Victoria University
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Ans To The Q. NO. 1

The basic concepts of operating System

An operating system serves as an interface between the program and various computer hardware or software components. The operating system is made to be able to control all of the computer's resources and activities. It is an entirely integrated collection of specialised application that manage all of the computer's functions. All other programs that are installed on the computer, including applications and system software are controlled and monitored by it An operating system

is composed of five layers: The Kernel input/output, memory management, file management system, and user interface. An operating system acts as a communication bridge interface between the user and computer hardware. The purpose of an operating system is to provide a platform on which a user can execute programs conveniently and efficiently.

An operating system is a piece of software that manages the allocation of computer Hardware. The coordination of the hardware must be appopiate to ensure and to prevent user programs from interfering with the

the proper working of the system
The main goal of the operating system is to make the Computer environment more convenient to use and the Secondary goal is to use the resources most efficiently. Some function of an operating System: Memory management, processor Management, Device Management, File Management, user interface or command interpreter Booting the Computer, Security, control over system performance. Job Accounting Error-Detecting Aids, Coordinate Between

others software and users, performs Basic computer tasks, Network management

All these services are ensured by the operating system for the convenience of the users to make the programming task easier. All different kinds of operating systems more or less provide the same services.

Ans To The Q. NO. 2

Advantage and Disadvantage of Multiprogramming operating system.

#Advantage

* it provides less response time
* it may help to run various Jobs in a Single application Simultaneously
* it helps to optimize the total Jobs thoroughput of the computer
* various users may use the multiprogramming system at once
* The resources are utilized Smartly.

Disadvantages

* it is highly complicated and Sophisticated

* The CPU Scheduling is required

* Memory management is needed in the operating system because all types of tasks are stored in the main memory

* The harder task is to handle all process and tasks

* if it has a large number of jobs, the long terms Jobs will require a long wai

Ans To The Q.NO.3

Feature and objects of operating System.

Here are some key Features of Operating Systems

process Management, Memory management, File management, Device management, Security and Access control Networking, User interface, Multitasking System performance monitoring

That's every Feature has two part Functionality, Details.

#The operating System is a progroam with the Following Features

*An operating system is a progroam that acts as an interfaces between the Software and the computer hardware

*It is a integrated set of Specialized progroams used to manage overall resources and operations of the computer.

*It is a Specialized Software that controls and monitors the execution of all other progroams that reside in the computer including application progroams and other System Software.

The objectives of the operating system

* To make the Computer system convenient to use in an efficient manner
* To provide users a convenient interface to use the computer system
* To manage the resources of a computer system
* To hide the details of the hardware resource from the users
* To provide efficient and Fair Sharing of resources among users and programs

Ans To The Q. NO. 4

The most Secure operating system:
Growing digitalization has led to an increase in the need for digital Security and privacy with this comes the requirment to have Secure operating system. operating system Security protects Sensitive data and maintains personal privacy. As awareness grows regarding the associated privacy risks of conventional systems like those provided by windows and chromeos, There tends to be an increasi inclination toward alternative system emphasizing Security privacy and anonymity. This comprehensive approac provides a compelete understanding that

can help you make the right decision regarding the Secure OS that would comply with your requirement. As cyber-attacks continue to rise and data breaches become regular, one question follows what OS provides the most protection But it's not as straightforward as one might be led to believe google chromeos stands out as an Ultra-Secure Operating system that in many ways surpasses Windows, macos and Linux in terms of Security.

deadlock operating system: in any system every process needs to utilise resources to be implemented these resources could take the form of plugged-in devies or a system's CPU once a process finishes, the resource being used is released, However, when multiple processes occur simultaneously they may compete for resources. Deadlock in operating system happens when two or more processes cannot complete their execution because each is waiting for a resource held by the other: in the blog, we will

delve into what deadlock is, with detailed examples to help you understand it better, we will also cover various methods for handling deadlock.
deadlock in OS refers to a situation where more than one or two process or Threads are not able to proceed because each is waiting for the other to release a resource. in other words, it's a state where a group of processes become stuck in a way that they can't make any progress.
deadlock usually occurs in systems where multiple process compete for limited resources such as CPU time, memory or input, or output devices.