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CHAPTER 4 : SYSTEM SOFTWARE

- Application Software
  - used by user to perform specific task
  - Works with end users, application software and computer hardware to handle technical details
- vs
- System Software
  - desktop operating system
    - Windows
      - most widely used
        - Windows 8
          - Integrates the desktop OS with its mobile OS
        - Windows 10
          - Merges Windows desktop and mobile operating system
    - Mac OS
      - runs on Apple computer
        - OS X Mavericks
          - Improved power management
        - OS X Yosemite
          - New user interface
    - UNIX
      - Servers on the Web
      - Mainframe computers
      - Personal Computers
    - LINUX
      - Google Chrome OS based on Linux
        - Focuses on Internet connectivity and cloud computing
        - Speed is determined by the speed of the Internet
      - Open source - free
      - Alternative to windows
  - The purpose of utilities and utility suites
    - Specialized programs to make computing easier and help users configure, analyse, optimise and maintain a computer
      - Utility suites
        - made for the express purpose of keeping your PC humming along at rapid speeds.
          - Combine several programs into one package
            - Less expensive
      - Most essential utilities
        - Troubleshooting or diagnostic programs
          - Recognizes and correct problems
        - Antivirus programs
          - Guard your computer against viruses or other damaging programs that can be invade your computer system
            - Norton AntiVirus
            - Webroot SecureAnywhere AntiVirus
        - Backup programs
          - Copies of files to restore if necessary
            - Windows 10 - File History tool
            - Mac OS X - Time Machine
        - File compression programs
          - Reduces the size of files for more efficient storage
- Mobile Operating Systems
  - allows mobile devices like phones, tablets and other smart devices like wearable technology to run applications and other program
    - For example, an iPhone runs on iOS and a Google Pixel runs on Android.
      - Android 47.51%,
      - iOS 41.97%
      - Symbian 3.31%
    - Advantages
      - Full access to the device, in software and hardware
      - Enhanced user experience
      - Vision from app stores, and integration with wearables
    - DISADVANTAGES
      - Different programming languages and skills depending on operating system.
      - High costs and lengthy development Periods
      - No SEO, it would not have a good Positioning in Google searchin case of lacking optimized web for mobile.
- Operating System
  - Functions of OS
    - Provide security
    - Monitor system performance
    - Manages computer resources
    - Coordinate memory, processing, storage, printers and monitors
    - Schedule tasks
    - Start-up the computer
  - Categories of Operating Systems
    - Embedded operating systems
      - RTOS (real-time operating systems)
      - Video game systems
      - Smartphones
      - Smartwatches
    - Stand-alone operating systems
      - desktop operating system
    - Network operating systems
      - Windows Server, Linux, Unix
      - OS stored on network server which coordinates all communication between the other computers
  - Features
    - Tabs
    - Gesture Control
    - Menus
    - Windows
    - Pointer
    - Help
    - Dialog boxes
    - Icons
- 4 Types of System Software
  - **Operating System:** Collection of programs that handle technical tasks.
  - **Utilities:** Manages computer resources.
  - **Device Drivers:** Allows devices to communicate with the computer.
  - **Language Translators:** Converts programming instructions into a language understood by computers
- Popular suites
  - Kaspersky
  - Norton Utilities
  - Bit Defender