

Assume there are 9 tape drives.

Processes	Allocated Tape Drives	Max Tape Drives
P1	0	3
P2	3	5
P3	4	7

Available
2

Need = (Max Tape Drives – Allocated Tape drives)
3
2
3

- WORK (after P2's execution) : $3 + 2 = 5$
- WORK (after P1's execution) : $5 + 0 = 5$
- WORK (after P3's execution) : $5 + 4 = 9$

The system is in safe state. The safe sequence is : <P2, P1, P3>

Suppose the process P1 makes an additional request of 1 more tape drive, will the request be granted?

Processes	Allocated Tape Drives	Max Tape Drives
P1	1	3
P2	3	5
P3	4	7

Available
1

Need = (Max Tape Drives – Allocated Tape drives)
2
2
3

There is no possible safe sequence, hence the system will be at the state of deadlock.

HENCE, THE REQUEST IS DENIED.