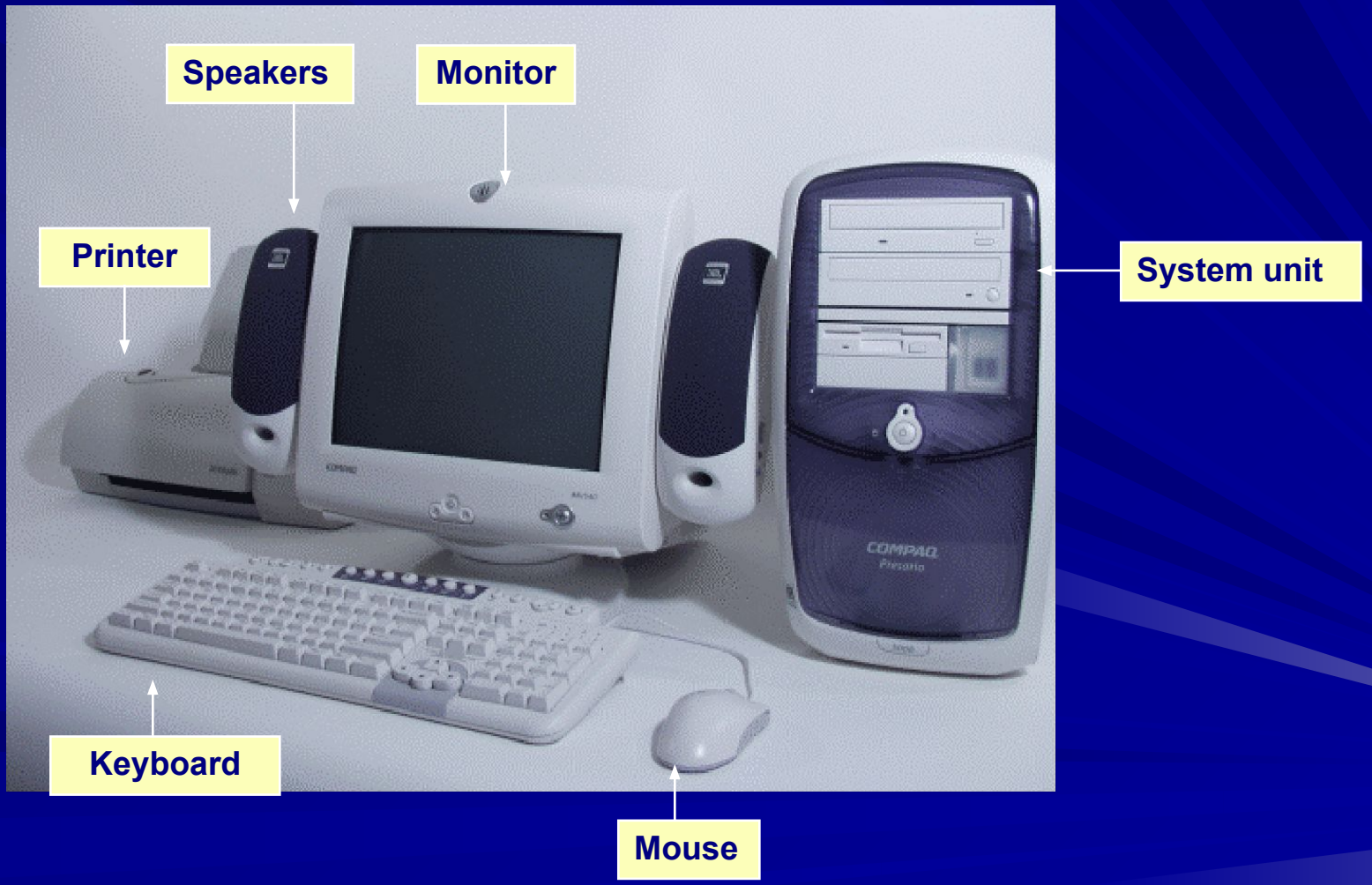
Introduction to Computer Systems

- Components of Computer
- 1) Hard ware
- 2) Soft ware
- 3)Data
- 4)Use

Hardware System



Hardware Components: Peripheral Devices

- Equipment added to computer to enhance its functionality
- Modify and expand the basic computer system
- Examples of peripheral devices:
  - Keyboard
  - Monitor
  - Mouse
  - Printer
  - Scanner
  - Digital Video Camera
  - Graphic Tablet
  - Joy Stick

Hardware Components: Storage Devices

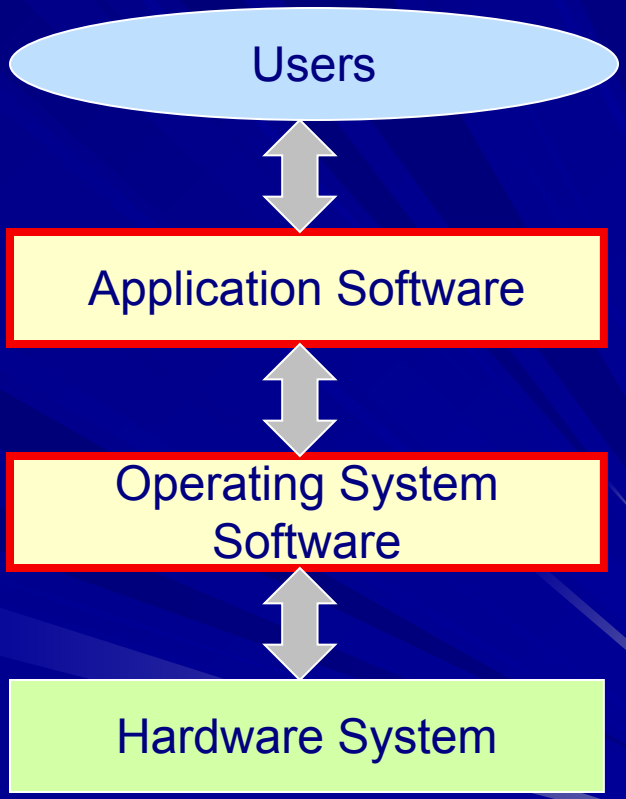
- Optical Disks
  - CD-ROM
  - CD-RW
  - DVD-ROM
- Magnetic Disks
  - Floppy disk
  - Hard disk (removable & fixed)

What is Software?

- Software is a set of computer instructions or data.
- Software receives input from the user and processes this input through the computer to produce output.
- Software directs how the computer interacts with the user.
- Software specifies how to process the user's data

Software System

- Two categories:
  - ***Operating system software***,
  - ***Application software***



Software System

- ***Operating system software***, also called system software, is the master controller for all activities that take place within a computer
  - Examples of OS software:
    - Microsoft Windows
    - Unix
    - Mac OS
- ***Application software*** is a set of one or more computer programs that helps a person carry out a task
  - Examples of application software:
    - Microsoft Word
    - Internet Explorer
    - Macromedia Dreamweaver
    - Adobe Acrobat Reader

Personal Computer (PC)

- Designed to meet the computing needs of an individual
  - Desktop computers

  - Notebook computers

Handheld Computer

- Designed to fit into a pocket, run on batteries, and be used while you are holding it
- Also called a ***PDA*** (Personal Digital Assistant)
  - Send and receive e-mail
  - Use maps and global positioning
  - Maintain expense account, contacts, to-do lists, memos, etc.
  - Make voice calls using cellular service

A personal digital assistant (PDA) accepts info on a touch-sensitive screen

Mainframe Computer

- It is a large and expensive computer that is capable of handling requests and passing data simultaneously to many users.
- Used by governments and large corporations to provide centralized storage and control
- Processes billions of data per second and includes many units where one
  operations, a second one hand
  communication between users
  searches for requests given by

Supercomputer

- It is the fastest type of computer.
- Supercomputers are very expensive and are employed for specialized applications that require immense amounts of mathematical calculations.
- It is often used for:
  - Breaking codes
  - Modeling weather systems
  - Simulating nuclear explosions
  - Research simulations
- Capable of performing over 600 billion floating-point operations per second.
- Examples: Deep Blue, PARAM 1000, Hitachi's SR2201