

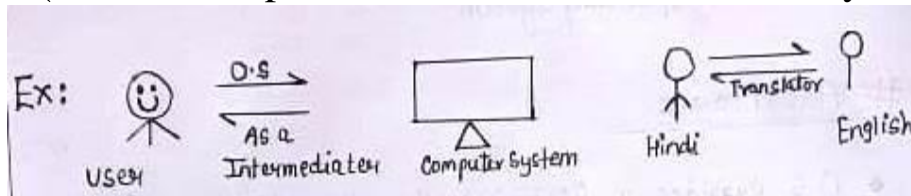
## Operating system:-

Operating system is a collection of set of programs, which manages all the resources of the computer system.

\* It is an intermediater between the user and hardware.

\* (User ko help karta hai work me.)

\*(O.s na hone par user ko bade bade commands yad karne padte thy.)



## Characteristics:-

- 1- scheduling.
- 2- Memory management.
- 3- security.
- 4-internet with different software.
- 5- device management.
- 6-Error detecting.

## Types:-

- 1- Batch operating system.
- 2- time sharing operating system.
- 3- Distributed operating system.
- 4- Network operating system.
- 5- Real time operating system.

## Advantages:-

\*O.s provides a GUI interface for the users in the form of menu, icons and buttons.

- \* Operating system also allows us to sharing the resources with other users.
- \* It helps user to understand the functions of a computer.
- \* It is very easy to use.
- \* It can be easily updated.

## Disadvantages:-

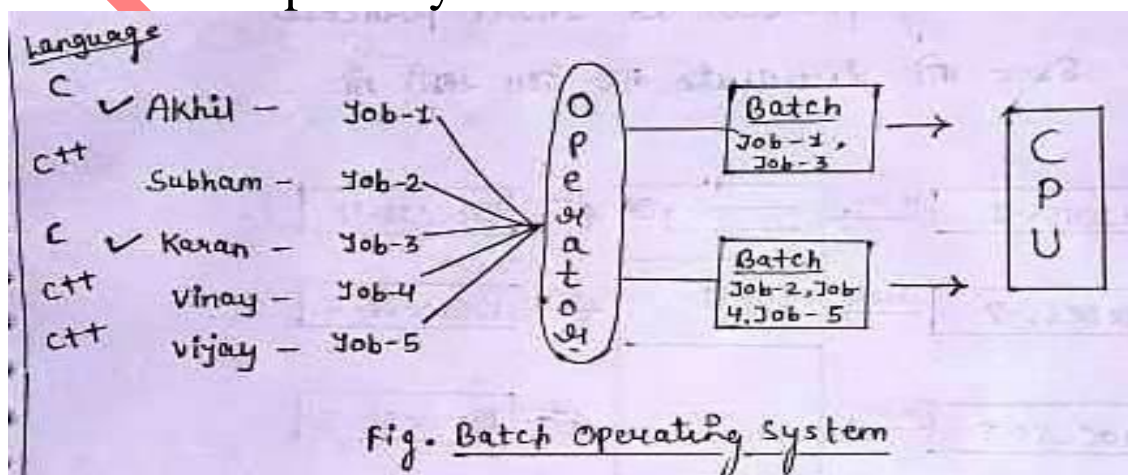
- \* If the operating system is corrupted then it will affect the entire system and the computer system will not work.
- \* Only some tasks run at a time.

## Types of operating system:-

### 1-Batch Operating System.

The batch Operating system will work to submit similar kinds of jobs together.

- \* In this Operating system, users do not interact directly with our computer system.



## Advantage:-

\* It is useful when we, working with large files which can take more time to execute.

## Disadvantages:-

\* Once the job is submitted, the user did not have any interaction with it.

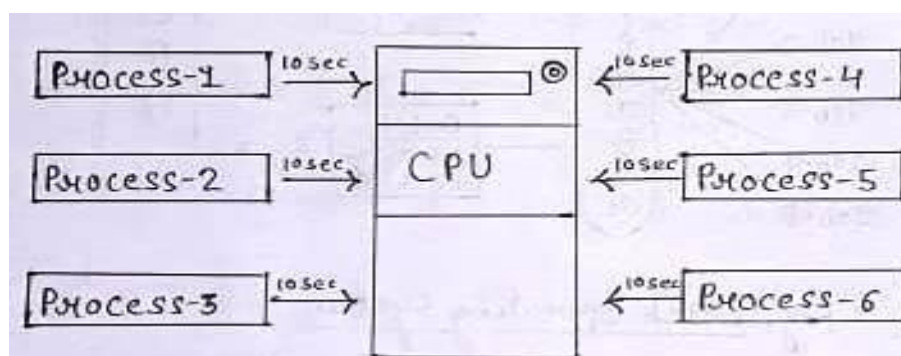
## 2- Time sharing operating system:-

\* The time sharing operating system works time sharing concept.

Here the cpu will provide a some time period to each an every process to complete it's task as soon as possible weather.

\*It is a long process or short process.

\*(Agar kesi task ko karne me 10sec Mila aur sirf 2sec karch huye baki k -8sec ko distribute kar dega sabhi ko.)



## Advantages:-

\*If the process of a task is completed then the time between the other tasks increase.

## Disadvantages:-

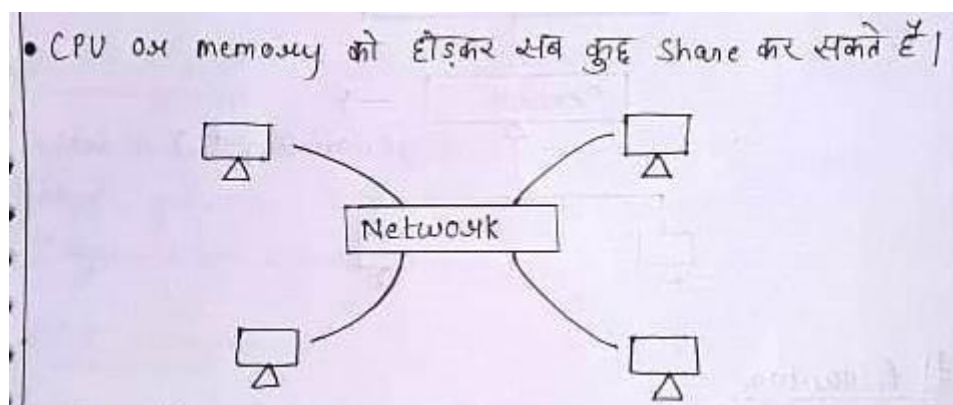
\* Sometimes in the operating system there may be a problem of data communication.

## Distributed operating system:-

\*When many computers are interconnected to each other through a network for the purpose of sharing their task then it is called distributed operating system.

\* (Hardware components ko share nahi kar sakte hai)

\* (Ye apne task ka load dusre system pe bhi dal dete hai, task use bhi kar lete hai)



## Advantage:-

\*If a node is overused, the distributed operating system shares that load to other node of the network.

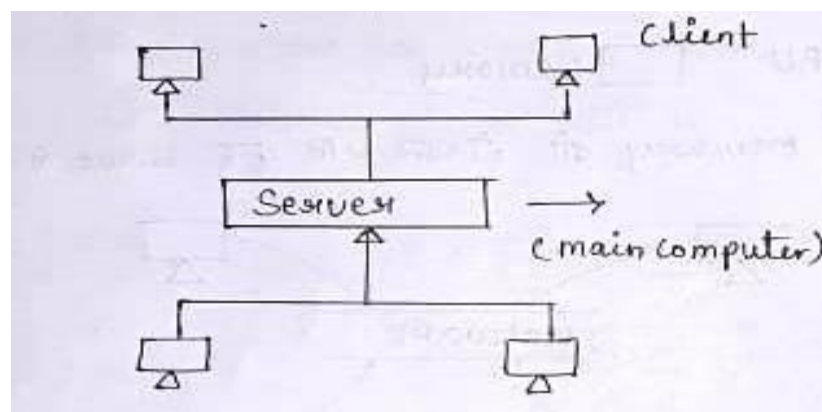
## Disadvantage:-

\* If the network is spread, communication of all computer is broken.

## 4- Network operating system:-

\* Network operating system have a server that connects many other client computer many other client computer.

So, We can easily share our files , resources and may more from the server machine to all the machine which are connected through a server.



## **Advantage:-**

\* Network operating system provides a security and we need to upgrade only server machine.

## **Disadvantage:-**

\*If server machine is crashed then automatically the entire network will be failed.

## **5- Real time operating system:-**

\* Real time operating system is very useful where we required a quick response for example - missile testing where the missile has to be launched at certain time, hospital etc

\* In the operating system CPU provides maximum efforts to its task with quick response.

## **Advantage:-**

\* Real time operating system provide a quick response hence generally used in scientific, engineering, Nasa and many more organization.

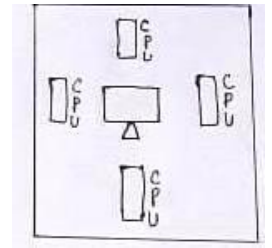
## **Disadvantage:-**

\* These operating system is very costly.

## **Types**

1- hard real time operating system

- 2-soft real time operating system
- 3- multi - processing operating system →
- 4- Multi- tasking operating system.
- 5- Multi - programming operating system.



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