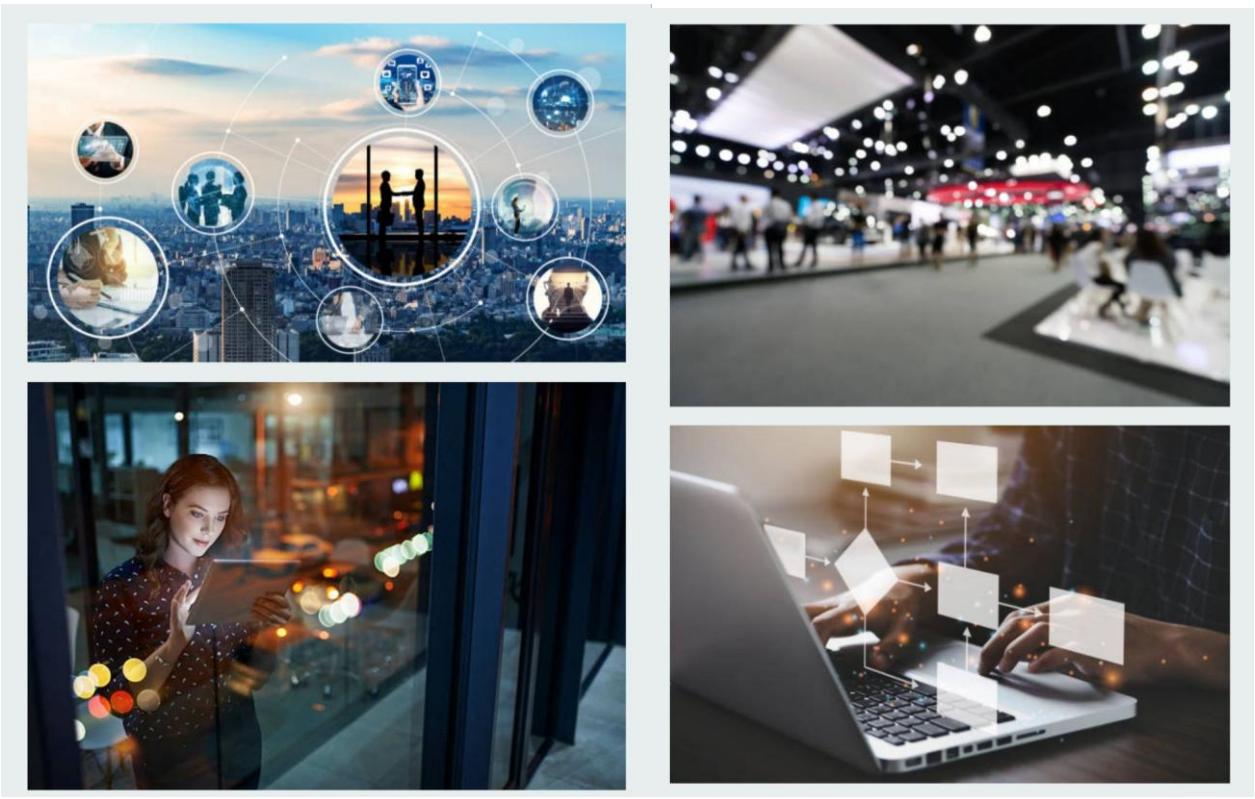
Writing

You are a budding entrepreneur with an innovative business idea. Write a plan outlining the steps you will take to successfully launch your start-up. Include details such as market research, funding strategies, marketing and promotion plans, and any other key considerations for getting your business off the ground.

Guidelines:

1. Begin by introducing your business idea and the problem or need it addresses in the market.
2. Discuss the importance of conducting thorough market research to understand your target audience, competitors, and industry trends.
3. Outline your funding strategies, including potential sources of investment, loans, or self-funding, and how you plan to manage your financial resources.
4. Describe your marketing and promotion plans, including how you will build brand awareness, attract customers, and differentiate your business from competitors.
5. Address any other key considerations such as legal and regulatory requirements, technology and infrastructure needs, and hiring a team.

Unit 8
Society



Exercise1

Match each word or phrase in column A with a meaning in column B.

1.physicist	a) noteworthy or important in quantity or quality;
2.prevent	b) the organized provision of medical services to individuals or communities to maintain or improve health;
3.shape society	c) actions or efforts that hinder rather than promote progress or success;
4.equipment	d) the influence and impact that societal factors have on the development and structure of a

	community;
5.postpone	e) a scientist specializing in the study of physics, the fundamental nature of matter, and the forces at work in the universe;
6.significant	f) tools, machinery, or other items necessary for a particular activity or purpose;
7.decrease pain	g) to delay or reschedule an event or action to a later time;
8.healthcare	h) an individual hired to work for an organization or business;
9.counterproductive	i) to lessen or reduce discomfort or suffering;
10. employee	j) to hinder or stop something from occurring or progressing;

Exercise2

Use a word from the box in each gap to complete the sentences. The first letter has been given to help you.

security	**information**	**technology**	**society**	**urban**
platforms	**automation**	**artificial**	**access**	**impact**

1. The rapid integration of technology in s _ _ _ _ _ _ has transformed how we communicate and connect with others.

2. As advancements continue, concerns about privacy and data s _ _ _ _ _ _ _ become increasingly prevalent in the technological landscape.

3. Educational institutions adapt to the digital era, leveraging t _ _ _ _ _ _ _ _ _ to enhance learning experiences and prepare students for the tech-driven workforce.

4. The accessibility of i_ _ _ _ _ _ _ _ _ _ through the internet has reshaped the way we gather knowledge, challenging traditional methods of acquiring information.

5. Smart cities utilize technology to optimize u _ _ _ _ living, improving efficiency in transportation, energy consumption, and overall resource management.

6. The rise of social media p _ _ _ _ _ _ _ _ has not only revolutionized communication but has also raised questions about the impact of technology on mental health and social dynamics.

7. A_ _ _ _ _ _ _ _ _ in industries raises discussions about job displacement and the need for retraining the workforce to meet the demands of evolving technologies.

8. The integration of a_ _ _ _ _ _ _ _ _ intelligence in healthcare introduces new possibilities for diagnosis and treatment, while ethical considerations surrounding its use continue to be debated.

9. The digital divide persists, highlighting the disparities in a_ _ _ _ _ to technology and its benefits among different socioeconomic groups.

10. E-waste management is a critical issue, necessitating responsible disposal practices to mitigate environmental i_ _ _ _ _ as technology continues to advance.

Exercise 3

affect paramedic cardiac ward medical expert suspected heart attack pain ambulance brim with technology civilian's medical records treat the patient

1.Emergency medical professional trained to provide pre-hospital care.

2.Specialized hospital unit focused on treating heart-related conditions.

3.To have an impact or influence on something.

4. Apprehension of a cardiovascular emergency.

5. Discomfort or soreness in the chest, often indicative of a cardiac issue.

6. Emergency vehicle equipped for transporting patients, particularly in critical situations.

7.: Abundant with advanced medical equipment and tools.

8. Documentation of an individual's health history and treatments.

9. Administer medical care to improve the patient's health.

10.: A professional with advance knowleage.

Exercise 4

Vocabulary

be and *have*

1 There are many expressions formed with the verbs *be* and *have*. Match *be* and *have* with their expressions.

crazy about	**about to**	**a lot in common**
fun		
a problem (with)	**sure of**	**time off work**
into		
off (work)	**a word with**	**keen on**

Be	have

2 Read conversations 1–3 and complete them with the correct form of the expressions from Exercise 1.

1 **A** Do you like Sally?
B Like her! I'm _____ her.
A I didn't *think she was your type.*
B What do you mean? We _____ great times together. We have a lot _____ .
A *Really?*
B *Well, yes. She's _____ opera and so am I.*
A *What? Since when have you been _____ opera?*
B *Well, I am now.*

2 **A** Can I have _____ with you?
B What about?
A Well, you*'ve had a lot of time* _____ *work lately.*
B I*'m sorry.*
A You _____ off four times last month.
B I know, I*'ve* _____ *a lot of family problems.*
A What kind of problems?
B Er - I*'d rather not say.*

3 ***A*** *I'll miss you.*
B *I'll miss you too.*
A *You're* _____ *on business so much.*
B *Don't worry. I'll be in* _____ *as soon as I get there.*
A *Look, you have to go. Your flight's* _____ *to board.*
B *Bye. Don't* _____ *too much fun while I'm away.*
A *You can be* _____ *of that! Bye,* _____*a good time!*

Exercise 5

Complete the sentences with the correct active or passive form of the verbs in brackets.

Technology update

Currently hundreds of trainee medical students (1)_____(teach) through the online virtual word Second Life. Once a day students (2)_____(send) to locations in the online world to treat computer-generated patients. When they are there, virtual equipment can_(3)_____(use) to check the patients at the scene and then the trainees can(4)_____ (decide)on the best course of action. The training tool has been a great success so far and from next year it(5) _____(use) at a number of medical schools around the world.

Pollution is an ever-growing problem in our cities, but in the near future a new system (6) _____(allow) traffic managers to identify pollution hotspots. It (7)_____(be) possible to alter the movement of cars through the big city by changing the traffic lights sequencing to direct cars away from problem areas. A computer (8) _____
(also/send) commuters warning text alerts on their mobile phones so they can decide how to avoid the hotspot. The new pollution monitoring system (9)_____(test) successfully for the first time at a trial last month and could (10) _____(introduce) next year.

Exercise 6

Reading

Life fifty years from now

1 The future is difficult to predict. What things in our lives today do you think scientists fifty years ago did NOT predict?

2 Look at the text *Life in 2060*. Read the introduction and paragraph headings 1–7 only. What do *you* predict about the topics?

An international group of forty scientists have made some very surprising predictions about the future. They say that in the next fifty years the way we live will change beyond our wildest dreams. Here are some of their predictions. You may find some of them surprising.
BEA ROSENTHAL reports.

1 Which sentences a–g do you think go with which topic?

a Lost limbs will regrow, hearts will regenerate.

b This knowledge will help reduce suicide rates, one of the major causes of death worldwide.

c . . . the most sensational discovery ever, that is, confirmation that life really does exist on Mars.

d It is now routine to extend the lives of laboratory animals by 40%.

e . . . your fridge will 'know' when you are low on milk or any other item, . . .

f Soon their existence will be no more controversial than the existence of other galaxies 100 years ago.

g It could cause a global revulsion against eating meat . . .

1 Read the article and put sentences a–g in the right place.

1 Life expectancy

Within 50 years, living to a 100 while still enjoying active, healthy lives will be the norm. Professor Richard Miller of the University of Michigan says: ‘ We will be able to do the same for humans’. So with regular injections, centenarians will be as vigorous as today's sixty-year-olds. Women will be able to give birth well into old age; their biological clocks could be extended by ten years.

2 Growing body parts

Professor Ellen Heber-Katz says: ‘People will take for granted that injured or diseased organs can be repaired in much the same way as we fix a car. Damaged parts will be replaced. Within 50 years whole-body replacement will be routine’. But doctors will need huge supplies of organs for transplant. Where will they come from? Scientists say these could be grown inside animals from human cells.

3 Understanding the brain

We don't yet know how the brain gives us our awareness of being alive. ‘But’, says Professor Susan Greenfield of Oxford University, ‘in 50 years’ time we may have a clearer idea of how the brain generates consciousness’. Studies of the brain and the nature of consciousness will bring much greater understanding of disorders such as schizophrenia ssion. Φ

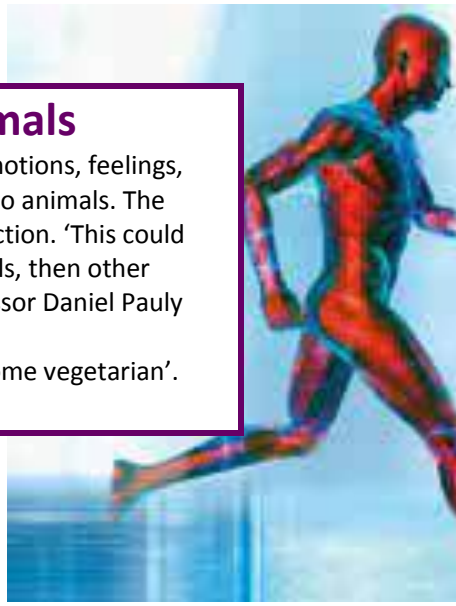
Other scientists go further than Professor Greenfield. They believe that by 2060 computers will develop their own consciousness and emotions. Human beings may eventually be replaced by computers in some areas of life

4 Understanding animals

Thanks to a device which can ‘read’ emotions, feelings, and thoughts, we will be able to ‘talk’ to animals. The story of *Dr Dolittle will be fact, not fiction. ‘This could first work with primates, then mammals, then other vertebrates, including fish’, says Professor Daniel Pauly fr

‘ , so we might all become vegetarian’.

* fictional character for children



5 Discovering aliens

A number of scientists predict that the biggest breakthrough in the next 50 years will be the discovery of extra-terrestrial beings. Dr Chris McKay of NASA says: ‘We may find evidence of alien life frozen in the ancient permafrost on Mars.’ Scientists hope that the current interest in space missions to this planet means that there is every chance of making g

Dr McKay also believes that evidence of alien life forms may even be found here on Earth.

6 Parallel universes

Advances in quantum physic will prove that there are parallel universes. In fact there may be an infinite number of them. These universes will contain space, time, and some of them may even contain you in a slightly different form. For years parallel universes only existed in the works of science fiction, but now Professor Max Tegmark says: ‘ ’.

7 Our homes

What might our houses be like in the second half of the 21st century? This is Professor Greenfield's prediction:

As you enter the living room, sensors will detect your presence and the walls will start to glow. Talk to the walls and, activated by your voice, they will change to a colour of your choice, 'pink' to 'green' to 'blue', whatever suits your mood.

Sink into your glowing cyber-armchair, relax in the knowledge that the house computer will perform all your everyday household tasks. The voice system in the chair will address you by name and advise a change in position that will be better for your spine.

In the kitchen, _____ and it will automatically send orders to the supermarket. However, it is in the kitchen where 'new' meets 'old'. Food remains in its old-fashioned form. Pills, so confidently predicted in the 20th-century to replace food, exist, but nobody wants them. There is too much pleasure in cooking, chewing and tasting all kinds of food.

Finally

Predicting the future has occupied mankind for generations. However, not always successfully. The huge influence of many of today's technical marvels, such as Internet or mobile phones, was never predicted.

Are these statements true (✓) or false (✗)?

1. Women will be able to give birth aged 100.
2. It will be possible to replace all the parts of the body.
3. Animal parts will be used for transplantation.
4. Scientists think that computers won't ever do the work of the human brain.
5. Scientists believe that if we can talk to animals, we won't want to eat them.
6. Alien life has already been found on Mars.
7. There could be an infinite number of other universes.
8. The walls in your house will change colour to suit your mood.
9. Your armchair will help you do your homework.
10. Pills will replace food.

What do you think?

Read the article again and underline the predictions that most surprise you.
Which do you believe will definitely happen?
Which might happen?
Which do you believe won't happen?
What predictions can you make? Choose from these topics:

transport	jobs	television	communication
the home	food	clothes	sport

Exercise 7

Watch the video and

https://youtu.be/giaK85VbfsY?si=prt679AWJWzPoTU2

Work in pairs and answer the following questions:

1. What is the primary advantage mentioned in the video regarding security camera systems?
2. How can security cameras prevent or help address criminal activities?
3. What is emphasized as a significant benefit of security cameras in terms of their placement?
4. How do security cameras contribute to maintaining a safe environment on a property?
5. In what ways can security cameras provide evidence in the event of a crime?
6. What potential downside is highlighted in the text regarding the breach of privacy associated with security cameras?
7. What is mentioned as a common concern about security cameras being hacked?
8. Besides the initial installation cost, what other factor is discussed as a potential financial burden for home or business owners?
9. What limitation of security cameras is pointed out in terms of their ability to deter criminals?
10. In the conclusion, what does the speaker encourage viewers to do if they have additional questions about security cameras?

Exercise 10

Writing

In today's interconnected world, surveillance has become an integral part of modern society, shaping the way we live, work, and interact. While advancements in technology offer benefits in security and convenience, they also raise concerns about privacy, ethics, and the balance between safety and individual freedoms.

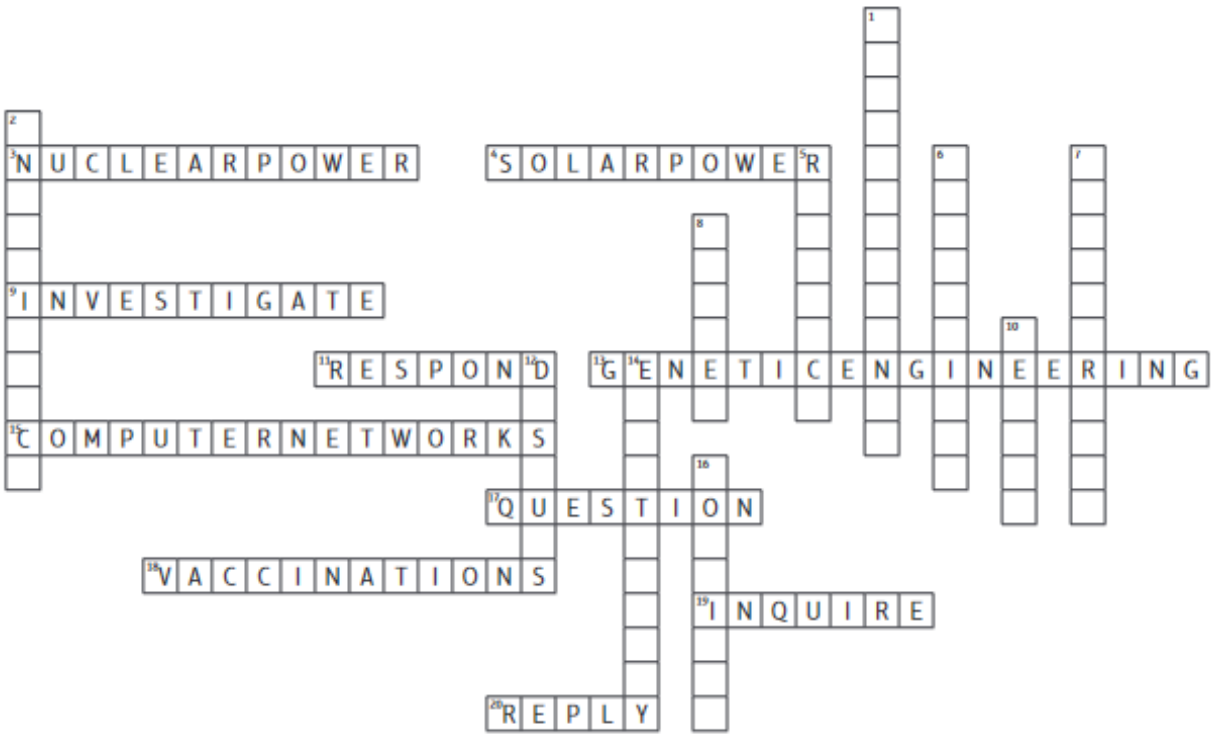
The proliferation of surveillance cameras in public spaces, facial recognition technology, and the extensive use of personal devices contribute to the constant monitoring of individuals. This increased visibility has undoubtedly aided law enforcement in crime prevention and investigation. However, it prompts a critical examination of the ethical implications surrounding the right to privacy.

Privacy advocates argue that unchecked surveillance poses a threat to personal freedoms, leading to a society where citizens are under constant scrutiny. The potential for abuse of surveillance technologies by both government and private entities raises questions about the limits of power and the need for robust regulations.

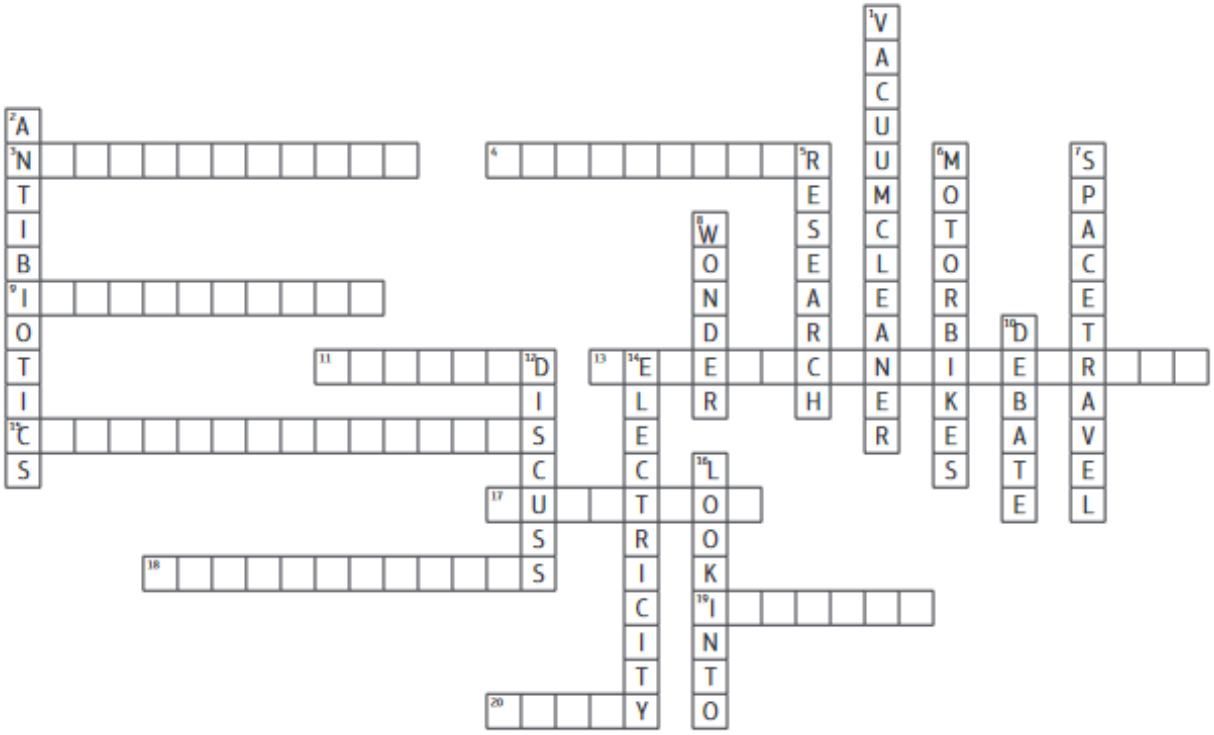
Moreover, the digital landscape introduces new dimensions to surveillance through data collection and online monitoring. Social media platforms, search engines, and other digital services often track and analyze user behavior, creating a complex web of information that can be exploited for various purposes. The challenge lies in finding a balance between innovation and protecting individual privacy.

As we navigate the intricacies of surveillance in modern society, it becomes crucial to establish clear boundaries and regulations. Striking a balance between security and personal privacy requires thoughtful consideration of legal frameworks, technological limitations, and public awareness. Only through a transparent and collaborative approach can we shape a future where surveillance serves its intended purpose without compromising the fundamental rights of individuals.

Crossword A



Crossword B



IT Glossary

1. Abstraction In a complex system or piece of software, abstraction is focusing on the most relevant details and hiding what can be ignored

2. AC – Alternating Current, the designation given to power that is delivered in the form of a sinusoidal wave form. AC won out over DC as the preferred method of delivering and using power in the industrial age due to the ease of voltage transformation using static devices (transformers).

3. ACAE – Air Conditioning Airflow Efficiency, the amount of heat removed per standard cubic foot of airflow per minute.

4. Access point – a device that allows wireless-equipped computers and other devices to communicate with a wired network.

5. Adaptive technology refers to modifying existing tech to make it more accessible for those with challenges or disabilities. This might mean using large monitors for easier reading or adjustable desks for people who rely on wheelchairs. Adaptive technology helps ensure people with disabilities can work productively, which creates a more inclusive tech experience.

6. Agile development — a software development philosophy that promotes a streamlined production and implementation pipeline for new software. Agile development ensures that IT teams working across large networks are able to work in tandem and without disruption to endpoint users.

7.AHU – Air Handling Unit

8. Air Mixing – the unintended mixing of cold and hot air.

9. Airside Economizer – a device consisting of fans, ducting and a control which utilizes outside air directly to cool the data center when environmental conditions allow. Air is typically filtered, brought into existing distribution system and then exhausted back to the atmosphere.

10. Aisle –the open space between rows of racks. Best-practice dictates racks should be arranged with consistent orientation of front and back to create ‘cold’ and ‘hot’ aisles.

11. Alias – a short, easy to remember name created for use in place of a longer, more complicated name; commonly used in e-mail applications. Also referred to as a "nickname".

12. AMS – Asset Management System, which is any process a company or organization uses to keep track of the equipment and inventory.

13. Anti-Spam – to prevent e-mail spam, both end users and administrators of e-mail systems use various anti-spam techniques. Some of these techniques have been embedded in products, services and software to ease the burden on users and administrators. No one technique is a complete solution to the spam problem, and each has trade-offs between incorrectly rejecting legitimate e-mail vs. not rejecting all spam, and the associated costs in time and effort. Dataprise Cloud-Based Anti-SPAM e-mail service eliminates the problem almost entirely. Our state-of-the-art solution lets users see only the e-mail they want — and filters out all of the viruses and e-solicitations they don't want before they reach user's computers and mobile devices.

14. Applet – a program capable of running on any computer regardless of the operating system. Many applets can be downloaded from various sites on the Internet.

15. Application – a program designed for a specific purpose, such as word processing or graphic design.

16. Array – data storage made up of multiple storage devices and cache memory (that's temporary memory for fast data access) block storage or block-level storage (noun) – data is saved in huge fixed-sized volumes called "blocks"; each block is treated as an individual storage device, has a unique identifier, and has its file system

17.**Artificial intelligence (AI)** with this tech, machines use information to teach themselves various problem-solving tasks for an ever-changing environment. AI can improve productivity, reduce costs and minimize human error, making it attractive to a range of industries and organizations.

18. ASCII file – a file that can be opened and read by standard text editor programs (for example, Notepad or Simple Text) on almost any type of computer. Also referred to as "plain text files". Examples: documents saved in ASCII format within word processors like Microsoft Word or WordPerfect; e-mail messages created by a program like Outlook; or HTML files.

19. ASHRAE – American Society of Heating, Refrigerating and Air-Conditioning Engineers is an international technical society organized to advance the arts and sciences of air management.

20. AT command set – an industry standard set of commands beginning with the letters "AT" that are used to control a modem. Example: ATDT tells the modem to dial (D) using touch-tone dialing (T). ATDP specifies pulse dialing (P). Also referred to as the "Hayes Command Set".

21. Augmented reality allows users to project digital overlays onto real-life sights and sounds. Because of augmented reality's robust applications, many companies see potential in leveraging it.

22. Authentication A – the process of identifying yourself and the verification that you're who you say you are. Computers where restricted information is stored may require you to enter your username and password to gain access.

23. Backbone – a term that is often used to describe the main network connections that comprise the Internet or other major network.

24. bandwidth – measurement of the amount of data that can be transmitted over a network at any given time. The higher the network's bandwidth, the greater the volume of data that can be transmitted.

25. BCP – Business Continuity Plan, or "BCP," is a set of documents, instructions, and procedures which enable a business to respond to accidents, disasters, emergencies, and/or threats without any stoppage or hindrance in its key operations. It is also called a business resumption plan, disaster recovery plan, or recovery plan.

26. BI – Business Intelligence - a recognized industry term for organizational analytics, including historical, current, and predictive views of business operations

27. Big data – user data gleaned from various sources, such as website traffic and social media content. When it comes to information technology terms, "big data" is one you'll hear a lot. Insights from big data analysis can give an organization crucial information about the future of its business.

28. binary file – a file that cannot be read by standard text editor programs like Notepad or Simple Text. Examples: documents created by applications such as Microsoft Word or WordPerfect or DOS files with the extension ".com" or ".exe".

29. BinHex – a common file format for Macintosh computers; it enables a binary file to be transferred over the Internet as an ASCII file. Using a program like Stuffit, a file can be encoded and renamed with an ".hqx" extension. The recipient uses a similar program to decode the file.

30. bit – a binary digit (either 0 or 1); it is the most basic unit of data that can be recognized and processed by a computer.

31. blended learning – an instruction that combines aspects of both face-to-face (F2F) and online learning experiences. An increasing number of courses at OSU now offer this type of mix.

32. blog refers to a weblog, a web page that contains journal-like entries and links that are updated daily for public viewing.

33. bluetooth – a wireless networking technology that allows users to send voice and data from one electronic device to another via radio waves.

34. BMP – bitmap file; a common image format on Windows computers. Files of this type usually have the suffix ".bmp" as part of their name.

35. bookmark – a feature available in certain programs like Internet Explorer, Firefox, and Acrobat Reader; it is a shortcut you can use to get to a particular web page (IE and Firefox) or to a specified location within a document (PDF).

36. boolean logic – a form of algebra in which all values are reduced to either true/false, yes/no, on/off, or 1/0.

37. bounce – a term applied to an e-mail message when it is returned to you as undeliverable.

38. Branch Circuit Monitoring (BCM) – a monitoring system used to record and monitor an individual electrical circuit. Typical parameters which are monitored include amperage, voltage, power factor, apparent power (volt amps), real power (watts) and energy usage (watt-hours). The branch circuit is typically defined to be a the circuit fed by a single breaker or 3 phase set of breakers in a multi-breaker panel**.**

39. bridge – a device used for connecting two Local Area Networks (LANs) or two segments of the same LAN; bridges forward packets without analyzing or re-routing them.

40. broadband connection – a high-speed Internet connection; at present, cable modems and DSL (Digital Subscriber Lines) are the two technologies that are most commonly available to provide such access.

41. browser – a program used to access World Wide Web pages. Examples: Firefox, Safari or Internet Explorer.

42. BTU –British Thermal Unit, a unit of energy. 1kWh = 3412btu. Cooling equipment capacity is commonly specified in btu/hr.

43. buffer – on a multitasking system, a certain amount of RAM that is allocated as a temporary holding area so that the CPU can manipulate data before transferring it to a particular device.

44. buffered – data that is collected but not made immediately available. Compare to a language translator who listens to a whole statement before repeating what the speaker has said rather than providing a word-by-word translation. Example: Streaming media data viewable using a tool like RealMedia Player is buffered.

45. Building Management System, synonymous with BAS, AMS and other computer-based tools used to manage data center assets.

46. business continuity – business continuity is the activity performed by an organization to ensure that critical business functions will be available to customers, suppliers, regulators, and other entities that must have access to those functions. These activities include many daily chores such as project management, system backups, change control, and help desk. Business Continuity is not something implemented at the time of a disaster; Business Continuity refers to those activities performed daily to maintain service, consistency, and recoverability.

47. business continuity plan – Business Continuity Plan or "BCP" is a set of documents, instructions, and procedures which enable a business to respond to accidents, disasters, emergencies, and/or threats without any stoppage or hindrance in its key operations. It is also called a business resumption plan, disaster recovery plan, or recovery plan. Also see above explanation.

48. Business intelligence (BI) uses internal, historical business data to make informed decisions. BI is often presented to executives in reports with visual formats that delineate particular risks and opportunities. BI can provide companies with a competitive market advantage, which means experienced IT analysts can have a direct impact on a company's success or failure.

49.Bypass Airflow – conditioned air that does not reach computer equipment. With fixed speed fans (common in DX equipment), some bypass air is inevitable and without containment, some bypass air is prudent. Unintended bypass air can occur by escaping through cable cut-outs, holes under cabinets, misplaced perforated tiles or holes in the computer room perimeter walls.

50. BYOD (Bring Your Own Device) – is a business and technology policy that allows employees to bring in personal mobile devices and use these devices to access company data, email, etc. This business philosophy means employees perform their work from personal devices as opposed to company-provided ones. Whether employees are using their own devices or company-issued ones, IT engineers must ensure that security and efficiency are not compromised.

51. byte – a group of adjacent binary digits that a computer processes as a unit to form a character such as the letter "C". A byte consists of eight bits.

52. Cable modem – a special type of modem that connects to a local cable TV line to provide a continuous connection to the Internet. Like an analog modem, a cable modem is used to send and receive data, but the difference is that transfer speeds are much faster. A 56 Kbps modem can receive data at about 53 Kbps, while a cable modem can achieve about 1.5 Mbps (about 30 times faster). Cable modems attach to a 10Base-T Ethernet card inside your computer.

53. Cache – many computational processes require data to be stored where it can be frequently accessed. The cache is where this kind of data is stored. By taking advantage of cached data, computational processes can be performed faster and more efficiently. Illustration with light blue IT symbols against a dark blue background. Refers to: 1) a region of computer memory where frequently accessed data can be stored for rapid access; or 2) a optional file on your hard drive where such data also can be stored. Examples: Internet Explorer and Firefox have options for defining both memory and disk cache. The act of storing data for fast retrieval is called "caching".

54.Captcha – a challenge-response test in the form of an image of distorted text the user must enter that to determine whether the user is human or an automated bot.

55. Carrier services – as authorized agents for the biggest names in the telecommunications industry, Dataprise will deliver the most appropriate and cost-effective carrier solutions for your organization. Dataprise will design, implement and support all of your Data, Internet, Voice and Conferencing solutions.

56. Case-sensitive – generally applies to a data input field; a case-sensitive restriction means lower-case letters are not equivalent to the same letters in upper-case. Example: "data" is not recognized as being the same word as "Data" or "DATA".

57. CBT – Computer-Based Training; a type of training in which a student learns a particular application by using special programs on a computer. Sometimes referred to as "CAI" (Computer-Assisted Instruction) or "CBI" (Computer-Based Instruction), although these two terms may also be used to describe a computer program used to assist a teacher or trainer in classroom instruction.

58. CD-R drive – a type of disk drive that can create CD-ROMs and audio CDs. CD-R drives that feature multi session recording allow you to continue adding data to a compact disk which is very important if you plan on using the drive for backup.

59. CD Roms – Compact Disk, Read Only Memory; a high-capacity secondary storage medium. Information contained on a CD is read-only. Special CD-ROM mastering equipment available in the OIT Multimedia Lab can be reserved for creating new CDs.

60. CD– CD-RW, CD-R disk – allows you to write data onto it multiple times instead of just once (a CD-R disk). With a CD-R drive you can use a CD-RW disk just like a floppy or zip disk for backing up files, as well as for creating CD-ROMs and audio CDs.

61. CGI – Common Gateway Interface; a mechanism used by most web servers to process data received from a client browser (e.g., a user). CGI scripts contain the instructions that tell the web server what to do with the data.

62. Chat – real-time communication between two or more users via networked-connected computers. After you enter a chat (or chat room), any user can type a message that will appear on the monitors of all the other participants. While most ISPs offer chat, it is not supported by OIT. However, the campus CMS (Carmen) supported by TELR does provide the capability for live chat among students participating on online courses.

63. Client – a program or computer that connects to and requests information from a server. Examples: Internet Explorer or Firefox. A client program also may be referred to as "client software" or "client-server software".

64. Client-server technology – refers to a connection between networked computers in which the services of one computer (the server) are requested by the other (the client). Information obtained is then processed locally on the client computer.

65. Cloud – the cloud is any network of servers that are connected to perform a specific function by working together. Being able to take advantage of cloud-based technology can translate to more efficient and cost-effective business processes. This is one of the most commonly heard tech terms today.

66. Cloud computing – a general term used to describe Internet services such as social networking services (e.g., Facebook and Twitter), online backup services, and applications that run within a Web browser. Cloud computing also includes computer networks that are connected over the Internet for server redundancy or cluster computing purposes.

67. CMS – 'Content Management System' is the collection of procedures used to manage work flow in a collaborative environment. In a CMS, data can be defined as nearly anything: documents, movies, pictures, phone numbers, scientific data, and so forth. CMSs are frequently used for storing, controlling, revising, semantically enriching, and publishing documentation. Serving as a central repository, the CMS

increases the version level of new updates to an already existing file. Version control is one of the primary advantages of a CMS.

68. Cookie – a small packet of information that is saved on a user's computer after visiting a website. This is one of the more common computer science words out there. If you're an IT technician in charge of managing a company website, then implementing cookies is a crucial step in providing users with a fast experience.

69. Compress – the process of making a file smaller so that it will save disk space and transfer faster over a network. The most common compression utilities are Winrar for PC or compatible computers (.zip files) and or Stuffit (.sit files) for Macintosh computers.

70. Connect – a term that commonly refers to accessing a remote computer; also a message that appears at the point when two modems recognize each other.

71. Content management –an umbrella term for the creation, storage and delivery of content such as video, images, text and audio. In any given business, being able to seamlessly create, store and deploy new content is critical. Maintaining and backing up the server space necessary to manage this content is a common responsibility of an IT engineer.

72. Courseware – software designed specifically for use in a classroom or other educational setting.

73. CPU – central processing unit; the part of a computer that oversees all operations and calculations.

74. Cross-platform refers to software that works across multiple operating systems, programming languages and physical devices. Efficient cross-platform business processes mean that everyone from employees to end users can access the same software, regardless of which platform they use.

75. Crowdsourcing using non-employees such as freelancers or volunteers to complete a given project. In IT, there may be a task that cannot be completed using only internal company resources. Crowdsourcing can help fill that gap in a timely fashion.

76. CSP – Cloud Service Provider; a business model for providing cloud services. To learn more please click here.

77. CSS – Cascading Style Sheet; A set of rules that define how web pages are displayed using CSS, designers can create rules that define how page.

78. Cursor – a special symbol that indicates where the next character you type on your screen will appear. You use your mouse or the arrow keys on your keyboard to move the cursor around on your screen.

79. Cyberspace – a term describing the world of computers and the society that uses them

80. Customer relationship management (CRM) – the total process of interacting with potential customers, moving them through the sales pipeline and analyzing the resulting data. For many businesses, managing potential leads is essential to their bottom lines. These companies depend on IT engineers to ensure that CRM software is running smoothly.

81. DaaS – Desktop-as-a-Service - also called virtual desktop or hosted desktop services, it is the outsourcing of a virtual desktop infrastructure (VDI) to a third- party service provider.

82.Daemon – a special small program that performs a specific task; it may run all the time watching a system, or it can take action only when a task needs to be performed. Example: If an e-mail message is returned to you as undeliverable, you may receive a message from the mailer daemon.

83. Data analytics the process by which raw data is translated into pertinent and useful conclusions. Knowledge is key, especially in competitive markets. The more you know how to translate raw data into usable information, the greater impact you can have at your organization.

84. Database – a collection of information organized so that a computer application can quickly access selected information; it can be thought of as an electronic filing system. Traditional databases are organized by fields, records (a complete set of fields), and files (a collection of records). Alternatively, in a Hypertext database, any object (e.g., text, a picture, or a film) can be linked to any other object.

84. Data center – the physical collection of servers that store and process a company's data. The upkeep of data centers, including software updates and hardware upgrades, falls under the responsibilities of the IT department. A data center (data centre / datacentre / datacenter) is a facility used to house computer systems and associated components, such as telecommunications and storage systems. It generally includes redundant or backup power supplies, redundant data communications connections, environmental controls (e.g., air conditioning, fire suppression) and security devices.

85. Data security – the protection of data from unauthorized access, alteration or corruption. Security is a high priority for any company working with data, as a breach can diminish customer trust. A background in cybersecurity offers real-life benefits in today's market.

86. Decompress – opposite of compressing a file; the process of restoring the file to its original size and format. The most common programs for decompressing files are Winrar for PC and compatible computers (.zip files) and Stuffit Expander (.sit files) for Macintosh computers.

87. Defragmentation – the process of rewriting parts of a file to contiguous sectors on a hard drive to increase the speed of access and retrieval.

88. Degauss – a process used to remove magnetism from a computer monitors. Note flat-panel displays do not have a degauss button since magnetism doesn't build up in them.

89. Desktop – on computers like IBM PC or compatibles and Macintoshes, the backdrop where windows and icons for disks and applications reside.

90. DevSecOps The combined practices of development, security and operations. This is a design philosophy for IT systems that incorporates security precautions into the deployment and upkeep of new patches, updates and software. DevSecOps is a crucial part of most modern IT infrastructures. It allows developers to create and deploy software quickly and in accordance with security protocols.

91. DHCP – Dynamic Host Configuration Protocol; a protocol that lets a server on a local network assign temporary IP addresses to a computer or other network devices.

92. Dialog box – sometimes referred to as a window; on a graphical user interface system, an enclosed area displayed by a program or process to prompt a user for entry of information in one or more boxes (fields).

93. Dial-Up Adapter – a network component within Windows that enables you to connect to a dial up server via a modem. Users running dial-up connections on Windows computers must have Dial-Up Adapter installed and properly configured.

94. Dial up connection – a connection from your computer that goes through a regular telephone line. You use special communications software to instruct your modem to dial a number to access another computer system or a network. May also be referred to as "dial up networking".

95. Digital asset – intellectual content which has been digitized and can be referenced or retrieved online; for example, PowerPoint slides, audio or video files, or files created in a word processing application, etc.

96. Digitize – sometimes referred to as digital imaging; the act of translating an image, a sound, or a video clip into digital format for use on a computer. Also used to describe the process of converting coordinates on a map to x,y coordinates for input to a computer. All data a computer processes must be digitally encoded as a series of zeroes and ones.

97. DIMM – Dual In-line Memory Module; a small circuit board that can hold a group of memory chips. A DIMM is capable of transferring 64 bits instead of the 32 bits each SIMM can handle. Pentium processors require a 64-bit path to memory so SIMMs must be installed two at a time as opposed to one DIMM at a time.

98. Directory – an area on a disk that contains files or additional divisions called "subdirectory" that keeps separate categories, such as by application, type, or usage.

99. Disaster recovery – disaster recovery as a service (DRaaS). The tools and practices that ensure the safety of the technology most critical to business functions. This includes being able to recover data in the event of a disaster. Disasters happen, but implementing DRaaS practices can mean the difference between a minor and a major business disruption. Disaster recovery is the process, policies and procedures related to preparing for recovery or continuation of technology infrastructure critical to an organization after a natural or human-induced disaster. Disaster recovery is a subset of business continuity. While business continuity involves planning for keeping all aspects of a business functioning in the midst of disruptive events, disaster recovery focuses on the IT or technology systems that support business functions. Dataprise's specialist Disaster Recovery Consulting Team can help you devise a near bulletproof Disaster Recovery Plan, so that you can have total piece of mind that your critical systems and processes are safe, and/or can recover from any potential data loss situation.

100. Disruptive technology – any technology that presents a groundbreaking change in how a particular industry or several industries operate. Keeping apprised of the latest and greatest technologies means you can implement the right ones more effectively.

101. Dither – a means by which the illusion of new colors and shades is created by varying the pattern of dots; the more dither patterns a device or program supports, the more shades of gray it can represent. Also referred to as halftoning in the context of printing.

102. DNS – Domain Name System; a service for accessing a networked computer by name rather than by numerical, (IP) address.

103. Domain – part of an Internet address. The network hierarchy consists of domains and subdomains. At the top are a number of major categories (e.g., com, edu, gov); next are domains within these categories (e.g., ohio-state); and then there are subdomains. The computer name is at the lowest level of the hierarchy.

104. Download – the process of transferring one or more files from a remote computer to your local computer. The opposite action is upload.

105. DPI – Dots per inch; a measure of a printer's resolution. The higher the number, the better the print quality. A minimum of 300 dpi usually is required for professional quality printing.

106. DRaaS – Disaster Recovery as a Service; a service that helps recover data in the event of a server failure or natural disaster.

107. Drag and drop – the act of clicking on one icon and moving it on top of another icon to initiate a specific action. Example: Dragging a file on top of a folder to copy it to a new location.

108. DSL – Digital Subscriber Line; an always on broadband connection over standard phone lines.

109. DVD – Digital video disk; a type of compact disc that holds far more information than the CD-ROMs that are used for storing music files. A DVD can hold a minimum of 4.7 GB, enough for a full-length movie. MPEG-2 is used to compress video data for storage on a DVD. DVD drives are backward-compatible and can play CD-ROMs.

110. DVD-RW, DVD-R disk – a DVD-RW disk allows you to write data onto it multiple times instead of just once like on a DVD-R disk. A DVD disk can hold a minimum of 4.7GB which is enough to store a full-length movie. Other uses for DVDs include storage for multimedia presentations that include both sound and graphics.

111. Enterprise architecture – the analysis of how a business is structured, where bottlenecks occur, and where there are areas for improvement. Understanding how a business operates can help you better manage your IT team and accomplish tasks in a timely manner.

112. EAP – Extensible Authentication Protocol; a general protocol for authentication that also supports multiple authentication methods.

113. EGA – Extended Graphics Adapter; a card (or board) usually found in older PCs that enables the monitor to display 640 pixels horizontally and 350 vertically.

114. eLearning – Electronic learning; applies to a wide scope of processes including Web-based learning, computer-based instruction, virtual classrooms, and digital collaboration. Content may be delivered in a variety of ways including via the Internet, satellite broadcast, interactive TV, and DVD- or CD-ROMs.

115. e-mail –electronic mail; the exchange of messages between users who have access to either the same system or who are connected via a network (often the Internet). If a user is not logged on when a new message arrives, it is stored for later retrieval.

116. e-mail archiving –email archiving is typically a stand-alone IT application that integrates with an enterprise email server, such a Microsoft Exchange. In addition to simply accumulating email messages, these applications index and provide quick, searchable access to archived messages independent of the users of the system, using different technical methods of implementation. The reasons a company may opt to implement an email archiving solution include protection of mission critical data, record retention for regulatory requirements or litigation, and reducing production email server load. Dataprise Cloud-based e-mail archiving service offers you the latest storage technologies in a secure, redundant and easy-to-use format. We take care of all the fine details, from configuring our archiving software to automatically transferring the files to our secure remote servers.

117 emoticon – a combination of keyboard characters meant to represent a facial expression. Frequently used in electronic communications to convey a particular meaning, much like tone of voice is used in spoken communications. Examples: the characters for a smiley face or for a wink.

118. Emulation refers to the ability of a program or device to imitate another program or device; communications software often include terminal emulation drivers to enable you to log on to a mainframe. There also are programs that enable a Mac to function as a PC.

119. Encryption the manipulation of data to prevent accurate interpretation by all but those for whom the data is intended.

120. EPS – encapsulated PostScript; a graphics format that describes an image in the PostScript language.

121. Ethernet – a popular network technology that enables data to travel at 10 megabits per second. Campus microcomputers connected to a network have Ethernet cards installed that are attached to Ethernet cabling. An Ethernet connection is often referred

to as a "direct connection" and is capable of providing data transmission speeds over 500 Kbps.

122. Ethernet card – an adapter card that fits into a computer and connects to Ethernet cabling; different types of adaptor cards fit specific computers. Microcomputers connected to the campus network have some type of Ethernet card installed. Example: computers in campus offices or in dorms rooms wired for ResNet. Also referred to as "Ethernet adapter".

123. Expansion card – also referred to as an expansion board; a circuit board you can insert into a slot inside your computer to give it added functionality. A card can replace an existing one or may be added in an empty slot. Some examples include sound, graphics, USB, Firewire, and internal modem cards.

124. Extension – a suffix preceded by a period at the end of a filename; used to describe the file type. Example: On a Windows computer, the extension ".exe" represents an executable file.

125. Female connector – a cable connector that has holes and plugs into a port or interface to connect one device to another.

126. Field –a single piece of information within a database (e.g., an entry for name or address). Also refers to a specific area within a dialog box or a window where information can be entered.

127. File – a collection of data that has a name (called the filename). Almost all information on a computer is stored in some type of file. Examples: data file (contains data such as a group of records); executable file (contains a program or commands that are executable); text file (contains data that can be read using a standard text editor).

128. Filter – refers to: 1) a program that has the function of translating data into a different format (e.g., a program used to import or export data or a particular file); 2) a pattern that prevents non-matching data from passing through (e.g., email filters); and 3) in paint programs and image editors, a special effect that can be applied to a bit map.

128. Finger – a type of directory service on many UNIX systems. Queries take the format firstname_lastname (e.g., jane_doe) or for more complete information,=firstname.lastname (e.g.,=jane_doe).

129. Firewall – a method of preventing unauthorized access to or from a particular network; firewalls can be implemented in both hardware and software, or both.

130. FireWire – a way to connect different pieces of equipment so they can quickly and easily share information. FireWire (also referred to as IEEE1394 High Performance

Serial Bus) is very similar to USB. It preceded the development of USB when it was originally created in 1995 by Apple. FireWire devices are hot pluggable, which means they can be connected and disconnected any time, even with the power on. When a new FireWire device is connected to a computer, the operating system automatically detects it and prompts for the driver disk (thus the reference "plug-and play").

131. Flash drive – a small device that plugs into computer's USB port and functions as a portable hard drive.

132. Flash memory – a type of memory that retains information even after power is turned off; commonly used in memory cards and USB flash drives for storage and transfer of data between computers and other digital products.

133. Folder – an area on a hard disk that contains a related set of files or alternatively, the icon that represents a directory or subdirectory.

134. Font – a complete assortment of letters, numbers, and symbols of a specific size and design. There are hundreds of different fonts ranging from businesslike type styles to fonts composed only of special characters such as math symbols or miniature graphics.

135. Frame – a feature of some web browsers that enables a page to be displayed in separate scrollable windows. Frames can be difficult to translate for text-only viewing via ADA guidelines, so their use is increasingly being discouraged.

136. Freeware – copyrighted software available for downloading without charge; unlimited personal usage is permitted, but you cannot do anything else without express permission of the author. Contrast to shareware; copyrighted software which requires you to register and pay a small fee to the author if you decide to continue using a program you download.

137. Fragmentation – the scattering of parts of the same disk file over different areas of a disk; fragmentation occurs as files are deleted and new ones are added.

138. FTP – File Transfer Protocol; a method of exchanging files between computers via the Internet. A program like WS_FTP for IBM PC or compatibles or Fetch for Macintosh is required. Files can contain documents or programs and can be ASCII text or binary data.

139. General data protection regulation (GDPR) Implemented in 2018 by the European Union (EU), these laws established the data protection and privacy guidelines for anyone handling data that stays within or passes through the EU. Along with other aspects of regulatory compliance, keeping your data infrastructure in line with legal

frameworks such as the GDPR is a prerequisite for many businesses working with personal data.

140. Generative AI –a type of artificial intelligence (AI) technology that can create multiple types of content, including images, audio, text, and synthetic data.

141. GIF – Graphics Interchange Format; a format for a file that contains a graphic or a picture. Files of this type usually have the suffix ".gif" as part of their name. Many images seen on web pages are GIF files.

142. Gigabyte (Gig or GB) – 1024 x 1024 x 1024 (2 to the 30th power) bytes; it's usually sufficient to think of a gigabyte as approximately one billion bytes or 1000 megabytes.

143. GPS – Global Positioning System; a collection of Earth-orbiting satellites. In a more common context, GPS actually refers to a GPS receiver which uses a mathematical principle called "trilateration" that can tell you exactly where you are on Earth at any moment.

144. Graphical user interface (GUI) – the visual representation of computer processes that allows users to accomplish tasks without the need for command line code. Implementing GUI allows for a more accessible user experience that can help customers or other employees use a given software with ease.

145. Green technology – technological products and innovations that focus on reversing or mitigating ecological damage. Green technology is an ever-growing field, requiring capable IT personnel to address the technological needs of businesses while mitigating any negative environmental impact.

146. Greyware – Greyware (or grayware) refers to a malicious software or code that is considered to fall in the "grey area" between normal software and a virus. Greyware is a term for which all other malicious or annoying software such as adware, spyware, trackware, and other malicious code and malicious shareware fall under.

147. GUI – Graphical user interface; a mouse-based system that contains icons, drop-down menus, and windows where you point and click to indicate what you want to do. All new Windows and Macintosh computers currently being sold utilize this technology.

148. Handshaking – the initial negotiation period immediately after a connection is established between two modems. This is when the modems agree about how the data will be transmitted (e.g., error correction, packet size, etc.). The set of rules they agree on is called the protocol.

149. Hard disk – a storage device that holds large amounts of data, usually in the range of hundreds to thousands of megabytes. Although usually internal to the computer, some types of hard disk devices are attached separately for use as supplemental disk space. "Hard disk" and "hard drive" often are used interchangeably but technically, hard drive refers to the mechanism that reads data from the disk.

150. Hardware – the physical components of a computer including the keyboard, monitor, disk drive, and internal chips and wiring. Hardware is the counterpart of software.

151. Header – the portion of an e-mail message or a network newsgroup posting that precedes the body of the message; it contains information like who the message is from, its subject, and the date. A header also is the portion of a packet that proceeds the actual data and contains additional information the receiver will need.

152. Healthcare IT – an umbrella term for information technology handling medical data, such as patient records or healthcare data points. The healthcare sector uses information technology to derive lifesaving insights from multiple data sources. At the same time, a focus on cybersecurity in IT management is paramount to keeping sensitive data safe.

153. Help desk – a help desk is an information and assistance resource that troubleshoots problems with computers or similar products. Corporations often provide help desk support their employees and to their customers via a toll-free number, website and/or e-mail. Dataprise offers 3 types of help desk service: 24 x 7 Support365™, Outsourced and private labeled.

154. Helper application – a program used for viewing multimedia files that your web browser cannot handle internally; files using a helper application must be moved to your computer before being shown or played. Contrast to a plug-in which enables you to view the file over the Internet without first downloading it.

155. Home page – a document you access using a web browser like Firefox or Internet Explorer. It usually refers to the first page of a particular web site; it also is the page that automatically loads each time you start your browser.

156. Host –a computer accessed by a user working at a remote location. Also refers to a specific computer connected to a TCP/IP network like the Internet.

157. HTML –HyperText Markup Language; a language used for creating web pages. Various instructions and sets of tags are used to define how the document will look.

158. HTTP – HyperText Transfer Protocol; a set of instructions that defines how a web server and a browser should interact. Example: When you open a location (e.g., enter a URL) in your browser, what actually happens is an HTTP command is sent to the web server directing it to fetch and return the requested web page.

159.Hyperlink – connects one piece of information (anchor) to a related piece of information (anchor) in an electronic document. Clicking on a hyperlink takes you to directly to the linked destination which can be within the same document or in an entirely different document. Hyperlinks are commonly found on web pages, word documents and PDF files.

160. Hypertext – data that contains one or more links to other data; commonly seen in web pages and in online help files. Key words usually are underlined or highlighted. Example: If you look for information about "Cats" in a reference book and see a note that says "Refer also to Mammals" the two topics are considered to be linked. In a hypertext file, you click on a link to go directly to the related information.

161. Hypervisor – a hypervisor, also called virtual machine manager (VMM), is one of many hardware virtualization techniques that allow multiple operating systems, termed guests, to run concurrently on a host computer. It is so named because it is conceptually one level higher than a supervisory program. The hypervisor presents to the guest operating systems a virtual operating platform and manages the execution of the guest operating systems. Multiple instances of a variety of operating systems may share the virtualized hardware resources. Hypervisors are installed on server hardware whose only task is to run guest operating systems. Non-hypervisor virtualization systems are used for similar tasks on dedicated server hardware, but also commonly on desktop, portable and even handheld computers.

162. IaaSI – Infrastructure as a Service; In the most basic cloud-service model, providers of IaaS offer computers - physical or (more often) virtual machines - and other resources.

163. Icon – on a system like Windows or Macintosh that uses a graphical user interface (GUI), a small picture or symbol that represents some object or function. Examples: a file folder for a directory; a rectangle with a bent corner for a file; or a miniature illustration for a program.

164. ICS – Internet Connection Sharing; a feature in Windows that when enabled, allows you to connect computer on your home network to the Internet via one computer.

165. IEEE 1394 port – an interface for attaching high-speed serial devices to your computer; IEEE 1394 connectors support plug and play.

166. Image map – a graphic overlay that contains more than one area (or hot spot) which is clickable and links to another web page or anchor. Image maps provide an alternative to text links for directing the user to additional information.

167. IMAP – Internet Message Access Protcol. A method of accessing e-mail messages on a server without downloading them to your local hard drive; it is the main difference between IMAP and POP3 which requires messages to be downloaded to a user's hard drive before the message can be read.

168. Information technology infrastructure library (ITIL) – these are standardized practices followed by most IT departments. An ITIL accreditation is a major asset in the field of IT, as it demonstrates a soup-to-nuts knowledge of managing complex IT resources.

169. Internet – a worldwide network based on the TCP/IP protocol that can connect almost any make or model of popular computers from micros to supercomputers. Special programs called "clients" enable users with a network connection to do things like process e-mail or browse web sites using the familiar interface of a desktop computer.

170. Internet Domain Management – the process of choosing, hosting, maintaining and securing internet domain(s).

171. Internet Explorer –a client program from Microsoft that comes pre installed on most new PC or compatible computers; enables you to browse the World Wide Web.

172. Internet radio – an audio broadcasting service transmitted via the Internet; broadcasts consist of a continuous stream. A drawback is the inability to control selection as you can when listening to traditional radio broadcasting.

173. IP address – Internet Protocol address; every computer connected to the Internet has a unique identifying number. Example: 192.168.100.2.

174. IRC – Internet Relay Chat; a system that enables two or more Internet users to conduct online discussions in real time.

175. IRQ – Interrupt request; refers to a number associated with a serial port on an PC or compatible computer. It usually can be changed by flipping a dip switch. Occasionally, when you're using a modem connect to the Internet, you may need to adjust the IRQ number assigned to the serial port which connects the modem to avoid conflicts with another device like your mouse.

176. ISP – Internet Service Provider; an organization or company that provides Internet connectivity.

177. IT Assessment – an IT Assessment is the practice of gathering information on part or whole of a IT network infrastructure, and then presented in a detailed report. This report typically analyzes the current state or health of technology or services and identifies areas needing improvement or prepare for a some type of system or application upgrade. A IT Assessment can be performed in-house or outsourced to an IT vendor. Dataprise has developed a comprehensive assessment process that includes conducting thorough, in-depth reviews all of your critical technology areas, evaluating them against best practices and then providing you with a roadmap to better leverage your IT as a competitive advantage.

178. IT governance –the rules and processes that define differing degrees of authority and access in an IT infrastructure. Defining who has access to certain network resources is an important aspect of cybersecurity as is making sure unauthorized users do not have access to key IT controls.

179. IV&V – Independent Verification and Validation (IV&V) is the process of checking that a project, service, or system meets specifications and that it fulfills its intended purpose. If you've recently implemented a new technology solution, you may want an independent party to assess the quality of the work.

180. Java – a general purpose programming language commonly used in conjunction with web pages that feature animation. Small Java applications are called Java applets; many can be downloaded and run on your computer by a Java-compatible browser like Firefox or Internet Explorer.

181. Java Script – a publicly available scripting language that shares many of the features of Java; it is used to add dynamic content (various types of interactivity) to web pages.

182. JPEG – Joint Photographic Experts Group; a graphics format which compresses an image to save space. Most images imbedded in web pages are GIFs, but sometimes the JPEG format is used (especially for detailed graphics or photographs). In some cases, you can click on the image to display a larger version with better resolution.

183. Justified – a word processing format in which text is formatted flush with both the left and right margins. Other options include left justified (text is lined up against the left margin) and right justified (text is lined up against the right margin).

184. K – an abbreviation for kilobyte; it contains 1,024 bytes; in turn 1,024 kilobytes is equal to one megabyte.

185. Kbps – Kilobits per second; a measure of data transfer speed; one Kbps is 1,000 bits per second. Example: a 28.8 Kbps modem.

186. Kerberos – an authentication system developed at the Massachusetts Institute of Technology (MIT); it enables the exchange of private information across an open network by assigning a unique key called a "ticket" to a user requesting access to secure information.

187. Kerning – the amount of space between characters in a word; in desktop publishing, it is typically performed on pairs of letters or on a short range of text to fine-tune the character spacing.

188. Keyword most often refers to a feature of text editing and database management systems; a keyword is an index entry that correlates with a specific record or document.

189. Kilobyte –kilobyte (K, KB, or Kb): 1,024 (2 to the 10th power) bytes; often used to represent one thousand bytes. Example: a 720K diskette can hold approximately 720,000 bytes (or characters).

190. Knowledge base – a database where information common to a particular topic is stored online for easy reference; for example, a frequently-asked questions (FAQ) list may provide links to a knowledge base.

191. LAN – Local area network; a network that extends over a small area (usually within a square mile or less). Connects a group of computers for the purpose of sharing resources such as programs, documents, or printers. Shared files often are stored on a central file server.

192. Laser printer – a type of printer that produces exceptionally high quality copies. It works on the same principle as a photocopier, placing a black powder onto paper by using static charge on a rolling drum.

193. Leading – the vertical space between lines of text on a page; in desktop publishing, you can adjust the leading to make text easier to read.

194. Learning management system (LMS) – software used for developing, using, and storing course content of all types. Information within a learning management system often takes the form of learning objects.

195. Learning object – a chunk of course content that can be reused and independently maintained. Although each chunk is unique in its content and function, it must be able to communicate with learning systems using a standardized method not dependent on the system. Each chunk requires a description to facilitate search and retrieval.

196. Link –another name for a hyperlink.

197. LINUX – an open-source operating system that runs on a number of hardware platforms including PCs and Macintoshes. Linux is freely available over the Internet.

198. ListProcessor – a program that manages electronic mailing lists; OIT is responsible for the ListProcessor software and also handles requests from the OSU community or new mailing lists.

199. LISTSERV, Listserver – an electronic mailing list; it provides a simple way of communicating with a large number of people very quickly by automating the distribution of electronic mail. At OSU, mailing lists are used not only for scholarly communication and collaboration, but also as a means of facilitating and enhancing classroom education.

200. Log in; log on – the process of entering your username and password to gain access to a particular computer; e.g., a mainframe, a network or secure server, or another system capable of resource sharing.

201. MaaS – Metal-as-a-Service; The dynamic provisioning and deployment of whole physical servers, as opposed to the provisioning of virtual machines.

202. MAC – Media Access Control; The hardware address of a device connected to a shared network.

203. Machine learning – the use of computer algorithms to teach computers how to make new predictions from existing data sets. Machine learning technologies have been used to do everything from predicting market trends to analyzing cancer cells. Their versatility and demand across industries make them vital to know for any IT professional looking to work at the cutting edge.

204. Macintosh – a personal computer introduced in the mid-1980s as an alternative to the IBM PC. Macintoshes popularized the graphical user interface and the 3 1/2 inch diskette drive.

205. Mail server – a networked computer dedicated to supporting electronic mail. You use a client program like Microsoft Outlook for retrieving new mail from the server and for composing and sending messages.

206. Mailing list – a collection of e-mail addresses identified by a single name; mailing lists provide a simple way of corresponding with a group of people with a common interest or bond. There are two main types of lists: 1) one you create within an e-mail program like Outlook that contains addresses for two or more individuals you frequently send the same message; and 2) a Listserve type that requires participants to be subscribed (e.g., a group of collaborators, a class of students, or often just individuals interested in discussing a particular topic).

207. Main memory – the amount of memory physically installed in your computer. Also referred to as "RAM".

208. Mainframe – a very large computer capable of supporting hundreds of users running a variety of different programs simultaneously. Often the distinction between small mainframes and minicomputers is vague and may depend on how the machine is marketed.

209. Male connector – a cable connector that has pins and plugs into a port or interface to connect one device to another.

210. Malware – software programs designed to damage or do other unwanted actions on a computer; common examples of malware include viruses, worms, trojan horses, and spyware.

211. Managed Workstations – a Managed Workstation reduces downtime, improves maintenance, increases productivity and data security through an effective blend of Help Desk and on-site support and centralized deployment of software patches and virus protection updates. Dataprise can deliver expert support at the workstation level for all of your users, at any location. Using our DesktopStreaming™ live online support technology, our highly qualified certified technical staff, working remotely, are able to see exactly what is happening on a user's computer screen — allowing us to quickly isolate issues and begin remediation.

212. MAPI – Messaging Application Programming Interface; a system built into Microsoft Windows that enables different e-mail programs to interface to distribute e-mail. When both programs are MAPI-enabled, they can share messages.

213. Marketing automation – platforms that facilitate multichannel marketing messaging simultaneously and automatically. Marketing automation allows marketing departments to increase their output while tailoring the messaging to specific customers. IT professionals who can implement this technology can greatly benefit their company's marketing efforts.

214. MDM – Mobile Device Management; Any routine or tool intended to distribute applications, data, and configuration settings to mobile communications devices. The intent of MDM is to optimize the functionality and security of a mobile communications network. MDM must be part of a coherent BYOD strategy.

215. Megabyte (Meg or MB) – 1,024 x 1,024 (2 to the 20th power) bytes; it's usually sufficient to think of a megabytes as one million bytes.

216. MHz or mHz – Megahertz; a measurement of a microprocessor's speed; one MHz represents one million cycles per second. The speed determines how many instructions

per second a microprocessor can execute. The higher the megahertz, the faster the computer.

217. Menu – in a graphical user interface, a bar containing a set of titles that appears at the top of a window. Once you display the contents of a menu by clicking on its title, you can select any active command (e.g., one that appears in bold type and not in a lighter, gray type).

218. Microsoft Exchange – Microsoft Exchange Server is the server side of a client–server, collaborative application product developed by Microsoft. It is part of the Microsoft Servers line of server products and is used by enterprises using Microsoft infrastructure products. Exchange's major features consist of electronic mail, calendaring, contacts and tasks; support for mobile and web-based access to information; and support for data storage. Dataprise has a 100% hosted Exchange solution that includes clustered and redundant Microsoft Exchange servers that provide more then enough horsepower to support all of your organization's messaging needs. And we handle the entire set-up and configuration for you.

219. Microsoft Windows – a group of operating systems for PC or compatible computers; Windows provides a graphical user interface so you can point and click to indicate what you want to do.

220. MIME – Multipurpose Internet Mail Extensions; a protocol that enables you to include various types of files (text, audio, video, images, etc.) as an attachment to an e-mail message.

221. Modem – a device that enables a computer to send and receive information over a normal telephone line. Modems can either be external (a separate device) or internal (a board located inside the computer's case) and are available with a variety of features such as error correction and data compression.

222. Moderator – a person who reviews and has the authority to block messages posted to a supervised or "moderated" network newsgroup or online community.

223. Monitor – the part of a computer that contains the screen where messages to and from the central processing unit (CPU) are displayed. Monitors come in a variety of sizes and resolutions. The higher the number of pixels a screen is capable of displaying, the better the resolution. Sometimes may be referred to as a CRT.

224. Mouse – a handheld device used with a graphical user interface system. Common mouse actions include: 1) clicking the mouse button to select an object or to place the cursor at a certain point within a document; 2) double-clicking the mouse button to start

a program or open a folder; and 3) dragging (holding down) the mouse button and moving the mouse to highlight a menu command or a selected bit of text.

225. MPEG – Motion Picture Experts Group; a high quality video format commonly used for files found on the Internet. Usually a special helper application is required to view MPEG files.

226. MRB – Managed Remote Back Up; a service that provides users with a system for the backup, storage, and recovery of data using cloud computing.

227. MSP – Managed Service Provider; a business model for providing information-technology services.

228. MSSP – an MSSP is an organization that takes care of businesses' security-related needs, such as threat detection, risk assessment, and incident response.

229. Multimedia –the delivery of information, usually to a personal computer, in a combination of different formats including text, graphics, animation, audio, and video.

230. Multitasking – the ability of a CPU to perform more than one operation at the same time; Windows and Macintosh computers are multitasking in that each program that is running uses the CPU only for as long as needed and then control switches to the next task.

231. NaaS – Network as a Service; a category of cloud services that provides users with the capability of where the capability provided to the cloud service user is to usinge network/transport connectivity services and/or inter-cloud network connectivity services.

232. Nameserver – a computer that runs a program for converting Internet domain names into the corresponding IP addresses and vice versa.

233. NAT – Network Address Translation; a standard that enables a LAN to use a set of IP addresses for internal traffic and a single IP address for communications with the Internet.

234. Natural language processing (NLP) – platforms that facilitate multichannel marketing messaging simultaneously and automatically.

235. Network – a group of interconnected computers capable of exchanging information. A network can be as few as several personal computers on a LAN or as large as the Internet, a worldwide network of computers.

236. Network adapter – a device that connects your computer to a network; also called an adapter card or network interface card.

237. Network hub – a common connection point for devices on a network.

238. NNTP – Network News Transport Protocol; the protocol used for posting, distributing, and retrieving network news messages.

239. Network monitoring – Dataprise Cloud-based Network Monitoring service, can configure and remotely monitor all of your important network systems (e-mail, servers, routers, available disk space, backup applications, critical virus detection, and more). If our system detects a problem, it alerts the Dataprise Technical Support Center, so we can take corrective action. Depending on prearranged instructions from your own network engineers, we'll correct the problem immediately, wait until the next business day or simply notify you of the issue.

240. Network security – network security consists of the provisions and policies adopted by a network administrator to prevent and monitor unauthorized access, misuse, modification, or denial of the computer network and network-accessible resources. Network Security is the authorization of access to data in a network, which is controlled by a network administrator. Dataprise uses state-of-the-art network security techniques while providing authorized personnel access to important files and applications. Every organization's needs are different and hackers are always adapting their techniques, so we are extremely serious about staying up to date with the latest network security tools, threats and industry developments.

241. OCR – Optical character recognition; the act of using a visual scanning device to read text from hard copy and translate it into a format a computer can access (e.g., an ASCII file). OCR systems include an optical scanner for reading text and sophisticated software for analyzing images.

242. on-Cloud – Dataprise realizes that businesses are moving more and more of their critical infrastructure to Cloud-based providers. 'On-Cloud' is currently our own term coined for providing management and support for your Cloud-based systems and processes.

243. on-site – at-place-of-work-or-business support, typically provided by a technically qualified individual.

244. Online – a term that has commonly come to mean "connected to the Internet". It is also used to refer to materials stored on a computer (e.g., an online newsletter) or to a device like a printer that is ready to accept commands from a computer.

245. Open Type – a format for scalable computer fonts. It was built on its predecessor TrueType, retaining TrueType's basic structure and adding many intricate data

structures for prescribing typographic behavior. OpenType is a registered trademark of Microsoft Corporation.

246. Open source – software whose code is freely available and that can be modified by individual developers. Open-source software is available for a number of IT processes and can help keep IT costs down.

247. PaaS – Platform as a Service, in the PaaS model, cloud providers deliver a computing platform that typically including an operating system, programming language execution environment, database, and web server.

248. Packet –a unit of transmission in data communications. The TCP/IP protocol breaks large data files into smaller chunks for sending over a network so that less data will have to be re-transmitted if errors occur.

249. Palette – the range of colors a computer or an application is able to display. Most newer computers can display as many as 16 million colors, but a given program may use only 256 of them. Also refers to a display box containing a set of related tools within a desktop publishing or graphics design program.

250. Page – refers to an HTML document on the World Wide Web or to a particular web site; usually pages contain links to related documents (or pages).

251. Parallel port – an interface on a computer that supports transmission of multiple bits at the same time; almost exclusively used for connecting a printer. On IBM or compatible computers, the parallel port uses a 25-pin connector. Macintoshes have an SCSI port that is parallel, but more flexible in the type of devices it can support.

252. Password – a secret combination of characters used to access a secured resource such as a computer, a program, a directory, or a file; often used in conjunction with a username.

253. PC – usually refers to an IBM PC or compatible, or when used generically, to a "personal computer". In a different context, PC also is an abbreviation for "politically correct."

254. PDA –Personal Digital Assistant; a small hand-held computer that in the most basic form, allows you to store names and addresses, prepare to-do lists, schedule appointments, keep track of projects, track expenditures, take notes, and do calculations. Depending on the model, you also may be able to send or receive e-mail; do word processing; play MP3 music files; get news, entertainment and stock quotes from the Internet; play video games; and have an integrated digital camera or GPS receiver.

255. PDF – Portable Document Format; a type of formatting that enables files to be viewed on a variety computers regardless of the program originally used to create them. PDF files retain the "look and feel" of the original document with special formatting, graphics, and color intact. You use a special program or print driver (Adobe Distiller or PDF Writer) to convert a file into PDF format.

256. Peer-to-peer – a type of connection between two computers; both perform computations, store data, and make requests from each other (unlike a client-server connection where one computer makes a request and the other computer responds with information).

257. Perl – Practical Extraction and Report Language; a programming language that is commonly used for writing CGI scripts used by most servers to process data received from a client browser.

258. Personality – a method of setting up a computer or a program for multiple users. Example: In Windows, each user is given a separate "personality" and set of relevant files.

259. PGP– Pretty good privacy; a technique for encrypting e-mail messages. PGP uses a public key to give to anyone who sends you messages and a private key you keep to decrypt messages you receive.

260. Ph – a type of directory service often referred to as a "phone book". When accessing this type of directory service, follow the directions from the particular site for looking up information.

261. Phishing – a con that scammers use to electronically collect personal information from unsuspecting users. Phishers send e-mails that appear to come from legitimate websites such as eBay, PayPal, or other banking institutions asking you to click on a link included in the email and then update or validate your information by entering your username and password and often even more information, such as your full name, address, phone number, social security number, and credit card number.

262. PING – Packet Internet Groper; a utility used to determine whether a particular computer is currently connected to the Internet. It works by sending a packet to the specified IP address and waiting for a reply.

263. Pixel – stands for one picture element (one dot on a computer monitor); commonly used as a unit of measurement.

264. Plug-in – a program used for viewing multimedia files that your web browser cannot handle internally; files using a plug-in do not need to be moved to your computer before being shown or played. Contrast to a helper application which requires the file to

first be moved to your computer. Examples of plug-ins: Adobe Flash Player (for video and animation) and Quicktime (for streamed files over the Internet).

265. Plug and play – a set of specifications that allows a computer to automatically detect and configure a device and install the appropriate device drivers.

266. POP – Post Office Protocol; a method of handling incoming electronic mail. Example: E-mail programs may use this protocol for storing your incoming messages on a special cluster of servers called pop.service.ohio-state.edu and delivering them when requested.

267. Pop-up blocker – any application that disables the pop-up, pop-over, or pop-under ad windows that appear when you use a web browser.

268. Post – the act of sending a message to a particular network newsgroup.

269. PostScript – page description language primarily used for printing documents on laser printers; it is the standard for desktop publishing because it takes advantage of high resolution output devices. Example: A graphic design saved in PostScript format looks much better when printed on a 600 dpi printer than on a 300 dpi printer.

270. PostScript fonts – called outline or scalable fonts; with a single typeface definition, a PostScript printer can produce many other fonts. Contrast to non-PostScript printers that represent fonts with bitmaps and require a complete set for each font size.

271. PPP – Point-to-Point Protocol; a type of connection over telephone lines that gives you the functionality of a direct ethernet connection.

272. Program – a set of instructions that tells a computer how to perform a specific task.

273. Private cloud – private cloud (also called internal cloud or corporate cloud) is a term for a proprietary computing architecture that provides hosted services to a limited number of users behind a secure and robust infrastructure. A Dataprise private cloud solution is designed to offer the same features and benefits of shared cloud systems, but removes a number of objections to the cloud computing model including control over enterprise and customer data, worries about security, and issues connected to regulatory compliance. Dataprise Private clouds" are designed to facilitate organizations that needs or wants more control over their data than they can get by using a third-party shared cloud service.

274. Protocol – a set of rules that regulate how computers exchange information. Example: error checking for file transfers or POP for handling electronic mail.

275. Proxy – refers to a special kind of server that functions as an intermediate link between a client application (like a web browser) and a real server. The proxy server intercepts requests for information from the real server and whenever possible, fills the request. When it is unable to do so, the request is forwarded to the real server.

276. Public Domain Software – any non-copyrighted program; this software is free and can be used without restriction. Often confused with "freeware" (free software that is copyrighted by the author).

277. Pull – frequently used to describe data sent over the Internet; the act of requesting data from another computer. Example: using your web browser to access a specific page. Contrast to "push" technology when data is sent to you without a specific request being made.

278. Push – frequently used to describe data sent over the Internet; the act of sending data to a client computer without the client requesting it. Example: a subscriptions service that delivers customized news to your desktop. Contrast to browsing the World Wide Web which is based on "pull" technology; you must request a web page before it is sent to your computer.

279. QoS – Quality of service; is the ability to provide different priority to different applications, users, or data flows, or to guarantee a certain level of performance to a data flow. For example, a required bit rate, delay, jitter, packet dropping probability and/or bit error rate may be guaranteed. Quality of service guarantees are important if the network capacity is insufficient, especially for real-time streaming multimedia applications such as voice over IP, online games and IP-TV, since these often require fixed bit rate and are delay sensitive, and in networks where the capacity is a limited resource, for example in cellular data communication.

280. Quick Time – a video format developed by Apple Computer commonly used for files found on the Internet; an alternative to MPEG. A special viewer program available for both IBM PC and compatibles and Macintosh computers is required for playback.

281. RAM **–** Random Access Memory; the amount of memory available for use by programs on a computer. Also referred to as "main memory". Example: A computer with 8 MB RAM has approximately 8 million bytes of memory available. Contrast to ROM (read-only memory) that is used to store programs that start your computer and do diagnostics.

282. Record – a set of fields that contain related information; in database type systems, groups of similar records are stored in files. Example: a personnel file that contains employment information.

283. Registry – a database used by Windows for storing configuration information. Most 32-bit Windows applications write data to the registry. Although you can edit the registry, this is not recommended unless absolutely necessary because errors could disable your computer.

284. Remote backup – a remote, online, or managed backup service is a service that provides users with a system for the backup and storage of computer files. Dataprise remote backup solution incorporates automatic data compression and secure data encryption. This means that your critical system data backs up safely and efficiently. For additional peace of mind, our backup service features proprietary dual tapeless backup protection, including fast incremental backup to a secure on-site hard drive and a second backup to our carrier-grade data center. Our remote backup service is completely automated and immensely secure. You'll never have to think about the safety of your data again.

285. Remote desktop – a Windows feature that allows you to have access to a Windows session from another computer in a different location (XP and later).

286. Remote login – an interactive connection from your desktop computer over a network or telephone lines to a computer in another location (remote site).

287. RGB – Red, green, and blue; the primary colors that are mixed to display the color of pixels on a computer monitor. Every color of emitted light can be created by combining these three colors in varying levels.

288. RJ- 45connector – an eight-wire connector used for connecting a computer to a local-area network. May also be referred to as an Ethernet connector.

289. ROM – Read Only Memory; a special type of memory used to store programs that start a computer and do diagnostics. Data stored in ROM can only be read and cannot be removed even when your computer is turned off. Most personal computers have only a few thousand bytes of ROM. Contrast to RAM (random access or main memory) which is the amount of memory available for use by programs on your computer.

290. Router – a device used for connecting two Local Area Networks (LANs); routers can filter packets and forward them according to a specified set of criteria.

291. RTF– Rich Text Format; a type of document formatting that enables special characteristics like fonts and margins to be included within an ASCII file. May be used when a document must be shared among users with different kinds of computers (e.g., IBM PC or compatibles and Macintoshes).

292. SaaS – Software as a Service; a software delivery model in which software and associated data are centrally hosted on the cloud. SaaS is typically accessed by users using a thin client via a web browser.

293. Safe mode – a way of starting your Windows computer that can help you diagnose problems; access is provided only to basic files and drivers.

294. SAN – a storage area network (SAN) is a dedicated storage network that provides access to consolidated, block level storage. SANs primarily are used to make storage devices (such as disk arrays, tape libraries, and optical jukeboxes) accessible to servers so that the devices appear as locally attached to the operating system. A SAN typically has its own network of storage devices that are generally not accessible through the regular network by regular devices.

295. SATA – Serial Advanced Technology Attachment or Serial ATA. An interface used to connect ATA hard drives to a computer's motherboard that provides a better, more efficient interface; Serial ATA is likely to replace the previous standard, Parallel ATA (PATA), which has become dated.

296. Satellite transmission – a method of data transmission; the sender beams data up to an orbiting satellite and the satellite beams the data back down to the receiver.

297. Screen reader – a software program that translates text on a Web page into audio output; typically used by individuals with vision impairment.

298. Search engine – a tool that searches documents by keyword and returns a list of possible matches; most often used in reference to programs such as Google that are used by your web browser to search the Internet for a particular topic.

299. Secure server – a special type of file server that requires authentication (e.g., entry a valid username and password) before access is granted.

300. Security token – a small device used to provide an additional level of authorization to access a particular network service; the token itself may be embedded in some type of object like a key fob or on a smart card. Also referred to as an authentication token.

301. Self-extracting file **–** a type of compressed file that you can execute (e.g., double-click on the filename) to begin the decompression process; no other decompression utility is required. Example: on IBM PC or compatibles, certain files with an ".exe" extension and on Macintoshes, all files with a ".sea" extension.

302. Serial port – an interface on a computer that supports transmission of a single bit at a time; can be used for connecting almost any type of external device including a mouse, a modem, or a printer.

303. Server – a computer that is responsible for responding to requests made by a client program (e.g., a web browser or an e-mail program) or computer. Also referred to as a "file server".

304. Shadow IT – software whose code is freely available and that can be modified by individual developers. Open-source software is available for a number of IT processes and can help keep IT costs down.

305. Shareware – copyrighted software available for downloading on a free, limited trial basis; if you decide to use the software, you're expected to register and pay a small fee. By doing this, you become eligible for assistance and updates from the author. Contrast to public domain software which is not copyrighted or to freeware which is copyrighted but requires no usage fee.

306. SIMM – Single In-line Memory Module; a small circuit board that can hold a group of memory chips; used to increase your computer's RAM in increments of 1,2, 4, or 16 MB.

307. Single sign-on (SSO) – the ability to use one set of credentials to gain access to different applications or services. Establishing SSO capabilities can help your company speed up business processes, but it’s also important to establish proper security protocols.

308. SMTP – Simple Mail Transfer Protocol; a method of handling outgoing electronic mail.

309. Software – any program that performs a specific function. Examples: word processing, spreadsheet calculations, or electronic mail.

310. Software as a service (SaaS) – cloud-based software that is purchased on a subscription basis and includes everything from hosted applications to virtual operating systems. Knowing how to leverage SaaS can greatly improve efficiency.

311. Spam – Email spam, also known as junk email or unsolicited bulk email (UBE), is a subset of spam that involves nearly identical messages sent to numerous recipients by email. Definitions of spam usually include the aspects that email is unsolicited and sent in bulk. Spammers collect email addresses from chatrooms, websites, customer lists, newsgroups, and viruses which harvest users' address books, and are sold to other spammers. They also use a practice known as “email appending” or "epending" in

which they use known information about their target (such as a postal address) to search for the target's email address.

312. SSID – Service Set Identifier; a name that identifies a wireless network.

313. Streaming (streaming media) **–** a technique for transferring data over the Internet so that a client browser or plug-in can start displaying it before the entire file has been received; used in conjunction with sound and pictures. Example: The Flash Player plug-in from Adobe Systems gives your computer the capability for streaming audio; RealPlayer is used for viewing sound and video.

314. Spoofing – a type of cyberattack where hackers digitally disguise themselves as trusted users in order to gain access to a system. It's important to implement proper identification and security features so your IT resources are protected against this kind of attack.

315. Spyware – any software that covertly gathers user information, usually for advertising purposes, through the user's Internet connection.

316. Subdirectory – an area on a hard disk that contains a related set of files; on IBM PC or compatibles, a level below another directory. On Macintoshes, subdirectories are referred to as folders.

317. Support365ŕ – Dataprise's unique Support365™ plans offer the best solution for organizations that need comprehensive IT support, that either don't have the time, skill-set or simply just don't want the burden of managing an IT person, department, or in some situations – an entire IT division. By choosing Support365™ We make it easier than ever for you to understand, budget, and manage your monthly IT requirements. It's basically like having your own virtual IT department.

318. SVGA – Super VGA (Video Graphics Array); a set of graphics standards for a computer monitor that offers greater resolution than VGA. There are several different levels including 800 x 600 pixels, 1024 by 768 pixels, 1280 by 1024 pixels; and 1600 by 1200 pixels. Although each supports a palette of 16 million colors, the number of simultaneous colors is dependent on the amount of video memory installed in the computer.

319. T-1 carrier – a dedicated phone connection supporting data rates of 1.544Mbits per second; T-1 lines are a popular leased line option for businesses connecting to the Internet and for Internet Service Providers connecting to the Internet backbone. Sometimes referred to as a DS1 line.

320. T-3 carrier – a dedicated phone connection supporting data rates of about 43 Mbps; T-3 lines are used mainly by Internet Service Providers connecting to the Internet backbone and for the backbone itself. Sometimes referred to as a DS3 line.

321. 10Base-T – an adaptation of the Ethernet standard for Local Area Networks that refers to running Ethernet over twisted pair wires. Students planning on using ResNet from a residence hall must be certain to use an Ethernet adapter that is 10Base-T compatible and not BNC (used with 10Base-2 Ethernet systems).

322. Table – with reference to web design, a method for formatting information on a page. Use of tables and the cells within also provide a way to create columns of text. Use of tables vs frames is recommended for helping to make your web site ADA-compliant.

323. TCP/IP – transmission Control Protocol/Internet Protocol; an agreed upon set of rules that tells computers how to exchange information over the Internet. Other Internet protocols like FTP, Gopher, and HTTP sit on top of TCP/IP.

324. Telephony – it encompasses the general use of equipment to provide voice communication over distances, specifically by connecting telephones to each other. Dataprise's expert team of telecommunication consultants can design and implement a system that is feature rich, simple to use and integrates seamlessly with your existing business applications.

325. Telnet – a generic term that refers to the process of opening a remote interactive login session regardless of the type of computer you're connecting to.

326. Terminal emulation –the act of using your desktop computer to communicate with another computer like a UNIX or IBM mainframe exactly as if you were sitting in front of a terminal directly connected to the system. Also refers to the software used for terminal emulation. Examples: the Telnet program for VT100 emulation and QWS3270 (Windows) and TN3270 (Macintosh) 0 fullscreen emulation.

327. TIFF – Tag Image File Format; a popular file format for storing bit-mapped graphic images on desktop computers. The graphic can be any resolution and can be black and white, gray-scale, or color. Files of this type usually have the suffix ".tif" as part of their name.

328. Token –a group of bits transferred between computers on a token-ring network. Wh computer has the token can send data to the other systems on the network which ensures only one computer can send data at a time. A token may also refer to a network security card, also known as a hard token.

329. Tokenization – replacing sensitive data within a system with equivalent, nonsensitive data that can be transferred back to the original only by trusted individuals. Proper tokenization helps neutralize potential security threats.

330. Tool bar – on a graphical user interface system, a bar near the top of an application window that provides easy access to frequently used options.

331. Trojan horse – a harmless-looking program designed to trick you into thinking it is something you want, but which performs harmful acts when it runs.

332. True Type – a technology for outline fonts that is built into all Windows and Macintosh operating systems. Outline fonts are scalable enabling a display device to generate a character at any size based on a geometrical description.

333. Tweet – an update of 140 characters or less published by a Twitter user meant to answer the question, " are you doing?" which provides other users with information about you.

334. Twitter – a service that allows users to stay connected with each other by posting updates, or "tweets," using a computer or cell phone or by viewing updates posted by other users.

335. Twisted pair cable – Whata type of cable that is typically found in telephone jacks; two wires are independently insulated and are twisted around each other. The cable is thinner and more flexible than the coaxial cable used in conjunction with 10Base-2 or 10Base-5 standards. Most Ohio State UNITS telephone jacks have three pairs of wires; one is used for the telephone and the other two can be used for 10Base-T Ethernet connections.

336. Two-factor authentication – a security system that allows access only after two distinct forms of identification are provided. This protocol is extremely common in modern IT and crucial for security. An extra level of security achieved using a security token device; users have a personal identification number (PIN) that identifies them as the owner of a particular token. The token displays a number which is entered following the PIN number to uniquely identify the owner to a particular network service. The identification number for each user is changed frequently, usually every few minutes.

337. Tokenization – replacing sensitive data within a system with equivalent, nonsensitive data that can be transferred back to the original only by trusted individuals. Proper tokenization helps neutralize potential security threats.

338. Virtualization – the creation of a digital equivalent of a physical IT resource. The most common forms of virtualization are virtual machines, which allow users to access entire operating systems from remote devices. Implementing virtual applications and

services into your IT infrastructure can help internal users access resources regardless of where they are.

339. Wearables – the broad category of smart devices that can be worn, most commonly as a watch. Wearable technologies can provide important data points for business insights. They customize sentations that include both sound and graphics.

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