

# Component 6 - Health Management Information Systems

## Unit 2-1a - Hardware and Software Supporting Health Information Systems

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## Objectives

- Describe
  - Major hardware components of a computer
    - Major types of software used in computer systems
  - Major types of network configurations

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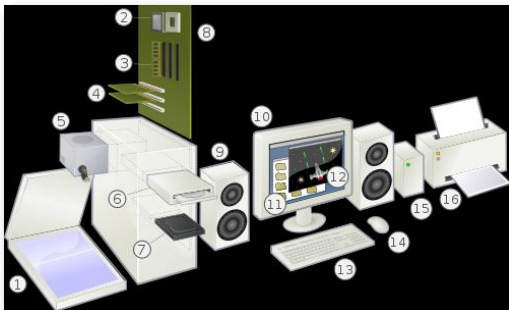
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## Major Computer Components



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# Computer Hardware

- Physical parts
  - Internal hardware
    - Examples: motherboard, RAM
  - External hardware
    - Examples: monitor, keyboard

Definition from the Tech Terms Computer Dictionary ([www.techterms.com](http://www.techterms.com))

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# Major Hardware Components

- Examples of hardware components
  - CPU
  - RAM
  - Video card
  - Sound card
  - Motherboard
  - Power supply
  - Hard drive

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# Major Hardware Components

- |                 |                |
|-----------------|----------------|
| • Input devices | Output devices |
| - Keyboard      | - Monitor      |
| - Light pen     | - Speakers     |
| - Mouse         | - Printer      |
| - Microphone    |                |
| - Webcam        |                |

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## Major Hardware Components

- Data ports
  - Serial port
  - Parallel port
  - Universal serial bus

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## Major Hardware Components

- Removable data storage
  - CD/DVD drive
  - USB flash drive
  - Memory card

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## Computer Software Components

- Computer software
  - Collection of computer programs and related data
  - Provides the instructions that tell a computer what to do

Available from: <http://en.wikipedia.org/wiki/Computersoftware>

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## Major Types of Software

- System software
  - Example: Utility software
    - Example: Backup and recovery software
- Application software
- Programming software

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## System Software

- Operating systems
- Device drivers
- Servers
- Utilities
- Windowing systems

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## Application Software

- Helps the user perform a task
  - Scheduling
  - Accounting
  - Word processing

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## Programming Software

- Compilers
- Interpreters
- Debuggers
- Linkers
- Text editors

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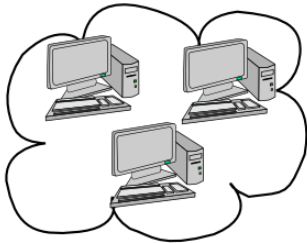
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## What is a Network?



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## Major Types of Network Configurations

- Local area
- Wide area
- Virtual
- Health Center Controlled
- Storage area

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# Local Area Network (LAN)

- Network of limited area
  - Examples
    - Home
    - Office
    - School
    - Airport

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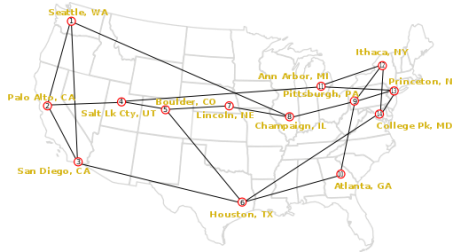
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# Wide Area Network (WAN)



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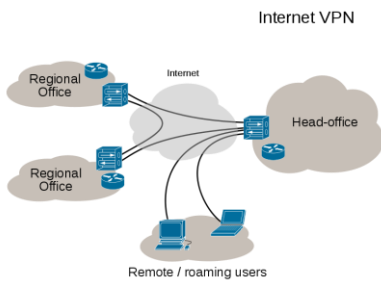
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# Virtual Network



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## Health Center Controlled Network (HCCN)

- Consortia of Section 330 funded health centers
- Exchange information and establish collaborative mechanisms

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## Storage Area Network (SAN)

- Network of storage disks
- Allows data transfers between computers and disks at high peripheral channel speeds

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## What is a Topology?

- The layout or structure of a network
- Physical
  - Physical design
- Logical
  - How data transfers in a network

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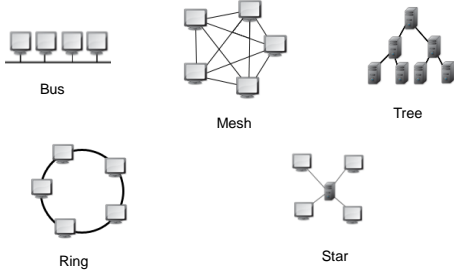
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# Common Network Topologies



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# Summary

- Major hardware and software components used in computer systems
- Types of network configurations

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