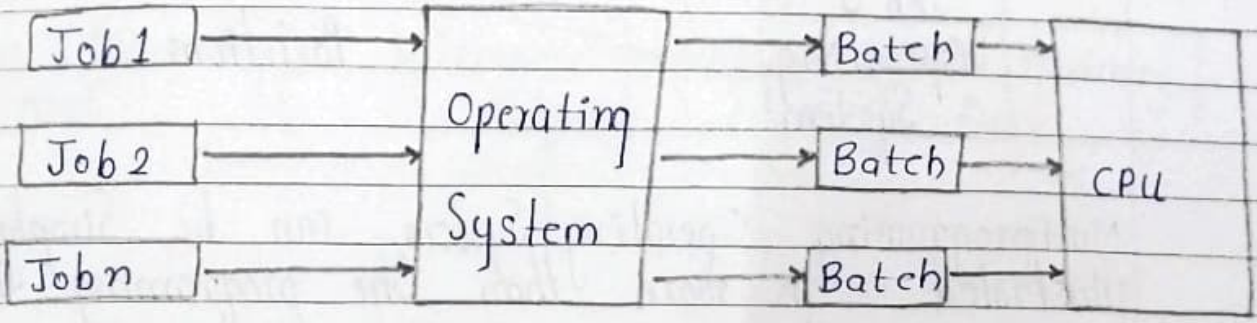
Tutorial NO- 1

Study of Types of Operating System

i Batch Operating System



This types of Operating System does not interact with the computer directly There is an operator which takes similar jobs having the Some requirements and groups them into batches. It is the responsibility of the Operator to sort jobs Batch Operating System is designed to manage and execute a large number of jobs efficiently

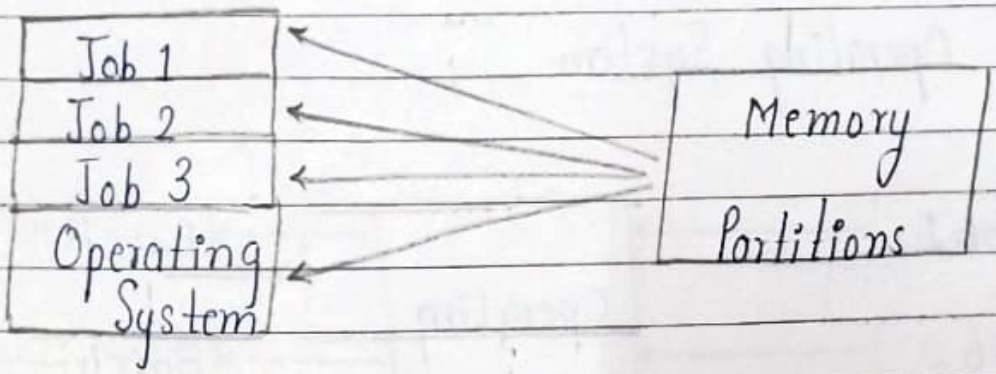
Advantages-

i Multiple users can share the batch Systems
ii It is easy to manage large work repeatedly in batch System.

Disadvantages -

i Batch System are hard to debug
ii It is Sometime Costly
iii The other jobs will have to wait for an unknown time if any jobs fails.

ii Multi-programming Operating System



Multiprograming Operating System can be Simply illustrated as more than One programing is present in the main memory and any one of them can be kept in execution. This is basically used for better utilization of resources

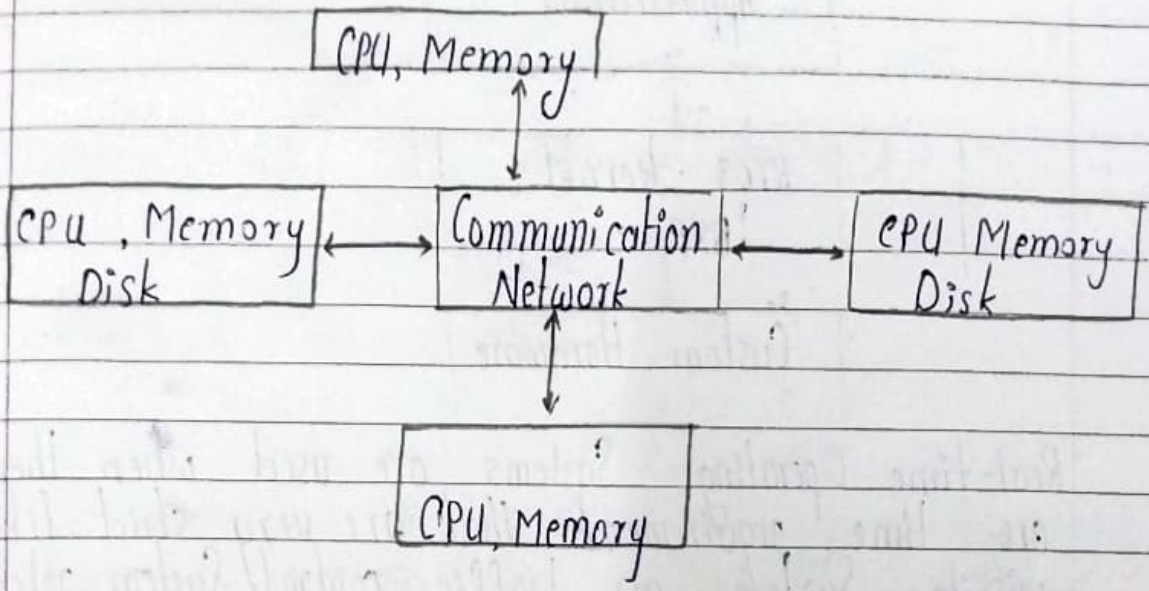
Advantages -

1 Multi-programming increses the Throughput of the System
2 It helps in reducing the responce time

Disadvantage-

1. There is not any facility for user interaction of System resources with the System

iii Distributed Operating System



These types of O.S is a recent advancement in the world of Computer technology. These System processors differ in Size and function. The major benefit of working with these types of O.S is that it is always possible that One user can access the files which are not actually present on his System

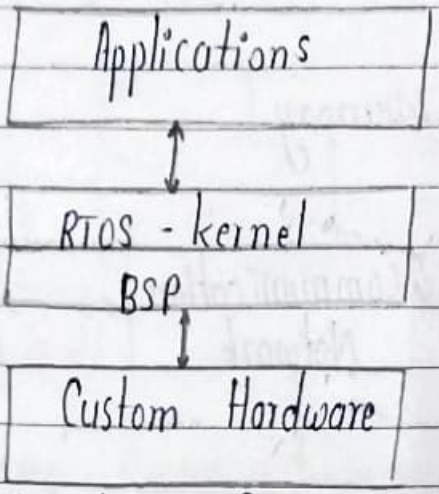
Advantages

1. Electronic mail increases the data exchange Speed
2. Load on host computer reduces.
3. Delay in data processing reduces.

Disadvantages -

1. Failure of the main network will stop the entire Communication.
2. To establish distributed System the language is not well-definet yet.

iv Real-Time Operating System



Real-time Operating Systems are used when there are time requirement that are very strict like missile System, air traffic control System robots etc

Types of Real-Time O.S

1. Hard Real-Time System - Hard Real-time Os are meant for applications where time constraints are very strict and even shortest possible delay is not acceptable
2. Soft Real-Time System - This Oss are for application where time-constraint is less strict

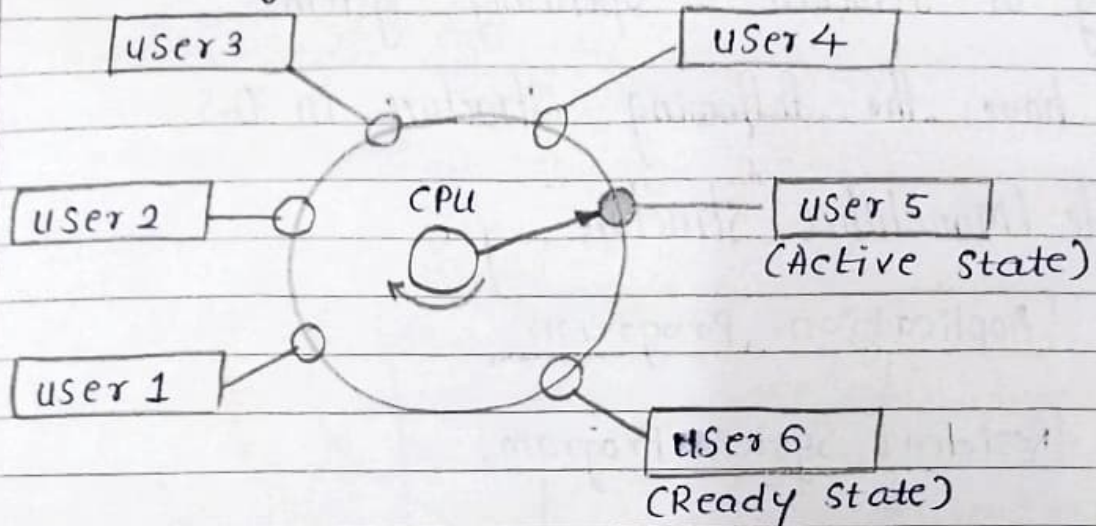
Advantages -

1] Focuses on Running application
2] These types of System are error free

Disadvantages

1. The algorithm are very comple and difficult for the designer to write On
2. Sometime the System resources are not so good and they are expensive as well

V Time sharing O.S



Each user get the time of the CPU as they use a Single System. The task can be from a Single user or different user also. The time that each task gets to execute is called quantum. After this time interval is over OS switch over to the next task.

Advantages-
1. Each task gets an equal opportunity
2. Fewer chances of duplication of s/w
3. CPU idle time can be reduced.

Disadvantages-
1. Reliability problem
2. One must have to take care of the Security & integrity of user program & data
3. Data Communication problem