SNS COLLEGE OF TECHNOLOGY

Coimbatore-35
An Autonomous Institution

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DEPARTMENT OF INFORMATION TECHNOLOGY
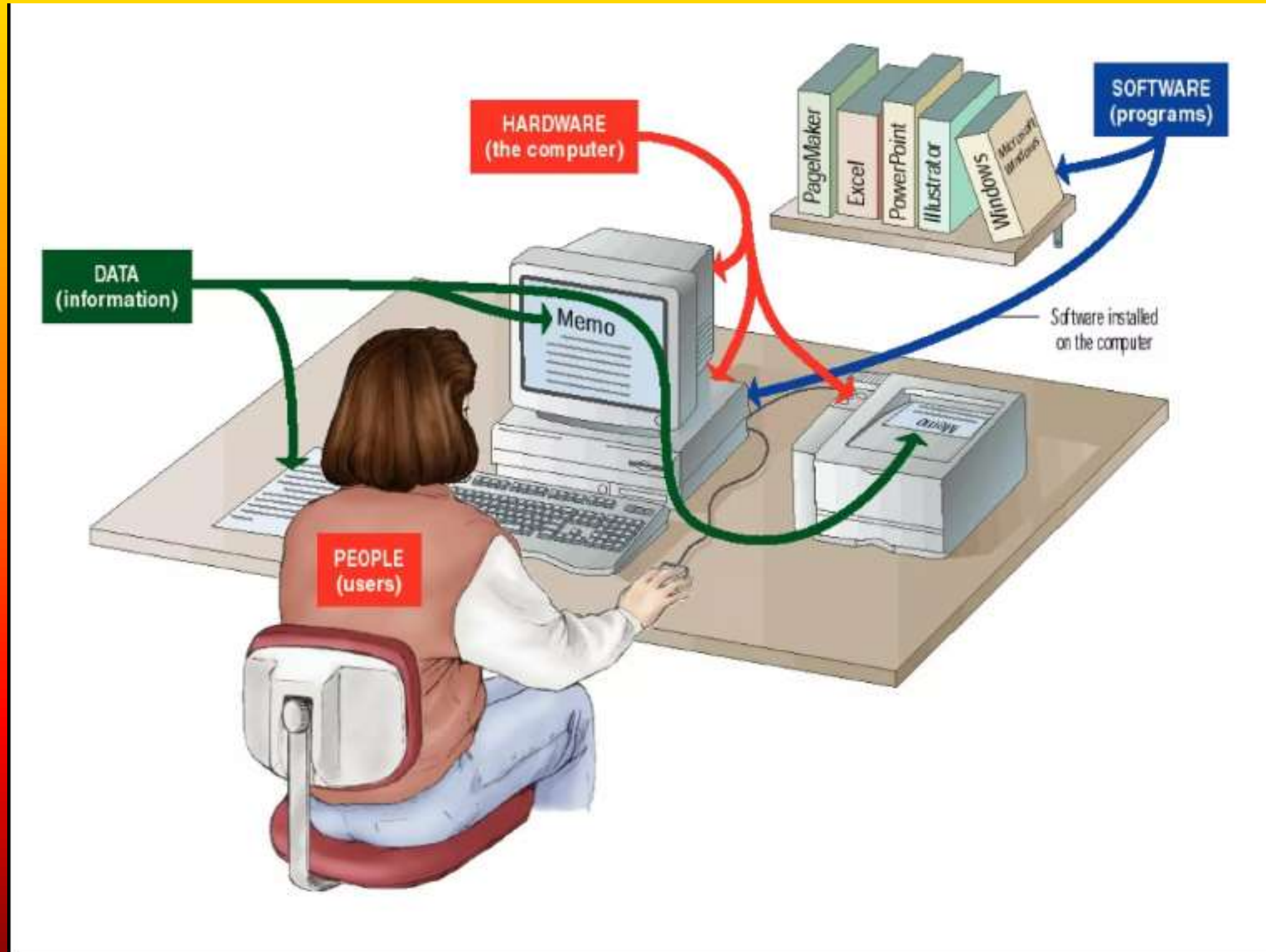
PROGRAMMING FOR PROBLEM SOLVING

I YEAR / I SEMESTER

UNIT 1 – INTRODUCTION OF PROBLEM SOLVING TECHNIQUES

TOPIC 2 – FUNDAMENTALS

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OUTLINE VIEW OF FUNDAMENTAL OF COMPUTERS

What is Computer ?

➢ **Computer is an electronic device.**

➢ **Can store large amounts of data.**

➢ **Can performing operations on data.**

➢ **Performing given function on the data & displays the result as output.**

➢ **Process data whenever needed.**

➢ **Known from 'to compute'**

What is Process?

➢ **Computer works on data as per programme is called process.**

➢ **Processing means operations like…..**

  ➢ **Calculations,**

  ➢ **Logical decision making,**

  ➢ **Outputting data,**

  ➢ **Communicating with others computer etc.**

History of Computers

- **First(1945-1955):** Used vacuum tubes. Were very large. Generated immense heat. Very expensive.

- **Second(1955-1965):** Used transistors. Continued to be large and expensive.

- **Third(1965-1975):** Used integrated circuits. Significant reduction in size and cost

- **Fourth(1975-1995):** Uses Very Large Scale Integration. Desktop computers would not have been possible without VLSI. It used Microprocessor minimizing the size of P.C.

- **Fifth (in progress):** Will provide us with Artificial intelligence. Also called knowledge information processing system

Characteristics of Computer

- Speed

- Arithmetical and Logical Operations

- Accuracy

- Reliability

- Storage

- Retrieving Data and Programme

- Automation

- Versatility (Flexible)

- Consistency

- Communications

Units of Computer Memory Measurements

1 Bit = Binary Digit

8 Bits = 1 Byte

1024 Bytes = 1 KB (Kilo Byte)

1024 KB = 1 MB (Mega Byte)

1024 MB = 1 GB(Giga Byte)

1024 GB = 1 TB(Terra Byte)

1024 TB = 1 PB(Peta Byte)

1024 PB = 1 EB(Exa Byte)

1024 EB = 1 ZB(Zetta Byte)

1024 ZB = 1 YB (Yotta Byte)

1024 YB = 1 (Bronto Byte)

1024 Brontobyte = 1 (Geop Byte)

Geop Byte is The Highest Memory

Classification of Computers

Personal computer :

- **A single-user computer**
- **Can be useful at School, Home, etc.**
- **Known as Micro Computer**
- **Laptop, Desktop**

Workstation :

- **A powerful, single-user computer.**
- **A workstation is like a personal computer, but it has a more powerful microprocessor**
- **higher-quality monitor.**
- **Can be found in companies etc.**

Minicomputer

- A multi-user computer
- Capable of supporting from 10 to hundreds of users simultaneously.
- Can be found in banks, government departments etc.

Mainframe

- A powerful multi-user computer
- Capable of supporting hundreds or thousands of users simultaneously.

Supercomputer

- An extremely fast computer
- Can perform hundreds of millions of instructions per second
- Weather, scientific research can be done by these types of computer.

Applications of Computer

- Science research

- Education

- Business applications

- Banking

- Office Automation

- Desktop publishing

- Management aids

- Engineering designing

- Road traffic control

- Railway

- Medicine

- Information services

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THANK YOU