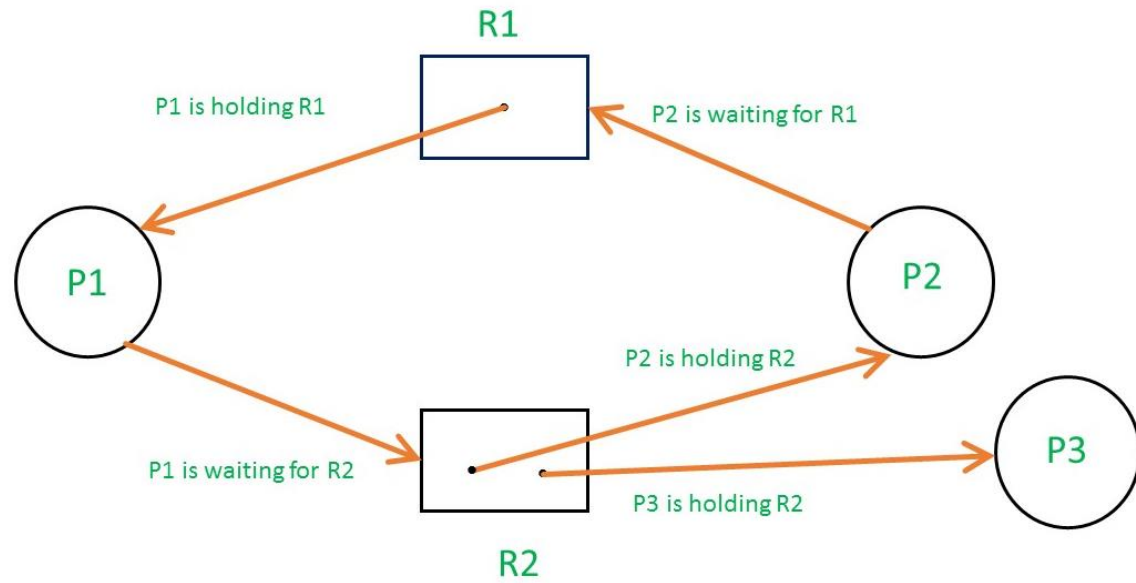
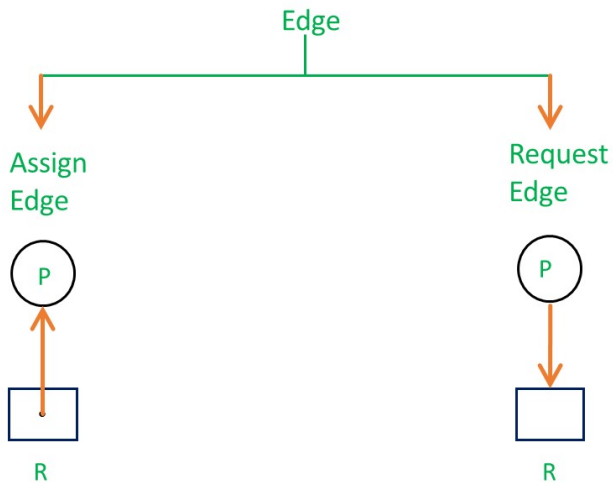


Week 6 - Tutorial

Resource Allocation Graph



MULTI INSTANCES WITHOUT DEADLOCK

Process	Allocation		Request	
	Resource		Resource	
	R1	R2	R1	R2
P1	1	0	0	1
P2	0	1	1	0
P3	0	1	0	0

Safe or Not

Available = $\begin{bmatrix} 0 & 0 \\ 0 & 1 \end{bmatrix}$ (As P3 does not require any extra resource to complete the execution and after completion P3 release its own resource)

New Available = $\begin{bmatrix} 0 & 1 \\ 1 & 0 \end{bmatrix}$ (As using new available resource we can satisfy the requirement of process P1 and P1 also release its previous resource)

New Available = $\begin{bmatrix} 1 & 1 \\ 0 & 1 \end{bmatrix}$ (Now easily we can satisfy the requirement of process P2)

New Available = $\begin{bmatrix} 1 & 2 \end{bmatrix}$