

Novice Programmers

Lecture Series.

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Lectures

- **Lecture 1: Computer literacy**
- Lecture 2: Programming Languages
- Lecture 3: Python coding 1: Basics
- Lecture 4: Python coding 2: Files and folders
- Lecture 5: Python coding 3: Statistics and graphs

Lecture 1: Computer literacy

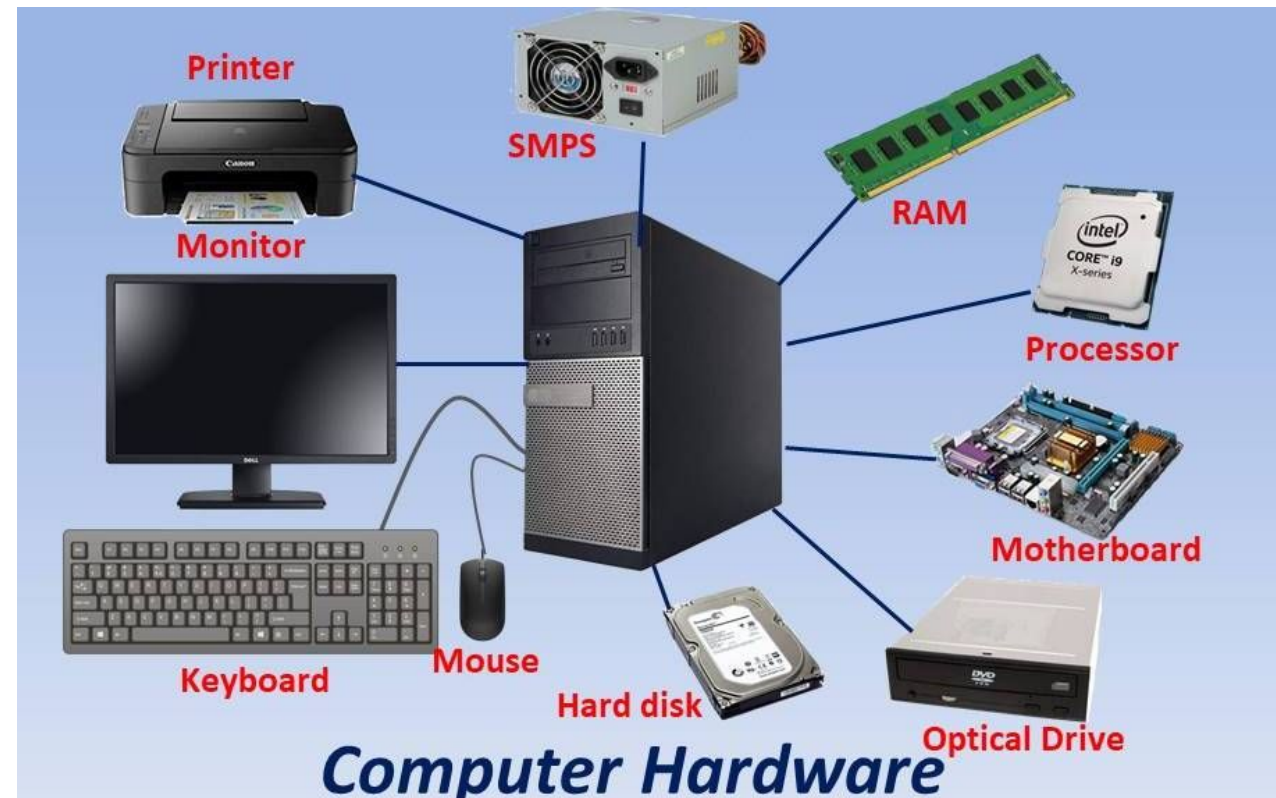
Define computer literacy

- Computer literacy is the ability to use computers effectively for various tasks, from basic to advanced.
- In today's digital age, computer literacy is crucial for personal, educational, and professional success.



Basic Components of a Computer

- Hardware refers to the physical parts of a computer, such as the Central Processing Unit (CPU), monitor, keyboard, and mouse.
 - Hardware:
 - CPU: Core i5, Core i7, Core i9, etc
 - monitor: Phillips, Samsung, etc
 - Input devices:
 - keyboard, mouse, etc



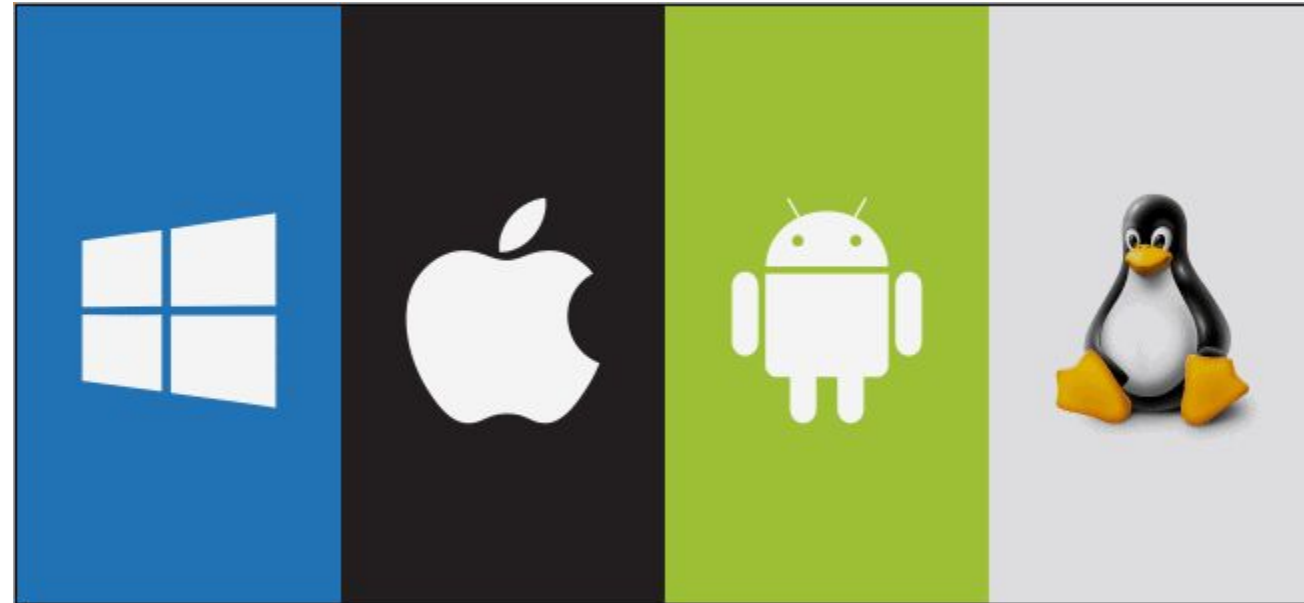
Basic Components of a Computer

- Software encompasses the programs and instructions that run on a computer, including the operating system and applications.
- Software:
 - Operating systems: Windows 10, MacOS, Ubuntu, etc
 - Applications:
 - End-user: Microsoft Word / Excel / Powerpoint, etc
 - Programming applications: Python, R language, C language, etc
 - etc.



Operating Systems

- An operating system is software that manages computer hardware and provides a user interface for interacting with the computer.
- Examples of operating systems include Windows, macOS, and Linux, each with its unique features and functions.



Common Software Applications

- Word processing software (e.g., Microsoft Word, Google Docs) is used for creating and editing text documents.

Free Alternatives to Microsoft Word



Google docs



zoho Docs



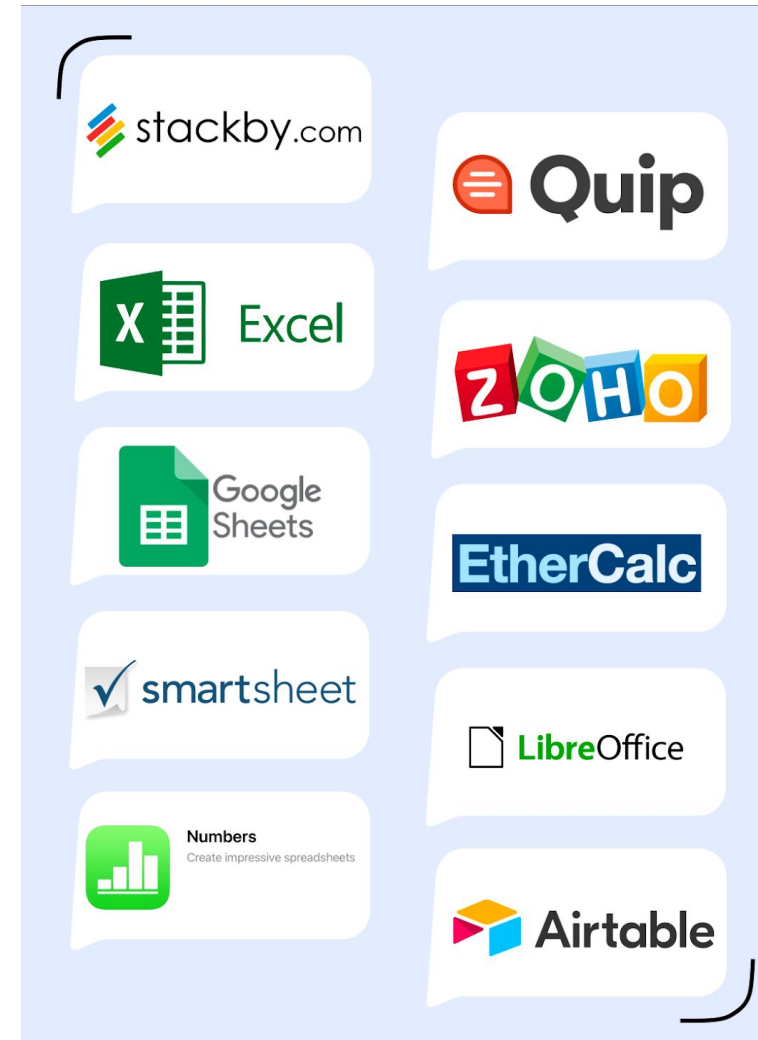
Office



atomic scribbler

Common Software Applications

- Spreadsheets (e.g., Microsoft Excel, Google Sheets) are used for organizing and analyzing data.



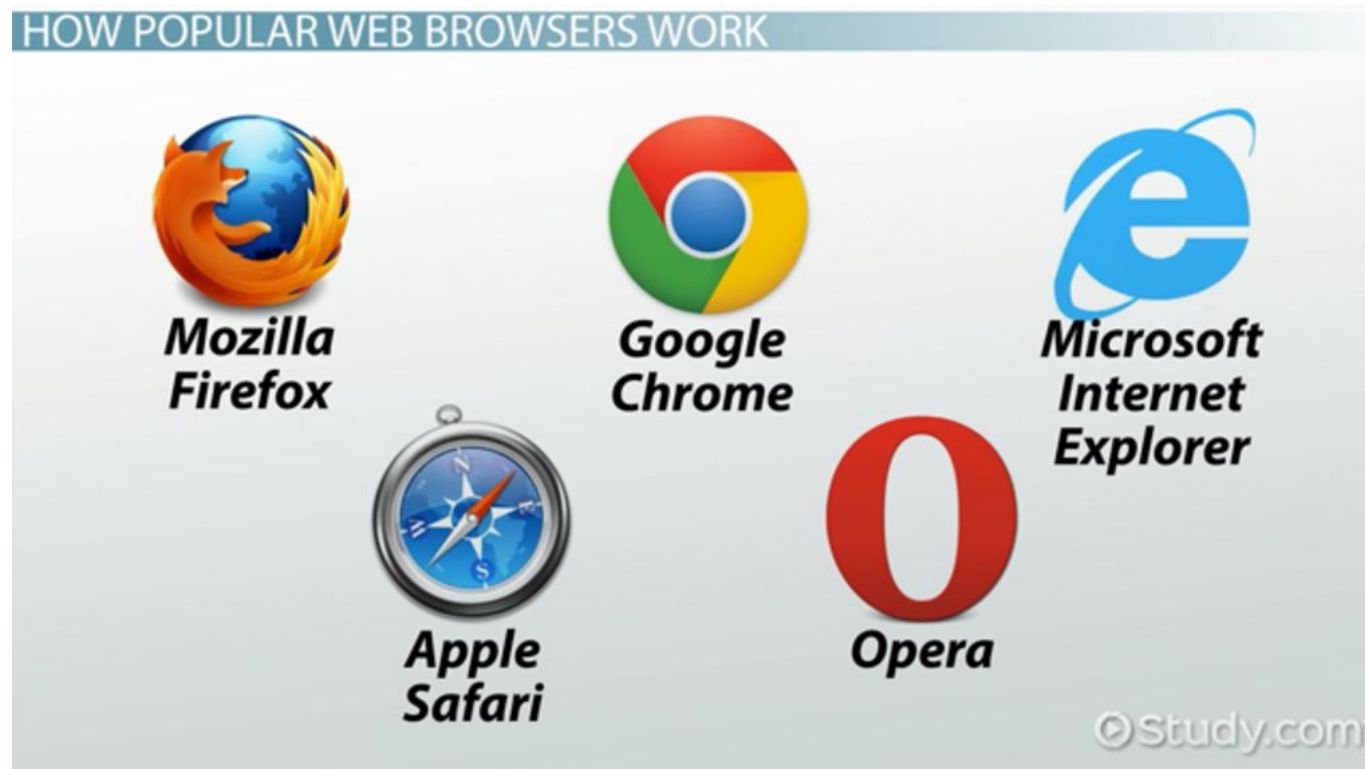
Common Software Applications

- Presentation software (e.g., Microsoft PowerPoint, Google Slides) helps create visual and engaging slideshows.



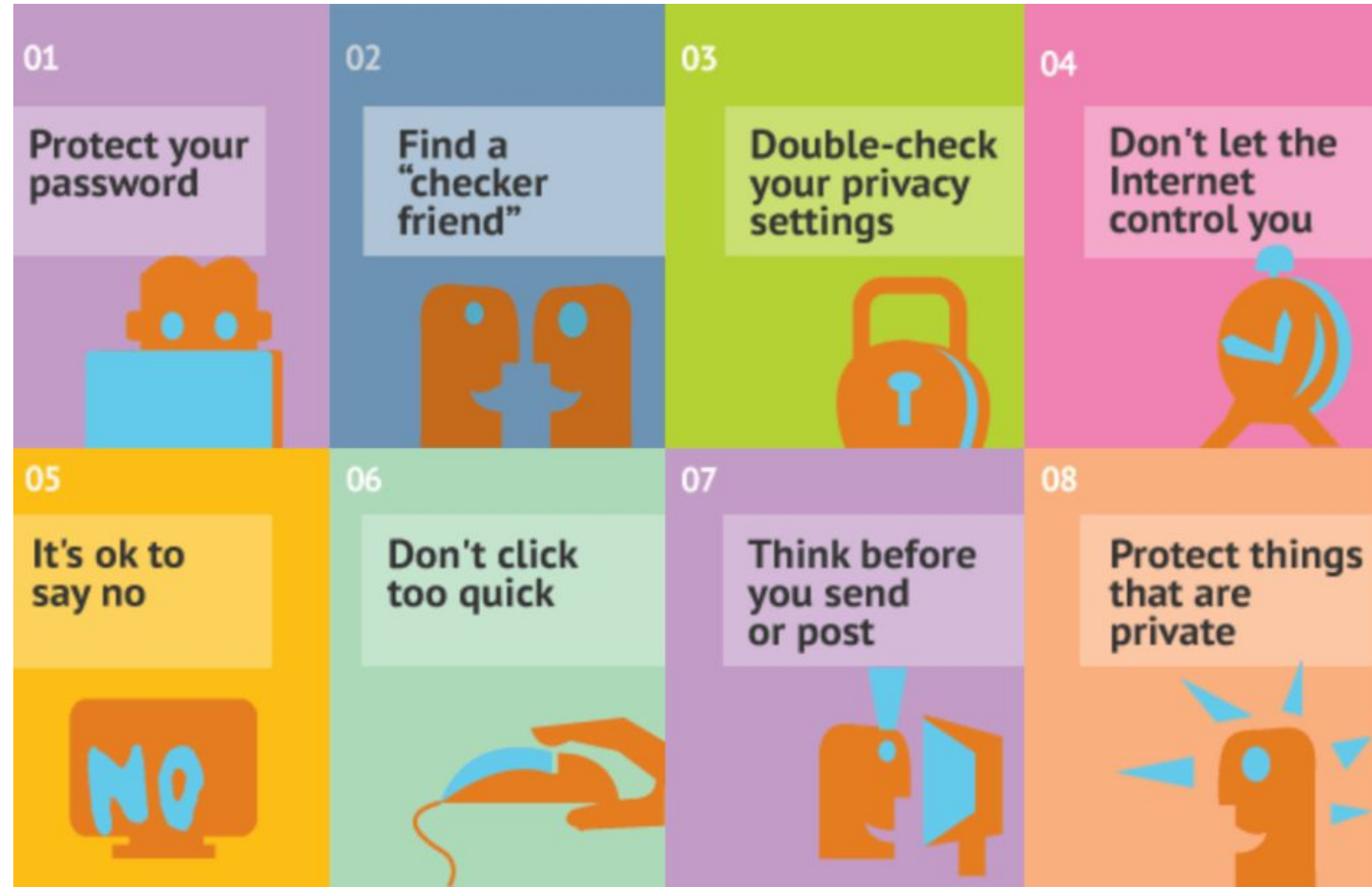
Common Software Applications

- Web browsers (e.g., Google Chrome, Mozilla Firefox) allow users to access and navigate websites on the internet.



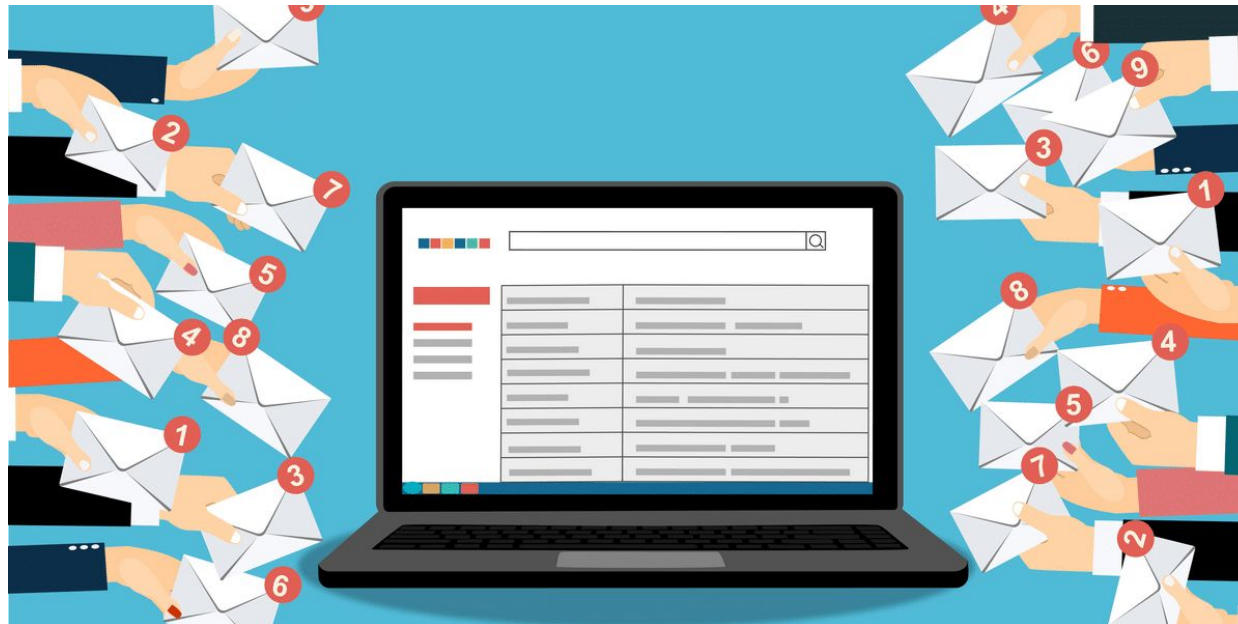
Internet and Online Safety

- Online safety involves protecting personal information, avoiding cyber threats, and practicing safe online behavior.
- Tips include using strong, unique passwords, being cautious of suspicious links and emails, and keeping software up to date.



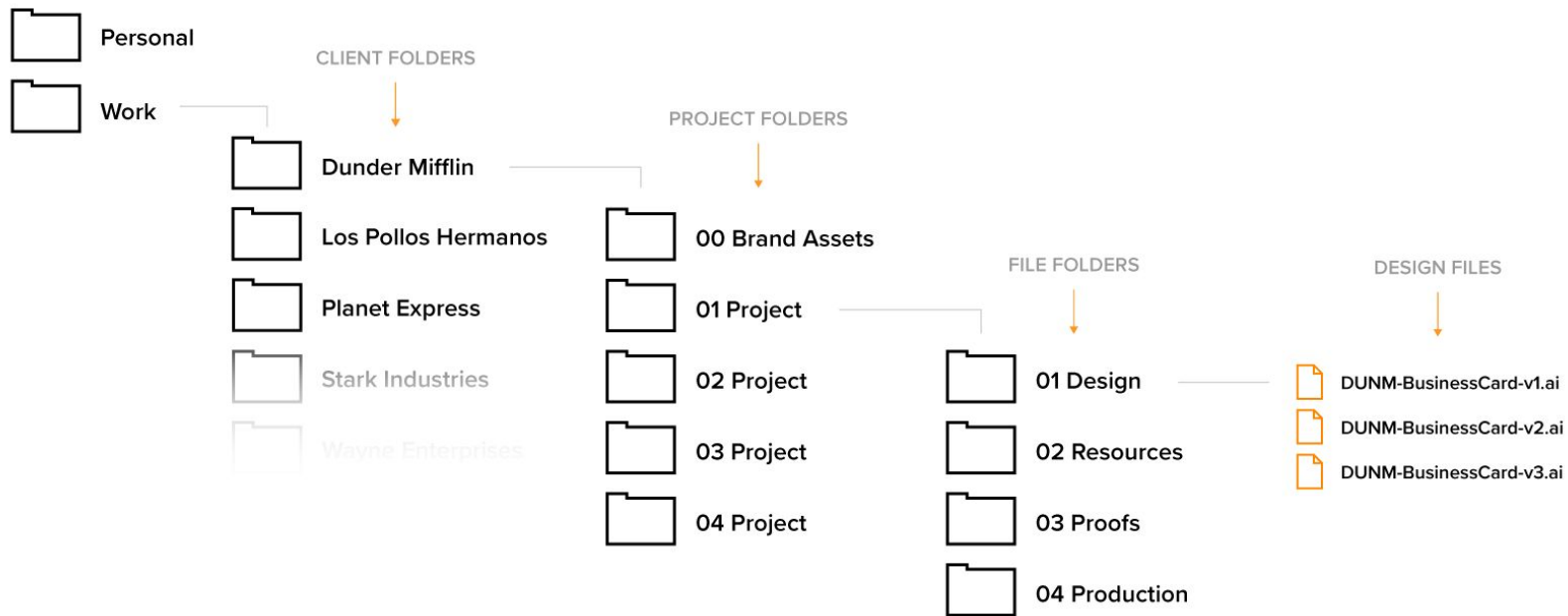
Email and Communication

- Email is a common method of electronic communication, allowing users to send and receive messages.
- Netiquette refers to proper etiquette and behavior when communicating online, including being respectful and concise.



File Management

- File management involves organizing and storing digital files and documents in a logical and accessible manner.
- Regular backups help prevent data loss and ensure important files are not accidentally deleted.



Digital Citizenship

- Digital citizenship involves responsible and ethical use of technology, respecting others' rights, and avoiding online plagiarism.
- It also includes considerations of copyright and intellectual property when using online resources.

DIGITAL CITIZENSHIP GUIDE

PRACTICING SAFE, RESPONSIBLE, AND LEGAL USE OF TECHNOLOGY



DIGITAL COMMERCE

Be respectful and always have permission before you hit "buy."



DIGITAL DOWNTIME

Remember to digitally disconnect and spend time with others.



DIGITAL ETIQUETTE

Apply real world behavioral standards to the digital world.



DIGITAL HEALTH

Know when to stay connected and when to turn off devices.



DIGITAL INTEGRITY

Examine the source of online information to determine credibility.



DIGITAL LITERACY

Avoid suspicious emails, websites, and online advertisements.



DIGITAL PRIVACY

Review privacy settings. Know what to share and with whom.



DIGITAL RESPONSIBILITY

Report problems, abusive behavior, and inappropriate images or content.

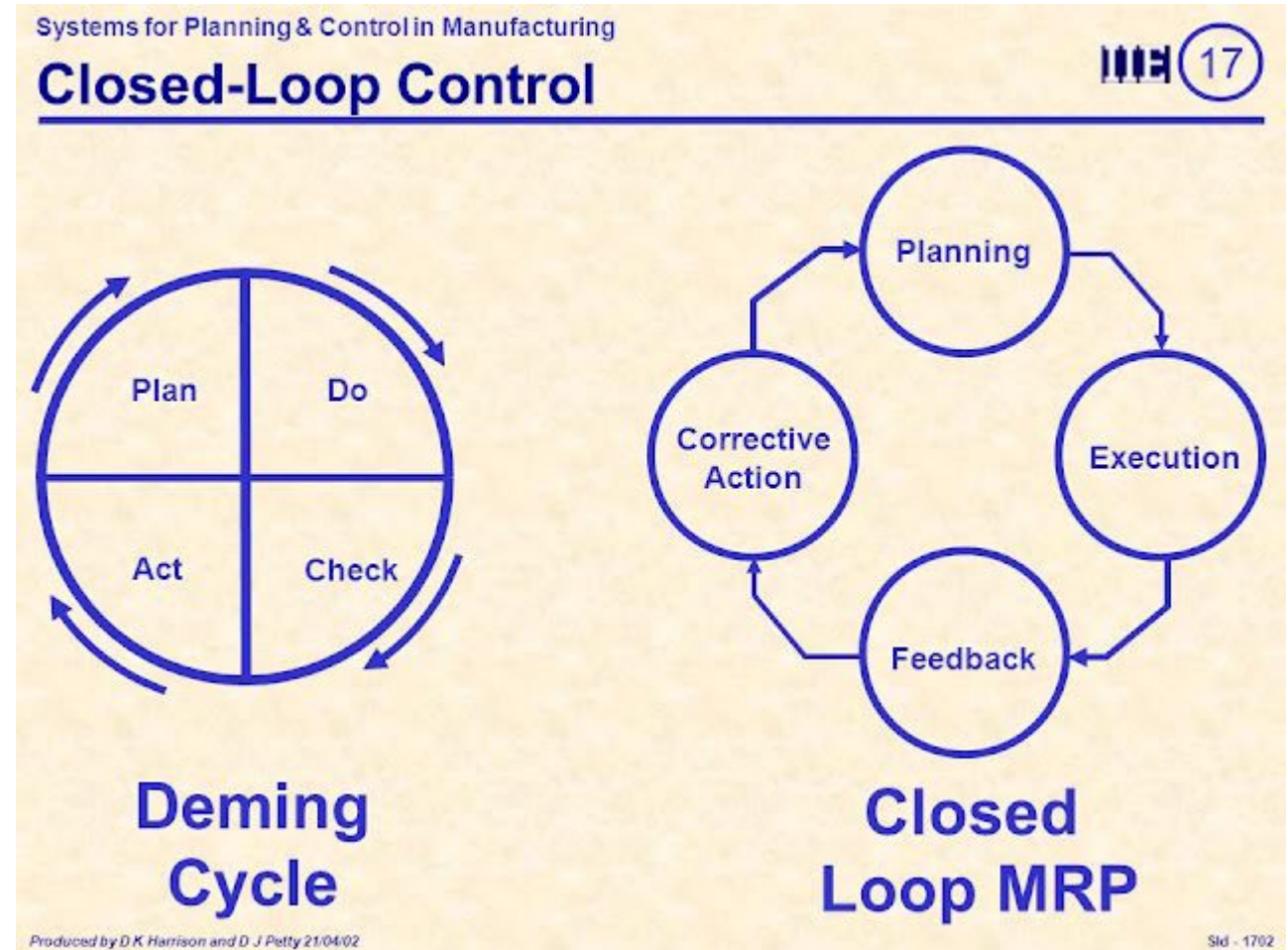


DIGITAL SECURITY

Make passwords easy to remember, but hard to guess.

Troubleshooting and Problem-Solving

- Troubleshooting involves identifying and resolving common computer issues, such as software glitches and hardware malfunctions.
- Resources for troubleshooting include online forums, user manuals, and contacting technical support.



Emerging Technologies

- Emerging technologies like Artificial Intelligence (AI), Internet of Things (IoT), and blockchain are shaping the future of technology.
- These technologies have implications for various industries and everyday life, from smart devices to data analysis.

TOP 10 EMERGING TECHNOLOGIES



Conclusion

- Introduction to Computer Literacy
- Basic Components of a Computer
- Operating Systems
- Common Software Applications
- Internet and Online Safety
- Email and Communication
- File Management
- Digital Citizenship
- Troubleshooting and Problem-Solving

Questions:

Question 1: What is the primary purpose of computer literacy?

- a) Playing video games
- b) Understanding and using computers effectively
- c) Collecting stamps
- d) Watching movies

Question 2: Which of the following is considered a hardware component of a computer?

- a) Microsoft Word
- b) Google Chrome
- c) CPU
- d) Operating System

Question 3: Which of the following is an example of an operating system?

- a) Microsoft Excel
- b) Google Docs
- c) Windows
- d) Microsoft PowerPoint

Question 4: What does "online safety" refer to?

- a) The color scheme of a website
- b) Safe driving practices
- c) Responsible behavior on the internet
- d) Keeping your computer offline on sensible use of technology and online behavior
- c) Playing online video games
- d) Using a digital camera

Questions:

Question 5: Which software application is commonly used for creating slide-based presentations?

- a) Microsoft Word
- b) Microsoft Excel
- c) Google Slides
- d) Photoshop

Question 6: What is "netiquette"?

- a) A type of software application
- b) Proper online communication etiquette
- c) A computer virus
- d) A programming language

Question 7: Which component of a computer is responsible for processing data and performing calculations?

- a) Monitor
- b) Keyboard
- c) CPU
- d) Mouse

Question 8: Why is it important to have strong passwords?

- a) To impress your friends
- b) To make them easy to remember
- c) To protect your online accounts from unauthorized access
- d) To increase the speed of your internet connection

Questions:

Question 9: What does "digital citizenship" refer to?

- a) Citizenship in a foreign country
- b) Responsible use of technology and online behavior
- c) Playing online video games
- d) Using a digital camera

Question 10: Which emerging technology has the potential to connect everyday objects to the internet?

- a) Artificial Intelligence (AI)
- b) Internet of Things (IoT)
- c) Virtual Reality (VR)
- d) Quantum Computing

Next time

- Lecture 2: Programming Languages