

Basic Computer Concept

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Characteristics of computer

(Accuracy, High Speed, GIGO, Storage, Diligence, Versatility)

❖ High Speed (3/4 of the time)

is done in a very short time)

❖ Accuracy (The computer does not make any mistakes)

❖ GIGO (Garbage In, Garbage Out) (If the input data is wrong, the output will also be wrong)

❖ Storage (The computer can store a large amount of data for a long time)

❖ Diligence (The computer works continuously without any break)

❖ Versatility (The computer can perform a wide variety of tasks)

Areas of computer applications

General Users

- Arts - Painting, Image creation
- 2. Book publication
- 3. Use of Internet (E-mail)
- 4. Ticket Reservation
- 5. Hospital Management
- 6. Engineering (CAD, CAM)
- 7. Database Management
- 8. Accounting
- 9. Portfolio Management
- 10. Video Conferencing
- 11. Shopping Information
- 12. E- Banking (ATM, Credit Card)
- 13. Internet Searching
- 14. WEB Designing
- 15. Music Downloading
- 16. Document Printing
- 17. Job Searching
- 18. Bio-Data Creating
- 19. Data Transfer Facility

• Commerce (Business)

1. Accounting Transaction (Tally)
2. Work at Home (For Woman's)
3. DTP (Digital Banners)
4. Financial Analysis
5. Office and Production Automation
6. Production Design
7. Production Control Process
8. Administrative Tool (SAP, BAN)
9. Various Types of Networking
10. E-Business
11. E-Marketing
12. E- Banking (ATM, Credit Card)
13. Advertising
14. Sales Management
15. Business Messaging
16. Share Market Transaction
17. Business Communication
18. Storage Management
19. Reporting
20. Video Conferencing

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Hard Drive



Monitor



Keyboard



Processor Chip



Mouse



CPU



Speakers



CD – ROM Drive



Scanner



Printer



DVD – Drive



Floppy Disk Drive



Zip – Drive



Microphone



PC Camera

Software

“A set of programs is called as software”

“Programs that instruct a computer how to process the data and generate required information, are called as software”

Computer Software Definition

“Software is a generic term for organized collections of computer data and instructions, often broken into two major categories: system software that provides the basic non-task-specific functions of the computer, and application software which is used by users to accomplish specific tasks”.

System software is responsible for controlling, integrating, and managing the individual hardware components of a computer system .

Application software, on the other hand, is used to accomplish specific tasks other than just running the computer system. Application software may consist of a single program, a small collection of programs (often called a software package) that work closely together to accomplish a task

Software is created with programming languages and related utilities, which may come in several of the above forms: single programs like script interpreters, packages containing a compiler, linker, and other tools; and large suites (often called Integrated Development Environments) that include editors, debuggers, and other tools for multiple languages.

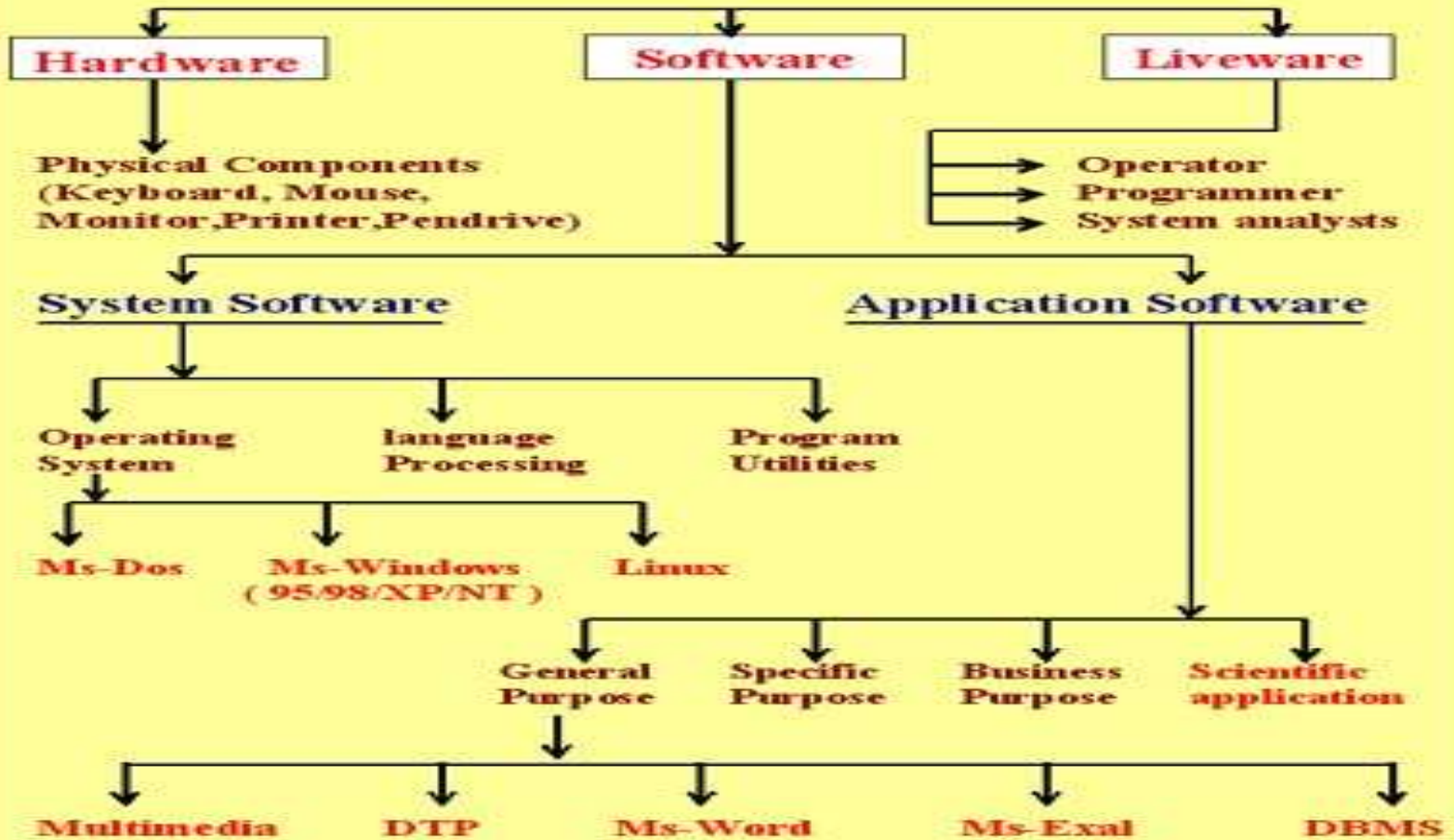
Computer System

“ Computer System may be defined as a group of two or more inter-related components or sub systems that serve a common purpose”

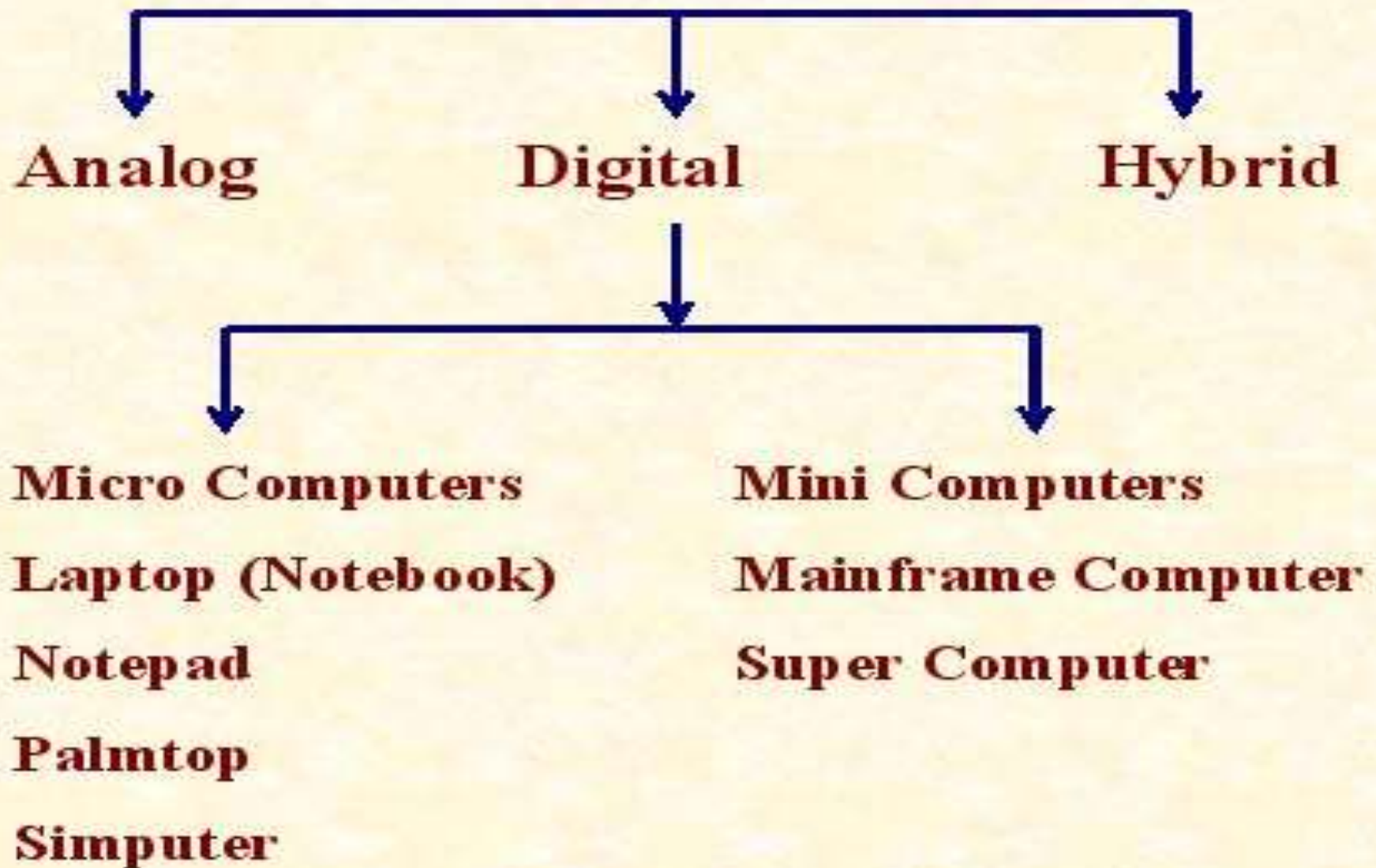


Computer System

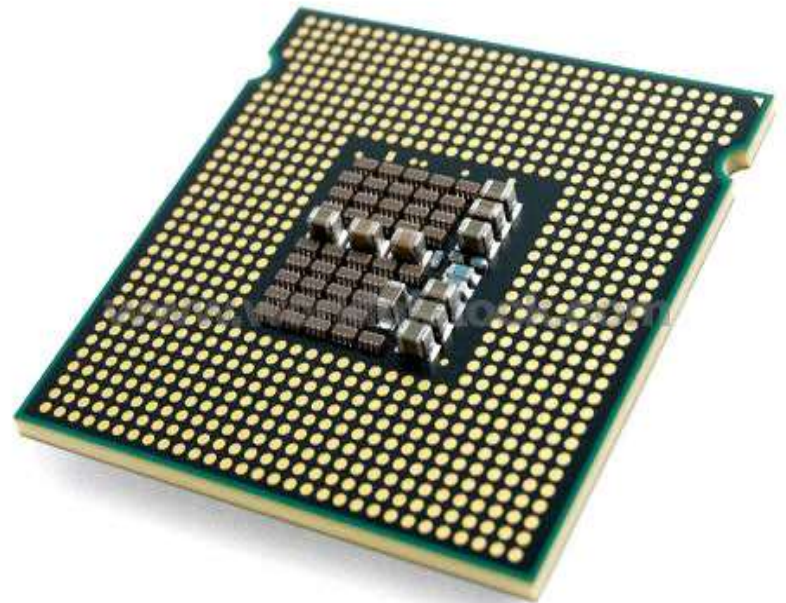
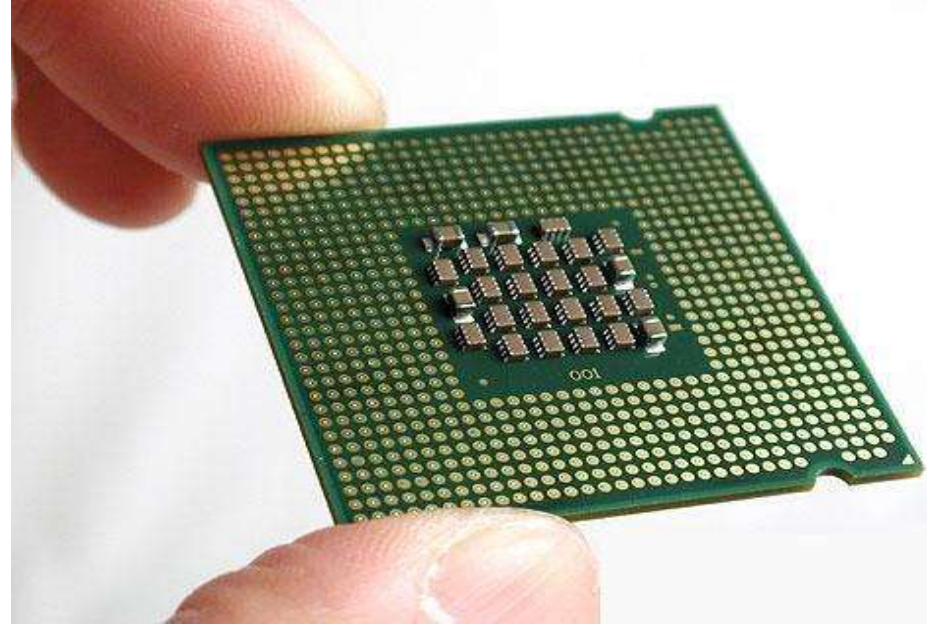
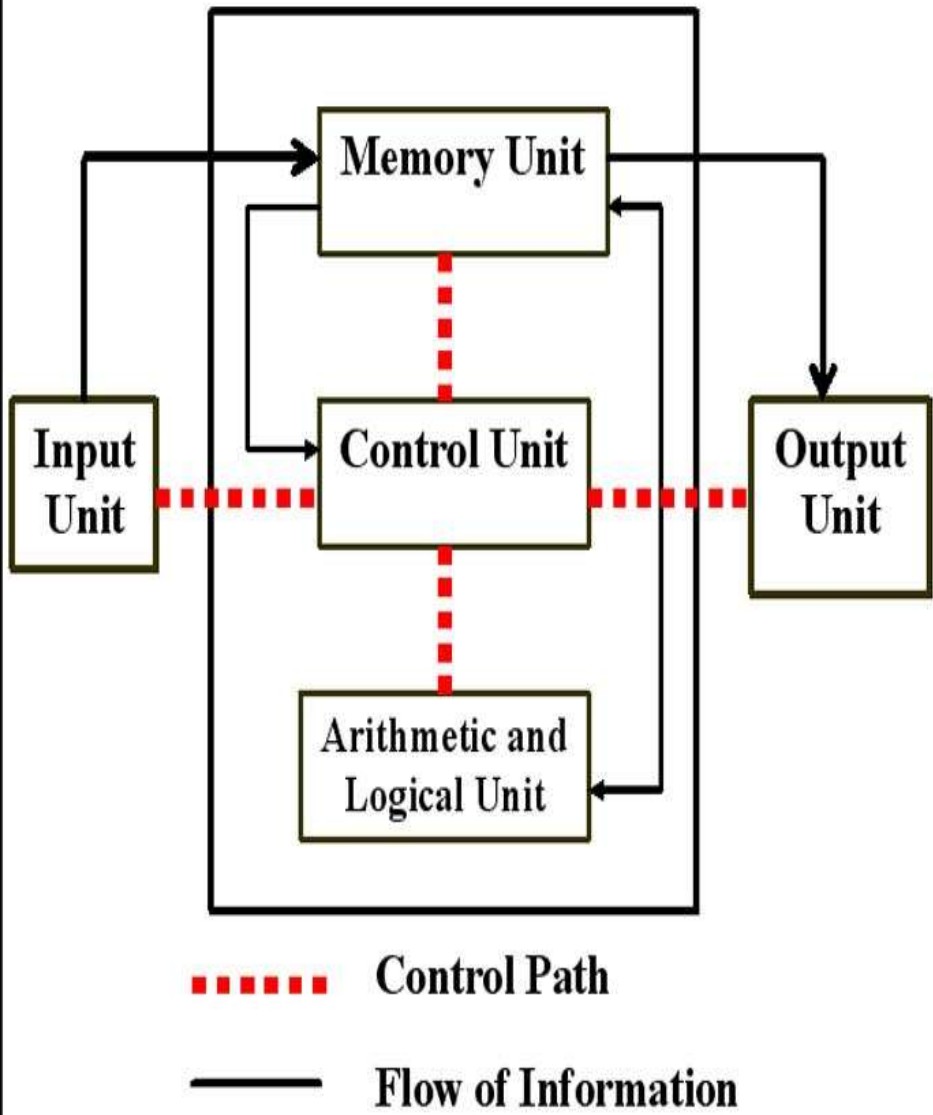
In simple words computer system is a combination of hardware, software & liveware



Types of Computer



Central Processing Unit



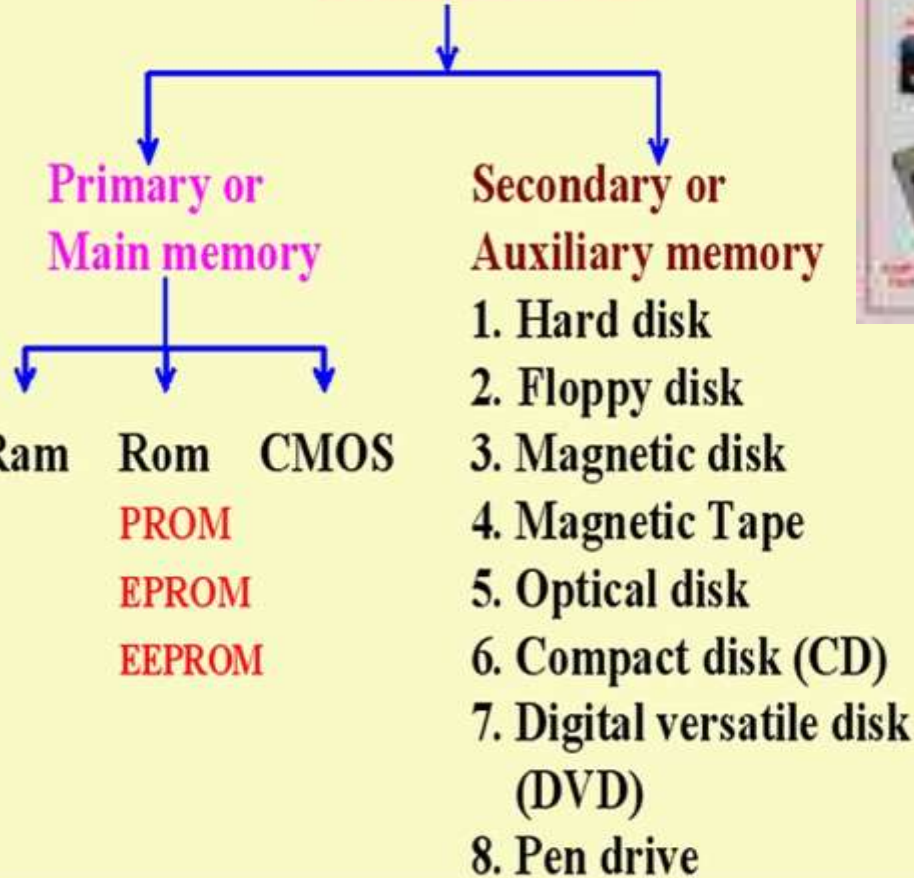
Computer Memory

“Computer memory is a place where the computer program and data are stored during processing” स्मृती म्हणजे जणू कांही वाचनालयातील पुस्तकांचे कपाट होय. संगणकाच्या स्मृती विभागाचाच माहितीचे कोठार म्हणतात.



Computer Ram (SD)

Types Memory



Bit and Bytes

0 = Off , Absent , No

1 = On , Present , Yes

bit

0 0 1 1 0 1 0 1

byte (8-bits)

0 1 1 0 1 0 0 1 1 0 1 0 1 1 0 1

word (16-bits, 2 bytes)



Computer Ram (SD)

Storage Capacity (Memory) Calculation of Bits and Byte

"bit", is a unit of digital information in computing and telecommunications. It is an ordered collection of bits, in which each bit denotes the binary value of 1 or 0.

0 or 1 = 1 Bit (b)

8 Bits = 1 Byte (B)

1024 Bytes = 1 Kilo byte (KB)

1024 Kilobytes = 1 Megabyte (MB)

1024 Megabytes = 1 Gigabyte (GB)

1024 Gigabytes = 1 Terabyte (TB)

1024 Terabytes = 1 Petabyte (PB)

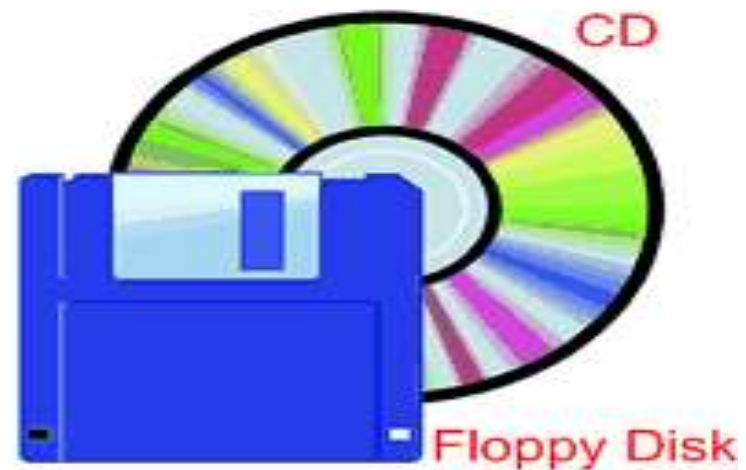
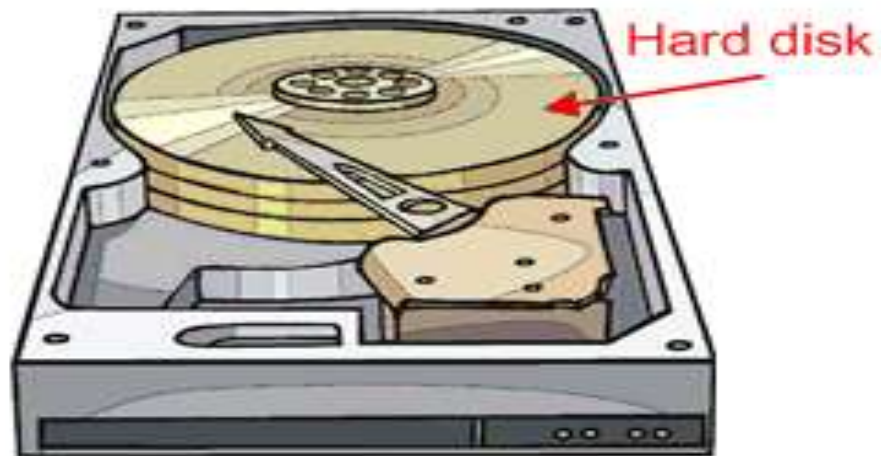
1024 Petabytes = 1 Exabyte (EB)

1024 Exabytes = 1 Zettabyte (ZB)

1024 Zettabytes = 1 Yottabyte (YB)

How to set Icons on Desktop





Hard drive (C:)

The hard drive and RAM are inside the system unit. You can't see them.

Random Access Memory (RAM)



CD Drive (D:)

Floppy Drive (A:)



Input Devices

“An input device converts input data and instruction in binary form for acceptance by the computer, such input device generate or produce digital signals”

1. **Keyboards**
2. **Mouse**
3. **Scanners**
4. **OMR (Optical mark reader)**
5. **OCR (Optical character reader)**
6. **MICER (Magnetic ink character recognition system)**
7. **OBR (Optical Barcode readers)**
8. **Joystick**
9. **Microphones**





Output Devices

“Output unit receive result or information from central processing unit and display on monitor for users or output unit convert the result in binary code in to user understandable form”

1. VDU (Monitor)
2. Printer
3. Plotters
4. Spooling





Types of Printers

- **Impact Printer**
- **Dot Matrix Printer**
- **Line Printer**
- **Drum Printer**
- **Non Impact Printer**
- **Laser Printer**
- **Inkjet Printer**

Definitions

Information

“Information can be defined as data that has been processed in to a form that is meaningful to the recipient and is of real value in current or future action”

Technology

“Technology refers to application of scientific knowledge to process the data.”

Information Technology

“Information Technology is a system which enables its users to collect, store, process and distribute information.”

Basic Features of Information Technology

- **High speed Transmission**
- **Networking**
- **Easy Communication**
- **Easy Connectivity**
- **Easy Interactivity**
- **Graphical User Interface**
- **Accuracy in Information**
- **Database Management**
- **Multi Media**
- **E-Commerce**
- **Prompt Decision Making**
- **World Wide Web**

:What is Internet:

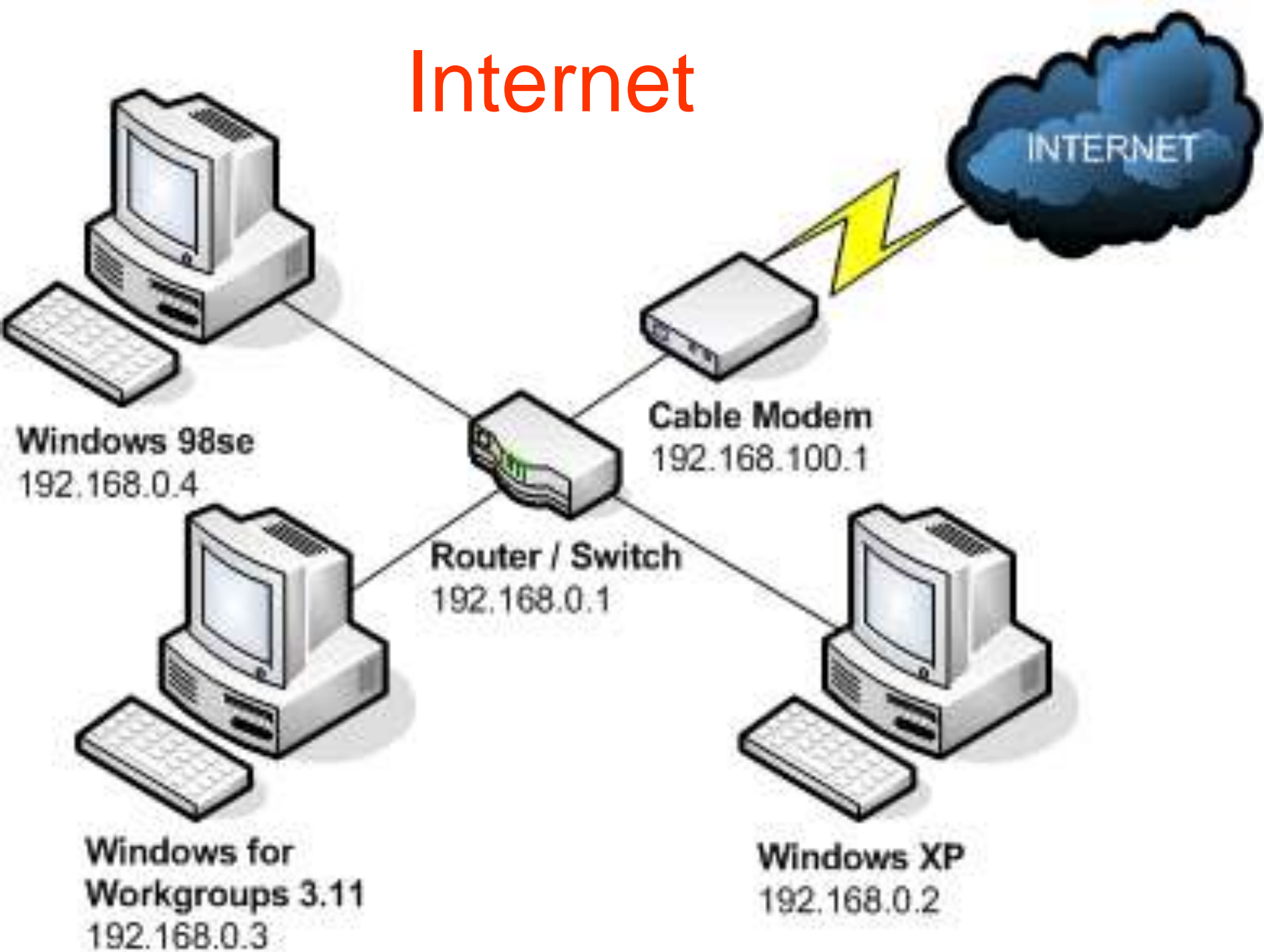
“The Internet is a worldwide, publicly accessible series of interconnected computer networks that transmit data by packet switching, using the standard Internet Protocol(IP). It is a “network of networks” that consists of millions of smaller domestic, academic, business, and government networks, which together carry various information and services, interlinked Web pages and other documents of the World Wide Web.”

- The Internet or Net was launched in 1969 by Advanced Research Project Agency Network (ARPANET).**
- The Internet is a large network that connects together smaller networks all over the globe.**

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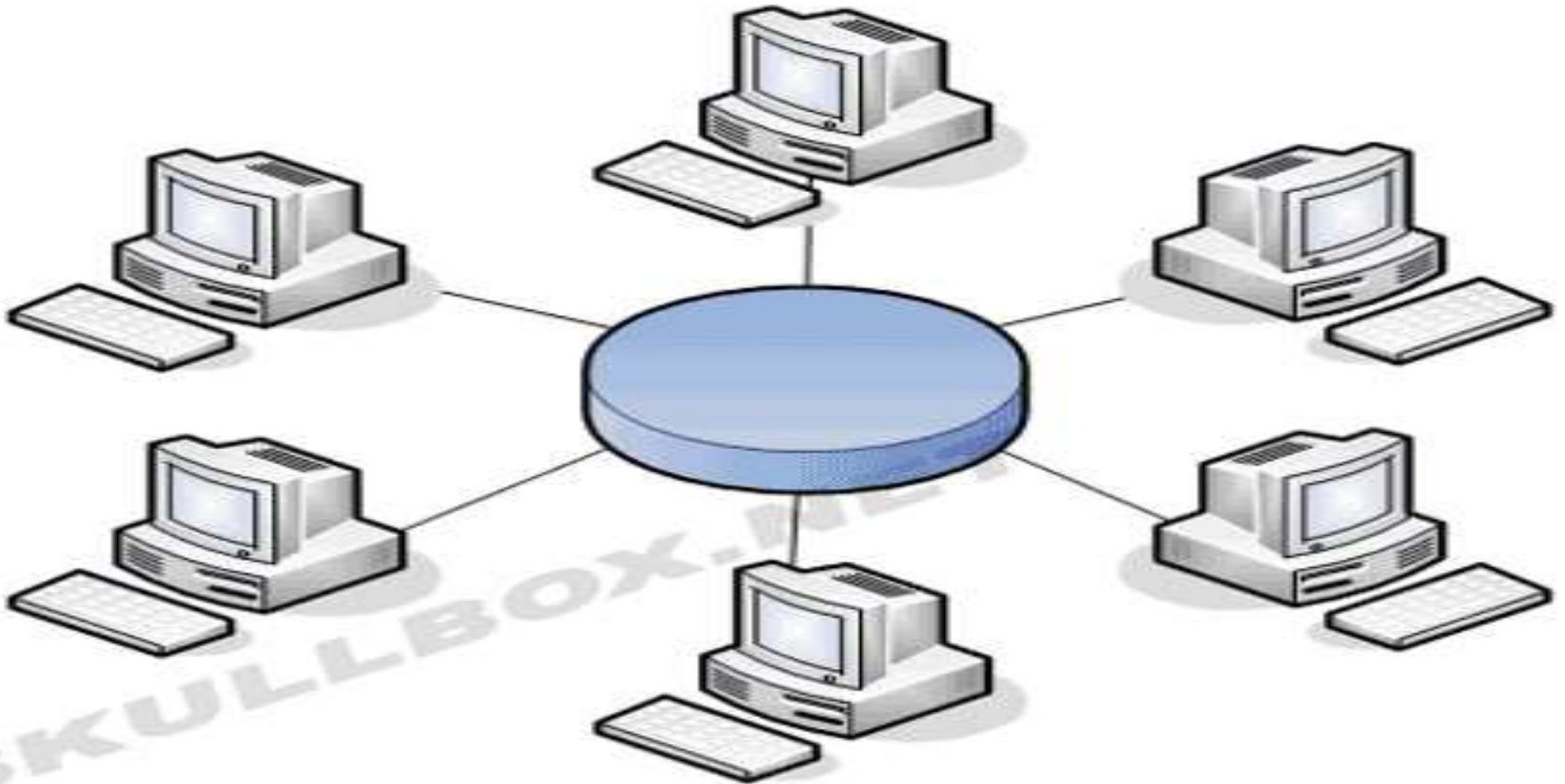
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Internet

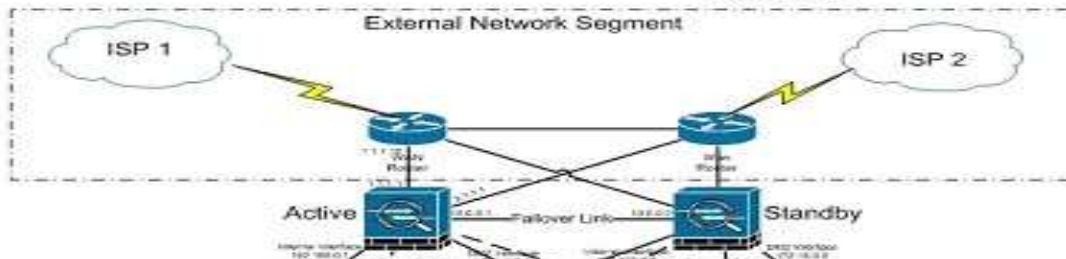
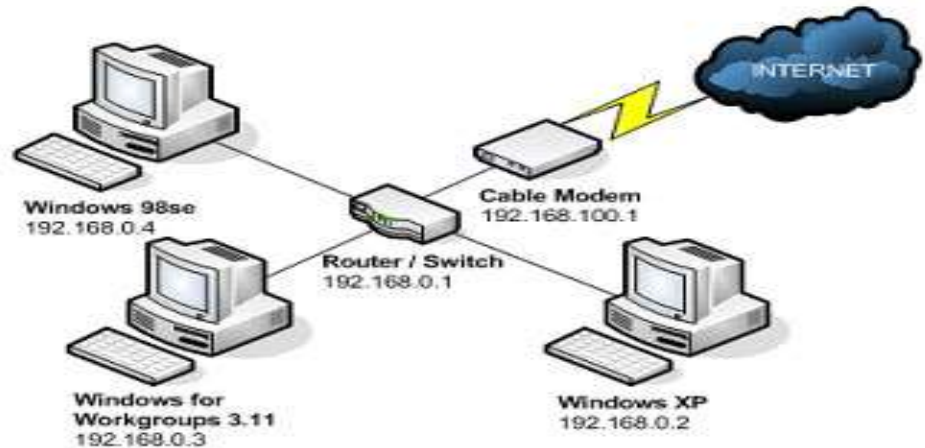
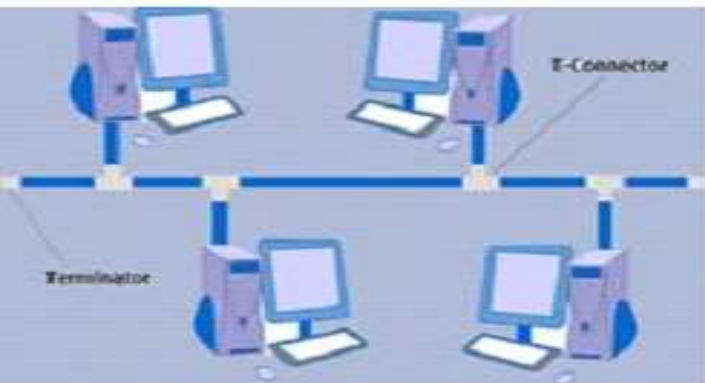


Αρχιτεκτονική Ολοκληρωμένου Συστήματος

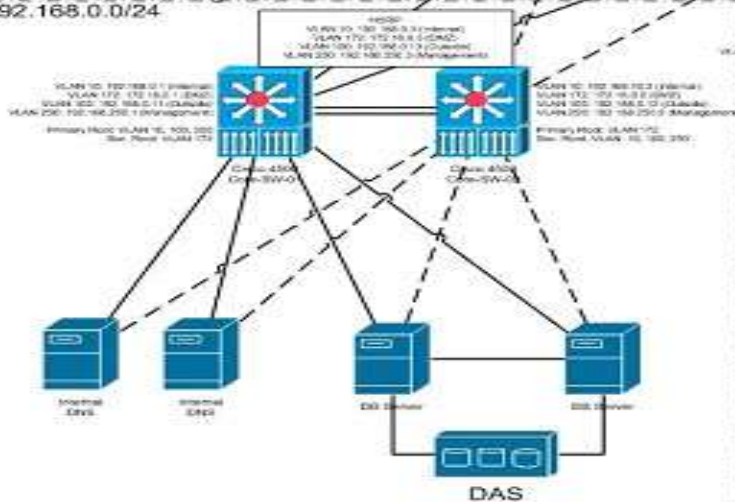
“ Η αρχιτεκτονική ενός ολοκληρωμένου συστήματος περιλαμβάνει τον σχεδιασμό της δομής του συστήματος, των λειτουργιών που θα εκτελούνται, των δεδομένων που θα χρησιμοποιούνται, των διαδικασιών που θα ακολουθούνται, των πόρων που θα απαιτηθούν και των μεθόδων που θα χρησιμοποιούνται για την επίτευξη των στόχων του συστήματος.”



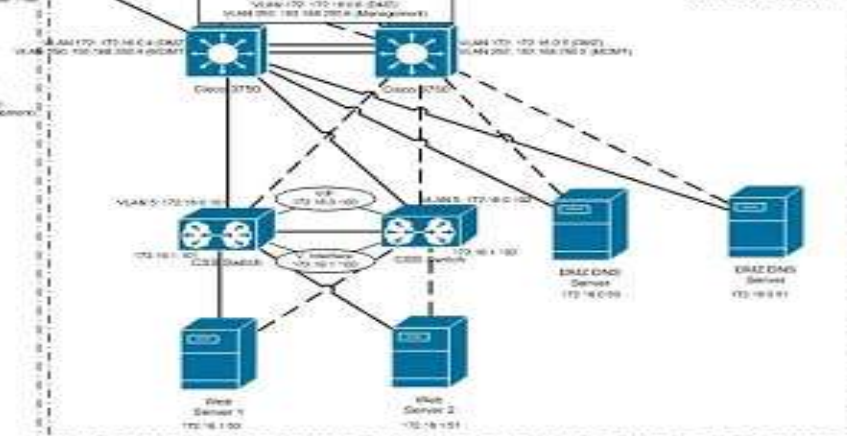
Computer Network



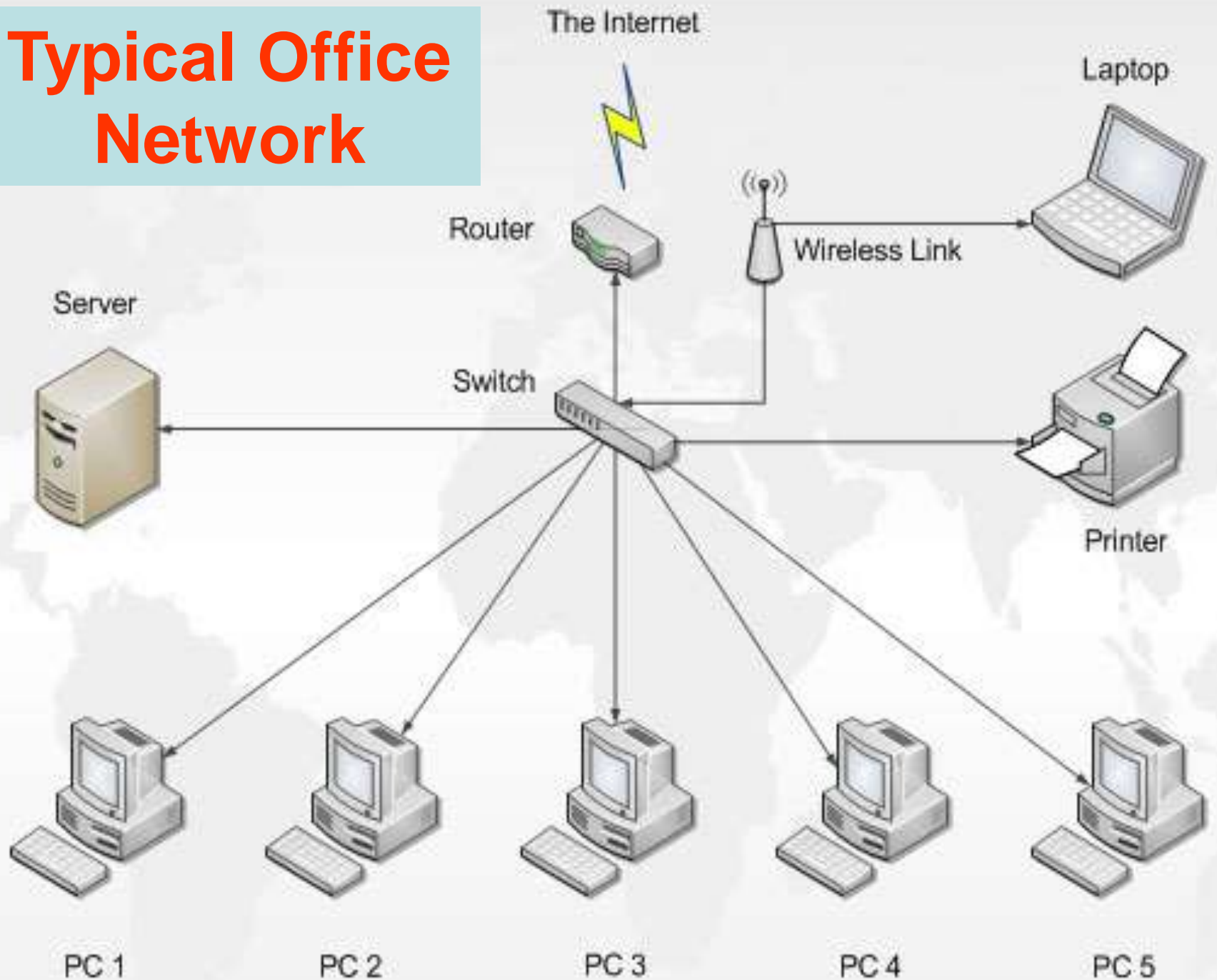
Internal Network Segment
192.168.0.0/24



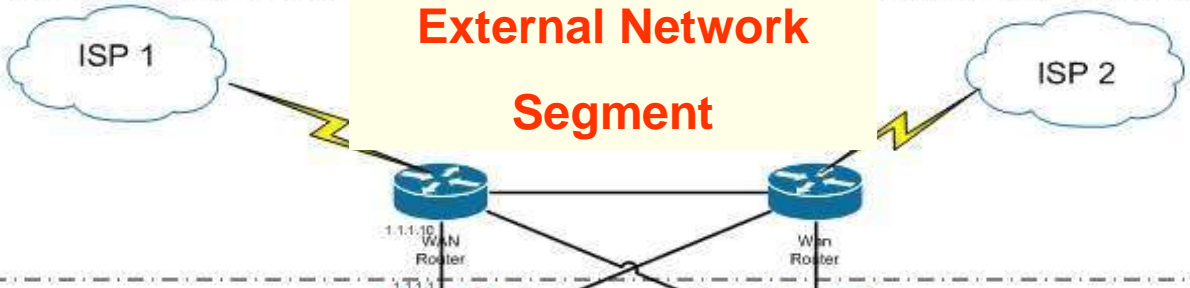
DMZ Network Segment
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Typical Office Network



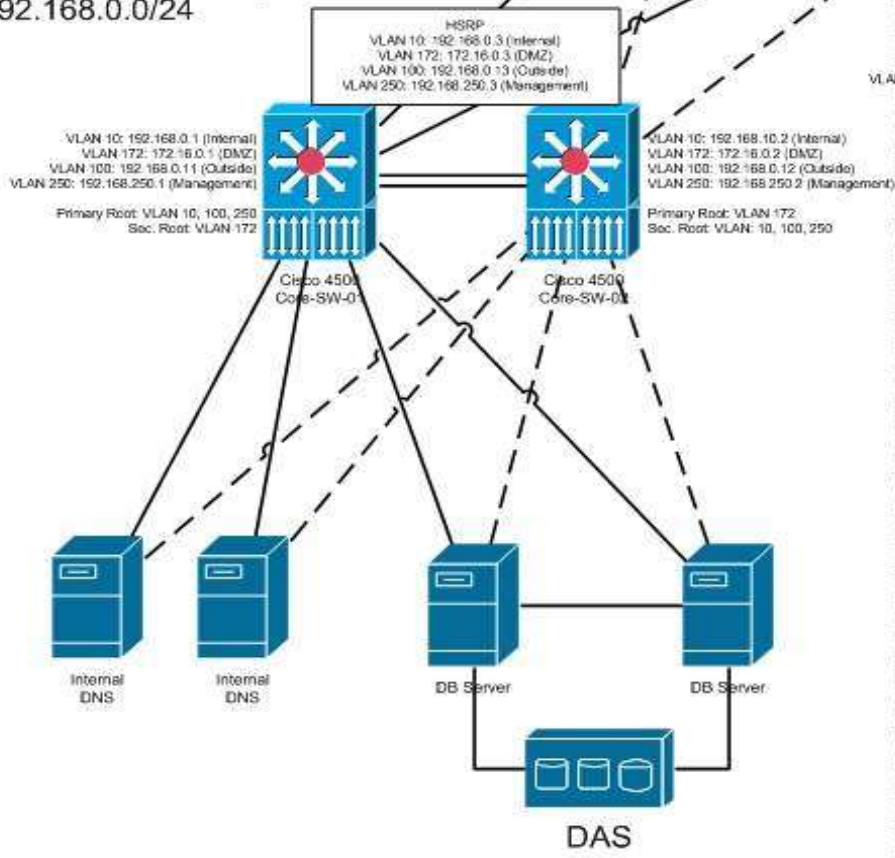
External Network Segment



Failover Link



Internal Network Segment 192.168.0.0/24



DMZ Network Segment 172.16.0.0/24

