Assignment - 1

Q1- A system call is a method for a computer program to request a service from kernel of OS on which it is running. A Method of interacting with the OS via programs. It is a request from computer software to an operating system's kernel.

Q2- The degree of multiprogramming describes the maximum no. of processes that a single processor can system can accomodate efficiently. Some factors affecting degree of multiprogramming are:

i) Primary factor is amount of memory available to be allocated to executing processes. If the amount of memory is too limited, the degree of multiprogramming will be limited because fewer processes will fit in memory.

ii) Operating system - The means by which resources are allocated to processes. If the OS can not allocate resources to executing processes in a fair and orderly fashion, the system will waste time in reallocation, or process execution could enter into a deadlock state as programs wait for allocated resources to be freed by other blocked process

iii) Other factors are I/O needs, program CPU needs, and memory and disk access, speed.

Q3- Properties of OS:
i) Batch processing
ii) Multiprogramming
iii) Interactivity
iv) Real time system
v) Distributive environment
vi) Multitasking
vii) Spooling

Q4- Single User - multitasking :
i) Time saving
ii) High productivity in less time frame
iii) Less memory is used for performing multiple tasks.

Multi-user - multitasking :
i) Resource sharing
ii) Multitasking
iii) Bg ~~processing~~ processing
iv) Time sharing
v) Invisibility.

Q5- **Multiprogramming:** A rudimentary form of parallel processing in which several programs run at the same time on a uniprocessor system. However, because there is only one processor, there is no true simultaneous execution of different programs.

Multitasking: Allowing a user to perform more than one computer task at a time. The OS is able to keep track of where you are in these tasks and go from one to other without losing information.

Time sharing: a method of allowing multiple individuals at different terminals to access the same computer system simultaneously. Multiprogramming is generally logically followed by time sharing.

Multiprocessing: To boost performance of multiple CPUs within a single computer system, multiprocessing is used in OSs.