

Q3) what is operating system? Describe Resource Request Algorithm. Explain Inter-process communication

Soln

- An operating system acts as an intermediary b/w the user & computer hardware.
- An operating system is software that manages the computer hardware.
- The hardware must provide appropriate mechanism to ensure the correct operation of the computer system & to prevent user programs from interfering with the proper operation of the system.

### Resource Request Algorithm

This describes the behavior of the system when a process makes a resource request in the form of a request matrix. The steps are:

1. If number of requested instance of each resource is less than the need, go to step 2.
2. If number of requested instance of each resource type is less than the available resources of each type, go to step 3. If not, the process has to wait because sufficient resources are not available yet.
3. Now, assume that the resources have been allocated.

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## Interprocess communication (IPC):

- Interprocess communication (IPC) means the mechanism used by process to communicate with each other while they are running.
- IPC allows process to synchronize their action without sharing the same address space.
- Messages provide a basic communication capability between two process.
- Interprocess communication is best provided by the two fundamental models:
  - (i) Shared memory system
  - (ii) message passing system