THE FUTURE TRACK

COMPUTER EDUCATION

BASIC

Computer Notes

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BASIC COMPUTER COURSE NOTES

WHAT IS COMPUTER

- A computer is a machine that processes information and performs tasks based on instructions. It can store data, solve problems, and run programs like games, apps, or websites.

HOW MANY TYPES OF COMPUTERS

- **The are three types of computer**

1. **Analog computer :**-An analog computer processes continuous data, like electrical signals, to solve complex calculations. It is used in specialized fields like engineering and science for tasks like simulations
2. **Digital Computer**-This computer is used to education purpose business purpose and any types of official work .
3. **Hybrid computer** -This computer is used to both of work analog and digital .

THERE ARE FOUR TYPES OF DIGITAL COMPUTER

- **Super computer :-**This computer used for complex tasks like weather forecasting and scientific research.
- **Mainframe Computer-**This computer is used to Large, powerful computers used by businesses and governments for processing large amounts of data..
- **Micro computer-**This computer is used to education purpose business purpose any types of official work.
- **Mini computer-**This computer is a sized computer but more powerful than personal computer but smaller than a mainframe computer

BASIC COMPUTER COURSE NOTES

WHAT IS THE BENEFIT OF A COMPUTER

- **Speed:** Computers can process data and perform tasks much faster than humans**.**
- **Storage:** They can store vast amounts of information and retrieve it quickly**.**
- **Automation:** Computers can automate repetitive tasks, saving time and effort.
- **Connectivity:** They enable communication and access to information globally through the internet.
- **Accuracy:** Computers perform calculations and tasks with high precision, reducing human error.
- **Versatility:** They can be used for a wide range of purposes, from gaming and entertainment to work, education, and research.

How many part of the computer

- **Central Processing Unit (CPU):** The brain of the computer that processes instructions.
- **Memory (RAM):** Temporary storage that helps the CPU run programs faster.
- **Motherboard:** The main circuit board connecting all parts of the computer.
- **Storage:** Hard drives (HDD) or solid-state drives (SSD) that store data long-term.
- **Power Supply:** Provides electricity to the computer.
- **Input Devices:** Tools like a keyboard and mouse used to give instructions.

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- Output Devices: Components like a monitor or printer that display results.
- Graphics Card (GPU): Handles visual output, especially for gaming or design

GENERATION OF COMPUTER

1st Generation (1940-1956)

Technology: Vacuum tubes.

Characteristics: Large, expensive, and consumes much electricity. Programming was done in machine language.

There are four computers developed in the First Generation

- ENIAC: Electronic Numerical Integrator and Computer
- UNIVAC: Universal Automatic Computer
- EDVAC: Electronic Discrete Variable Automatic Computer
- EDSAC: Electronic Delay Storage Automatic Computer

Feature of the first-generation
Language : Machine language
Memory : Magnetic drum
Keyboard : Punch card

2nd Generation (1956-1963) Technology: Transistors.

Characteristics: Smaller, more reliable, and more energy-efficient than first-generation computers. High-level programming languages like COBOL and FORTRAN emerged.

Examples: IBM 7094, CDC 1604.

Feature of 2d generation
Language : Assembly language
Memory : Magnetic disk
Keyboard : Punch card

3rd Generation (1964-1971)
Technology: Integrated Circuits (ICs).
Characteristics: Further miniaturization and increased performance due to ICs. More powerful and efficient, with the introduction of operating systems allowing multitasking.
Examples : IBM 360, PDP-8.
Feature : 3D generation
Language : High-level language
Memory : Hard disk
Keyboard : QWERT keyboard

GENERATION OF COMPUTER

4th Generation (1971-Present)
Technology: Microprocessors.
Characteristics: Computers became more accessible and affordable due to microprocessors. Personal computers (PCs) emerged with graphical user interfaces (GUIs) and networking capabilities.
Examples: Intel 4004, Apple Macintosh.
Feature of 4th generation
all programming langauge
mouse introduced in the fourth generation
keyboard
hard disk

5th Generation (Present and Beyond)
Technology: Artificial Intelligence (AI) and Quantum Computing.

Characteristics: Focus on AI and machine learning, advanced natural language processing, and quantum computing. These systems aim to solve complex problems and improve decision-making processes.
Examples: AI-driven systems, quantum computers.