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Assignment	Computer

-: HISTORY OF COMPUTER :-

Starting :- (from 1600)

Originally calculations were computed by humans, whose job title was computers. These human computers were typically engaged in the calculations of a mathematical expression..

The calculations of this period were specialized and expensive, requiring years of training in mathematics. The first use of the word "Computer" was recorded in 1613, referring to a person who carried out calculations and the word continued

to be used in that sense until the middle of the 20th century.

Abacus:-

An abacus is a mechanical device used to aid an individual in performing mathematical calculations.

The abacus was invented in Babylonia in 2400 B.C.

It is used to perform basic arithmetic operations.



Napier's Bones:-

Napier's Bones

is a calculating device invented by John Napier in 1614.

It allowed the operator to multiply, divide and calculate square and cube roots by moving the rods around and placing them in constructed boards.

Slide Rule:-

Slide Rule is the new version of Napier's Bones, invented by "William Oughtred" in 1622.

Slide rule was invented, based on Napier's ideas about logarithms.

Slide Rule is used primarily for:

- Multiplication
- Division
- Roots
- Logarithms
- Trigonometry

Slide Rule is not normally used for addition or subtraction.

Pascaline :-

Pascaline is a calculating device, was invented by "Blaise Pascal" in 1642.

It was its limitation to addition and subtraction.

It is too expensive.

Stepped Reckoner :-

Stepped Reckoner was invented by "Gottfried Wilhelm Leibniz" in 1672.

It was the first machine that is used to calculate all operations like add, subtract, multiply and divide automatically.

Arithometer:-

Arithometer is a mechanical calculator invented by "Thomas De Colmar" in 1820.

Arithometer was the first reliable, useful and commercially successful calculating machine.

Arithometer was the machine could perform the four basic mathematic functions.

Arithometer was the first mass-produced calculating machine.

Difference Engine and Analytic Engine:-

It's an automatic, mechanical calculator designed to tabulate polynomial functions.

Difference Engine and Analytic Engine was invented by "Charles Babbage" in 1822 and 1834.

It is the first mechanical computer.

Due to this Charles Babbage called the "Father of Computer".

First Computer Programmer:-

In 1840, Augusta Ada Byron suggest to Babbage that he use the binary system. She written programs for the Analytic Engine.

Havard Mark 1:-

Havard Mark 1

is also Known as IBM

Automatic Sequence Controlled
Calculator (ASCC).

It was invented by
"Howard H. Aiken" in 1943.

Havard Mark 1 was the
first electro-mechanical computer.

EDVAC :-

It is stands for
Electronic Discrete Variable
Automatic Computer.

EDVAC was the first stored
program Computer Designed
by Von Neumann in 1952.

Osborne 1 - the first
portable computer. It was
released in 1981 by the
Osborne Computer Corporation.

Day: _____

Date: _____

The First Computer Company:-

The First computer company was the Electronics Control Company, founded in 1949 by J. Presper Eckert and John Mouchly.

-: Generations of Computer :-

- Generation in computer terminology is a change in technology a computer was being used.
- There are FIVE generations of computer:

-: 1st Generation of Computer :-

- The period of first generation was 1946- 1959.
- The computers of first generation used vacuum tubes as the basic components for memory.
- In this generation mainly batch processing operating system were used.
- The computers in this generation used machine code as programming language.
- The vacuum tubes, like electric bulbs, produced a lot of heat

and were prone to frequent fusing of the installation.

:- Features :-

The main features of first generation of Computer are:

- Vacuum tube technology.
- Unreliable
- Supported machine language only.
- It is very costly.
- It is Generated lot of heat,
Need of A.C.
- It has Slow input and output devices.
- It is Non-portable.
- It consumed lot of electricity.

-: 2nd Generation of Computer :-

- The period of second generation was 1959 - 1965.
- In this generation transistors were used that were cheaper, consumed less power than the 1st generation of vacuum tubes.
- In this generation, magnetic cores were used as primary memory and magnetic tape and magnetic disks as secondary storage devices.
- In this generation, assembly language and High-level language were used.
- The computers used batch processing and multiprogramming operating system.

-: Features :-

The main features of Second generation of computers are:

- Use of transistor
- Reliable in comparison to first generation computers.
- Smaller size as compared to first generation computers.
- Generated less heat as compared to first generation Computers.
- It consumed less electricity.
- It is faster than first generation computers.
- It still very costly.
- It is supported machine and assembly languages.

-: 3rd Generation of Computer :-

- The period of third generation was 1965-1971.
- The computers of third generation used integrated Circuit (ICs) in place of transistors.
- A single IC has many transistors, resistors and capacitors along with the associated circuitry.
- The IC was invented by Jack Kilby.
- This development made computers smaller in size, reliable and efficient.
- In this generation, remote processing, time-sharing were used. High-Level language were used during this generation.

-Features:-

The main features of Third Generation of Computer are:

- IC used.
- It is faster.
- It is lesser maintenance.
- It is still costly, A.C. needed.
- It has smaller size.
- It generated less heat.
- It is more reliable in comparison to previous two generations.
- It is supported high-level languages.
- Consumed less electricity.

-:- 4th Generation of Computer :-

- The period of fourth generation was 1971 - 1980.
- The computers of fourth generation used very large Scale Integrated (VLSI) circuits.
- VLSI circuits having about 5000 transistor and other circuit elements and their associated circuits on a single chip made it possible to have microcomputers of fourth generation.
- In this generation time sharing, real time, networks, distributed operating system were used.
- All the high-level languages like C, C++ etc were used in this generation.
- Fourth generation computers became more powerful, compact, reliable and affordable.

-: Features :-

The main features of fourth generation are:

- VLSI technology used.
- Very cheap, Computers became easily available.
- Portable and reliable, Use of PC's.
- Very small size.
- Pipeline processing.
- No A.C needed.
- Concept of internet was introduced.
- Great developments in the fields of networks.

-:- 5th Generation of Computer :-

- The period of fifth generation is 1980 - till date.
- In this generation, the VLSI technology became (Ultra Large Scale Integration) ULSI technology.
- This generation is based on parallel processing hardware and AI (Artificial Intelligence) software.
- AI is an emerging branch in computer science, with interprets means and method of making computer think like human beings.
- All the high-level languages like C and C++, Java, .Net etc., are used in this generation.

-:Features:-

The main features of fifth generation are:

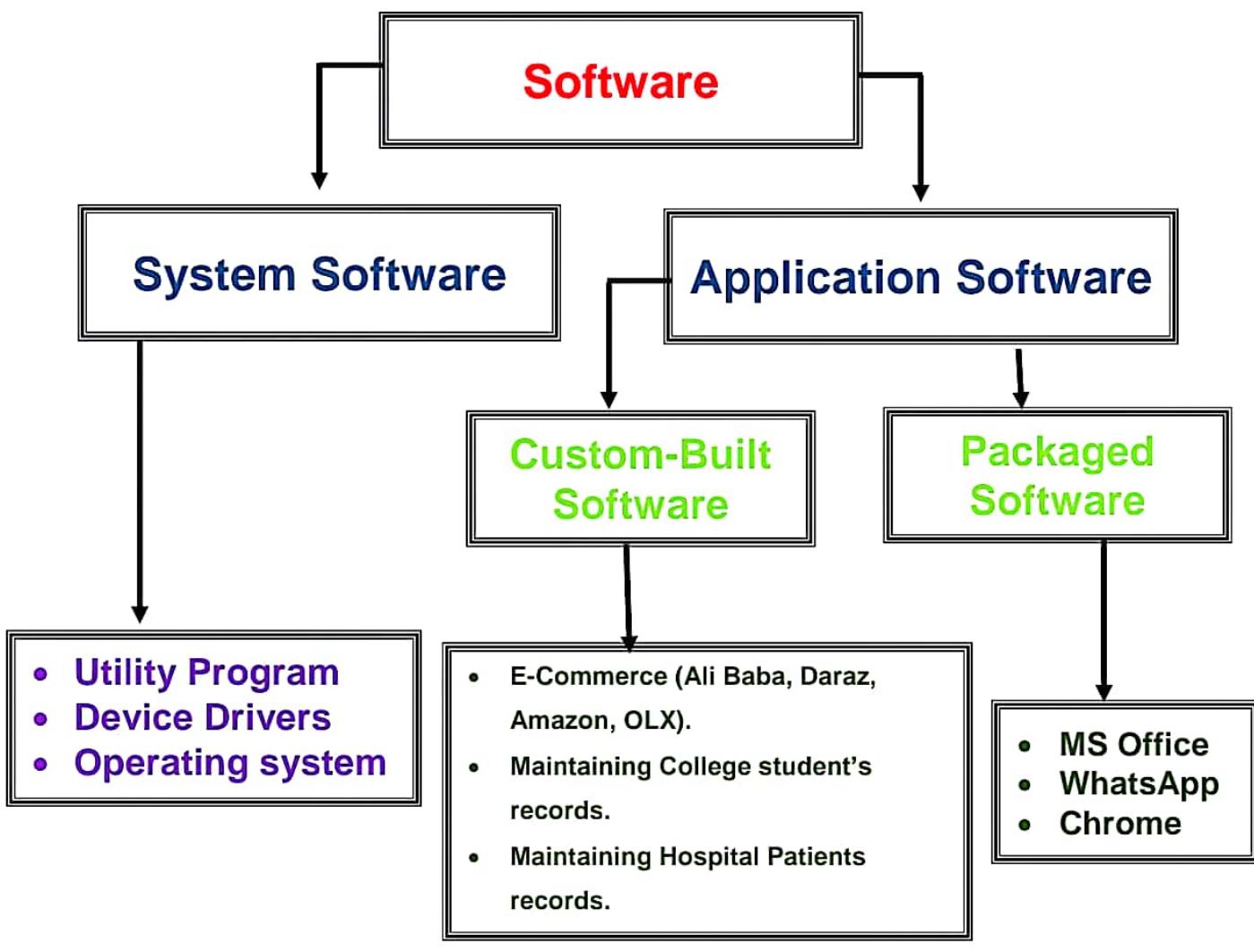
- ULSI technology.
- Development of true artificial intelligence.
- Development of Natural language processing.
- Advancement in parallel processing.
- Small computer invented.
- More user friendly interface with multimedia features.
- Advancement in superconductor technology.



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Topic # 03

Computer software & it's types:



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Computer software & it's types

SOFTWARE

Software is a collection of instructions which is given to the computer to perform a specific task. software tells the computer what to do and how to do. Software is also known a program.

TYPES

There are two major type of software:

- System Software.
- Application Software.

System Software

System software is a program designed to run a computer's hardware and applications and manage its resources, such as its memory, processors, and devices.

Example:

- Utility program.
- Operating System.
- Device Drivers.

Application Software

Application software designed to handle specific tasks for users. Such software directs the computer to execute commands given by the user and may be said to include any program that processes data for a user.

TYPES

There are two major types of Application software:

- Custom-Built software
- Package software

Custom-Built software

The software which is especially designed for only one person and organization is called custom-Built software. It is also known as Customized software.

Example:

- E-Commerce (Ali Baba, Daraz, Amazon, OLX).
- Maintaining College student's records.
- Maintaining Hospital Patients records.
- Maintaining Company Employees records.

Package software

The software which is developed for people to solve different types of problem is called Package software. These programs work together to accomplish a task; in which case these are known as a spreadsheet package.

Example:

- MS Office
- WhatsApp
- Chrome
- MS Access



-:(Intro to Computing):-

CHAPTER # 01:-

Computer:-

"Computer is a programmable digital electronic device that takes data as input and perform instructed arithmetic and logical operations and gives output in the form of useful information."

Data & Information:-

Data:-

"Data is a collection of raw facts and figure about an object. Data cannot be useful and cannot be meaningful."

Example:-

Ages of Students

Medical Records

Emails

Information:-

The processed form of data is called Information. It can be useful and meaningful.

Example:-

DBMS

Results of all students

Computer Components of Data:-

Computer consists of two major components of Computer.

(i) Software

(ii) Hardware

Software :-

Software is a set of instruction that tells the computer what to do and how to do.

Hardware :-

The physical parts of computer which we can see and touched is called hardware.

Example:-

- Keyboard
- Mouse
- Monitor
- Speaker

Input & Output Devices:-

Input Device:-

The device which is used to input the data into the computer is called Input Device.

Example:-

- Keyboard = Textual Data
- Mouse - Instructions
- Microphone = Voice or Audio data

Output Devices:-

The device which is used to takes output from Computer is called Output Device.

Example:-

- Monitor
- Printer
- Speaker
- . . .

Storage Devices:-

The Storage devices is used to store data temporary or permanently.

There are two types of Storage devices-

- Primary Storage devices.
- Secondary Storage devices.

Primary Storage devices:-

The storage devices that communicates directly with the CPU is called primary storage devices. Primary Memory is also known as Main Memory.

Example:-

- RAM (Random Access Memory)
- ROM (Read Only Memory)
- Cache Memory
- Registers

Secondary Storage Device:-

The devices which is used to store data permanently is called Secondary Storage devices. The Secondary Memory refers to external storage devices. It is also known as

Backup Memory.

It is also refer to removable storage device.

Example:-

- Hard Disk
- Floppy Disk
- SSD (Solid State Drives)
- USBs
- DVDs
- CDs
- Memory Card.

Processing Devices:-

The devices that receives information and instruction from the input devices and return the result through analysis is called processing devices.

CPU (Central Processing Unit)

Networking Devices:-

The devices which is used to communication and interaction between devices on a computer network and used to connect the computer to the network, is called Networking devices.

Example:-

- Router
- Bridge
- Modem

Connector Devices:-

The devices which is used to joins the two equipment by a wire or piping together is called Connector Devices.

Example:-

- Power Cable
- HDMI Cable
- Data Cable