

OPERATING SYSTEM WEEK 9 ASSIGNMENT

Explain deadlock avoidance justifying with example.

Deadlock Avoidance

In deadlock avoidance, the operating system is provided with extra information related to all resources any process will require during its lifetime. Then at every request, the system can decide whether to grant that request or not. This decision depends upon

- resources currently available
- resources currently allocated to each process
- future request and release of resources by each process

Safe State

• Safe State: state is safe if the system can allocate resources to every process in some order and still avoid deadlock.

Safe sequence – is an order {P1, P2... Pn} in which the processes can be allocated resources safely

Example :

System has total 12 magnetic tapes and 3 processes. Individual process requirement is as below

Process	Max need	Current need
P0	10	5
P1	4	2
P2	9	2

System state is safe.