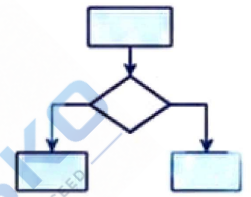
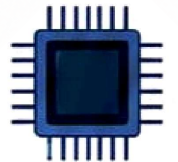


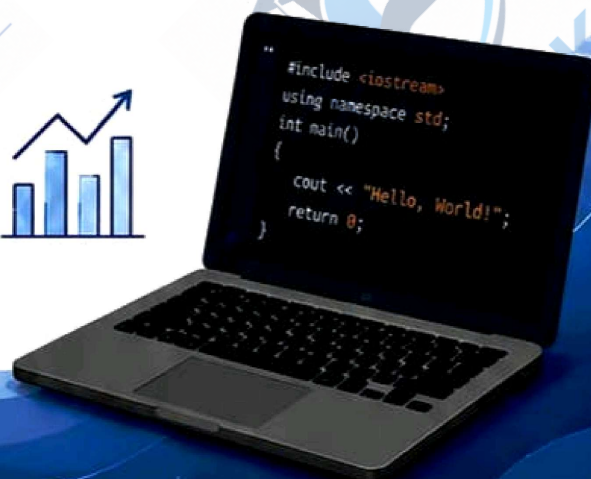
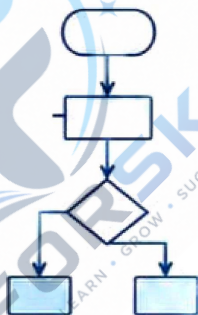
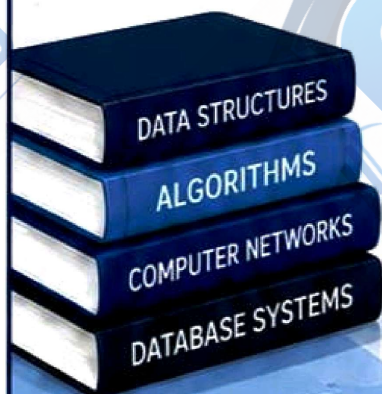
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Unit - IV



Unit -IV

Operating System.

Short Type

1. What is operating system?

Ans:- An operating system is defined as an interface between user and hardware. It is responsible for the execution of all the processes, Resource Allocation, CPU management, File Management and many other tasks.

2. What is kernel?

Ans:- A kernel is a core part of an operating system that manages hardware and software resources.

3. Who is the father of linux?

Ans:- The father of linux is Linus Torvalds.
OR

Linus Torvalds is known as father of linux.

4. What is booting?

Ans:- Booting is a process of starting a computer and loading its operating system into memory.

5. Who developed the linux operating system?

Ans:- Linus Torvalds developed linux operating system in 1991.

Long Type.

Q.1.
Ans:- Explain the functions of operating system.

1. Controlling System Performance :-

i. One of the most important function of the operating system is controlling the system's health.

ii. It monitor and observes the delay time between a service being requested and the requested service being served.

iii) This delay time is reduced as much as possible to improve the overall performance of system.

2. Memory Management :-

Main memory consists of bytes, each with unique address.

Programs must be in main memory to run. Operating System allocate and deallocate memory for programs.

Operating System keep track of which memory is assigned to which program.

3. Input Output Management:-

Operating system manage communication with peripheral devices.

Peripheral devices use drives to communicate with the system. The operating system determine which program or ~~or process in which program~~ process is accessed by which connection and devices.

4. ~~memory and control store at user d~~

~~not doing with their hardware~~

~~indication~~

~~the system but all the data~~

~~on the basis of first come first~~

~~serve and then executes the job~~

~~the user collect their own~~

~~when all jobs are executed~~

~~the purpose of this operating system~~

~~to transfer control from~~

~~one job to another as soon as the job~~

~~is completed~~

~~contains a small a number of~~

~~smaller subroutines called~~

~~in one way or another~~

~~of the system~~

2.
Ans:-

Explain batch mode operating system.

1. A batch mode operating system where jobs are grouped together and executed in batches.
~~In the~~
2. In 1970s, Batch processing was very popular.
3. In batch operating system, access is given to more than one person. They submit their respective jobs for the execution.
4. The system put all the jobs in queue on the basis of first come first serve and then executes the jobs one by one.
5. The user collect their jobs respective output when all jobs get executed.
6. The purpose of this operating system was mainly to transfer control from one job to another as soon as the job was completed.
7. It contain a small set of program called resident monitor that always resided in one part of main memory the remaining part is used to servicing jobs.

13. Explain Real-Time Operating System.

Ans:-

~~The real-time operating system is a special type of operating system that is used.~~

In Real-Time System, each job carries a certain deadline within which the job is supposed to be complete otherwise the huge loss will be there, or even if the result is produced, it will be completely useless.

The application of Real-Time system exists in case of military application if you want to drop missile, then the missile is supposed to be dropped with a certain time.

✓ 4. Explain Linux operating system.

Ans:

Linux is a free and open-source operating system, that is widely used in computers, mobiles, servers. It was created by Linus Torvalds in 1991.

✓ Explain Multiprogramming operating system.

Ans:-

The Multiprogramming operating system is a type of operating system that allows multiple programs to run at a time on a single computer. Each process needs two types of system time: CPU time and I/O time.

In a multiprogramming environment when a process does its I/O, the CPU can start execution of other processes. Therefore, multiprogramming improves the efficiency of the system.

✓
Ans:-

Explain booting process in MS-DOS.

The booting process in MS-DOS is a series of steps that initialize the system and load the operating system into memory.

1. Power-On Self-Test (POST):

When you power on the computer, the BIOS performs a series of hardware checks to ensure everything is working correctly. This includes testing of CPU, Memory, Keyboard, Mouse and other peripherals.

2. BIOS Locates Boot Device:

The BIOS then looks for the boot device, which is typically a floppy disk or hard disk drive. It checks the BIOS setup to determine the boot order.

3. Master Boot Record (MBR) Loading:

If the boot device is found, the BIOS loads the first sector of the boot device known as the master boot record (MBR) into memory.

4. Boot Sector Execution:

The MBR contains a small program that checks the partition table to find the active partition. It then loads the boot sector of the active partition into memory.

5. Loading DOS System Files:

The boot sector loads the core DOS system files, including:-

1. IO.SYS : Contains low-level input/output routines.
2. MSDOS.SYS : Contains the DOS kernel which manages memory files system and device drives.
4. Command.COM :- The command-line interpreter, which allows you to interact with the DOS system.

6. Configuration and Initialization:

DOS loads device drivers and initializes hardware components.

The AUTOEXEC.BAT file, if present, is executed. This file contains the series of commands that can be used to configure the system and launch programs automatically.

7. Command Prompt:-

Once the system is fully initialized, the DOS command prompt appears on the screen, indicating that the system is ready to accept user's data.

✓
Ans: Explain time sharing operating system.

1. A time sharing operating system is a type of operating system that allows multiple users to share the same computer system simultaneously.
2. It helps to provide a large number of users direct access to the main computer.
3. It is a logical extension of multiprogramming.
4. In time sharing, the CPU is switched among multiple programs given by different users on a scheduled basis.
5. It allows many users to be served simultaneously, so sophisticated CPU scheduling schemes and I/O management are required.
6. It is very difficult and expensive to build.