

CHAPTER 5

- As you learned application software is the software you used to do everyday tasks at home and at work
- System software is a set of programs that help from the computer and coordinates instructions between application software and the computer's hardware devices
- From the time you turn on your computer to the time you should of you are interacting with system software
- There are 2 primary types of programs for system software: the operating system and utility programs

What does system software do?

- System software manages the computers resources
- The OS manages the computer's hardware
- OS also provides a consistent mean for software applications to work with the CPU
- The OS is responsible for management scheduling and coordination of tasks as well as system maintenance
- Your first interaction with the OS is the user interface which includes the desktop icons and menus
- Hey utility program is a small program that performs many of the general housekeeping tasks for the computers

Do all computers have operating systems?

- Every computer has an operating system. Even cell phone, game consoles, automobiles, and small applications
- OS is critical; the computer cannot operate without it

Are all operating systems alike?

- Some operating systems are embedded which means the device doesn't require user intervention at all
- There are proprietary system developed specifically for the device
- Some are available for personal and business use to run on personal computers are mobile devices
- Others coordinate resources for many users on a network
- These operating systems were traditionally classified into categories depending on the number of users and their tasks
- Personal computers were at 1 time run by single time task, single user operating systems such as the Microsoft disk operating system MS-DOS
- This was the first widely install the operating system in personal computers
- You have to type specific commands and did not have icons or menus
- OS allowed a single user to multitask
- Network capabilities were added to facilitate sharing peripheral devices and Internet access among multiple computers at home. They became multi user, multitasking operating systems
- Smart phones were initially single top of the vices, with combined functionalities; the

newer devices are beginning to add multitasking capabilities

Types of operating systems

- Categorize by the type of device in which they are installed
- Real time operating systems: why do machines with built in computers need an operating system?
- Machinery that is required to perform a repetitive series of specific tasks in an exact amount of time requires a real time operating system RTOS
- Also referred to as in embedded systems
- Must guarantee certain response times for particular computing task
- There are no commercially available standard RTOS software programs
- An example is the Mars Reconnaissance Orbiter

Where else are RTOSs in use today?

- Car engines, inkjet printers, medical devices, and many types of robotic equipment

What kind of operating system controls a simple cell phone?

- Unlike smartphone, simple cell phones are single function devices
- They use firmware which are instructions permanently installed onto computer chips that can be updated
- Other devices that use it are portable audio players, digital cameras, and gaming consoles

Operating systems for networks, servers, in mainframes: what kind of operating system Do networks use?

- A multi user operating system also known as network operating system
- Enables more than 1 user to access the computer system at 1 time by efficiently handling and prioritizing request from multiple users
- How many users simultaneously access the server, which is the computer on a network that manages network resources such as printers?
- A printer on a network will need to produce documents at 1 time and in the order requested. This is the job of the OS
- Examples of network operating systems are Windows Server, Linux, and Unix

What is Unix?

- A multi user multi task operating system that works primarily with mainframes
- Developed in 1969 by Ken Thompson and Dennis Ritchie of AT&T
- The UNIX code was initially nonproprietary meaning that no company owned it. Now it belongs to company called the open group
- Vendors can pay a fee and then modify the Linux code to run specifically on their hardware

What other kind of computers require a multi user operating system?

- Mainframes and supercomputers
- Mainframes are responsible for storing, managing, and simultaneously processing data from all users. Falls into multiuser category
- Examples of mainframes are Unix and IBM

-Super computers are used to solve complex problems or to perform massive computations

Operating systems for mobile devices: what kind of operating system does a smartphone use?

- Operating systems that are found on smartphones include Symbian, blackberry, Windows Mobile, iPhone iOS, Android, and WebOs

Do gaming consoles and personal media players required operating system?

- Yes, all require some form of custom my system software that is developed specifically for the particular device

Operating systems for personal computers: what is the Microsoft Windows operating system?

- Microsoft when does begin as MS-DOS

-Later versions were Windows 95, XP, and Vista, in the newest Windows 7

- Windows 7 give users the touch screen monitors the ability to use touch commands

-Windows improvements have concentrated on functionality, friendliness, improving internet capabilities, privacy, and security

What is the difference between the various additions of Windows 7 operating systems?

-Starter and Home Premium, professional, and ultimate are available operating systems intended for different uses such as business or personal

- The 32 bit version is built for computers that have up to 4 gigabytes of RAM

-The 64 bit version is for systems with more than 4 gigabytes of RAM

What is the Mac operating system?

-1984 Mac OS became the first commercially available of operating system to incorporate a graphical user interface GUI with user friendly point and click technology

Does it matter what operating system is on my computer?

- The processor determines the operating system. This combination is known as the computers platform

- In 2006 Apple discontinue the use of Power PC processors and started to use Intel

-Most applications software is also operating system dependent

Can I have more than 1 operating system on my computer?

- Some Mac users may want to have both Mac OS X and windows on their machines

- Today users can run multiple operating systems on a single machine

- Boot camp from Mac OSX allows you to boot into either windows or OS X

- If you want to use Mac OSX and Windows at the same time you can create virtual drives using virtualization software such as parallels or VMware Fusion

What are web based operating systems?

-Also known as web based operating environment and portable or web desktop

-You still need a computer, operating system, and web browser to access a web based OS

- It allows users to access applications and content via the web regardless of the