

Process Scheduling Algorithms

First-come, First-served (FCFS)
Shortest remaining time next (SRTN)



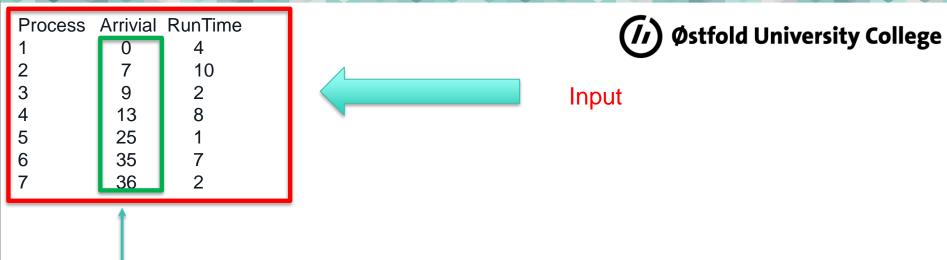
Process Scheduling

> The OS decides which process to run next

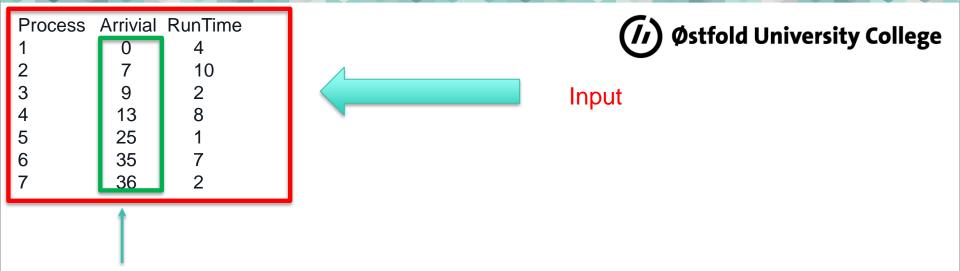
Process	Arrivial	RunTime	
1	0	4	
2	7	10	
3	9	2	
4	13	8	
5	25	1	
6	35	7	
7	36	2	



Input

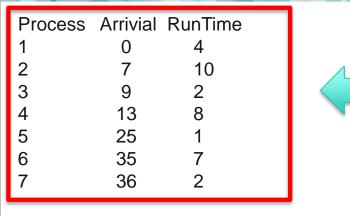


Sorted Arrival time



Sorted Arrival time

No sorting algorithm is needed





OS has to decide which process to run next?

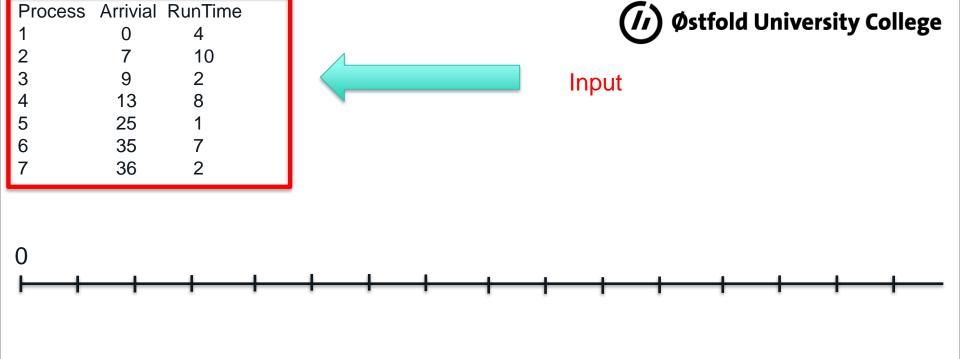


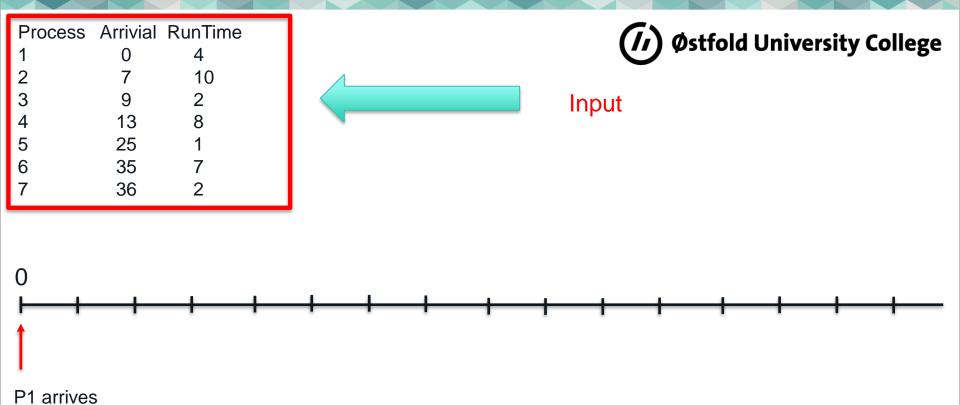
Process Scheduling Algorithm

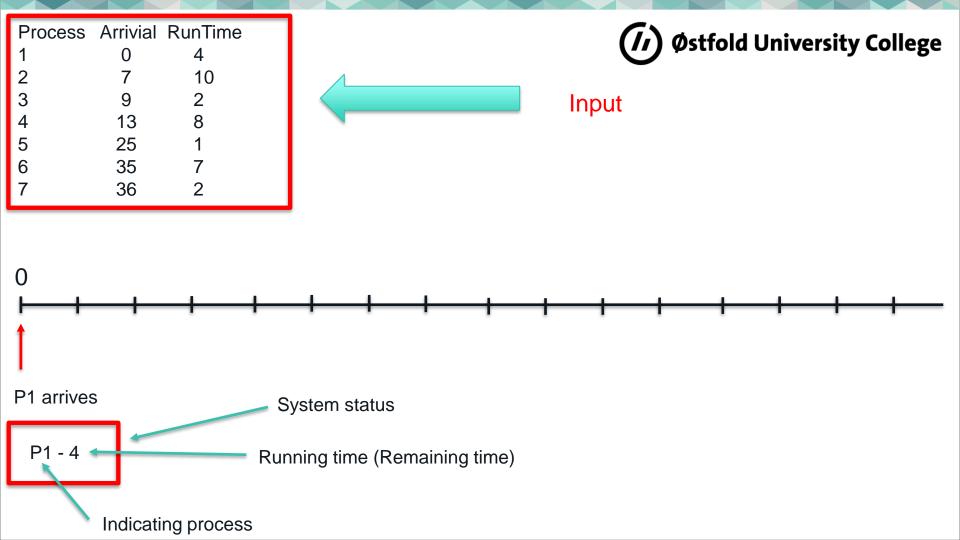
- > The decision is made based on different criteria
- > Each Scheduling algorithm has different criteria

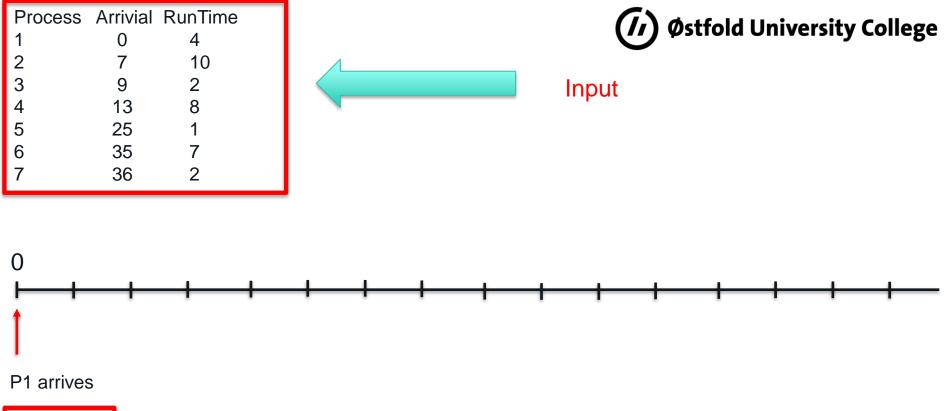


First-come, first-served (FCFS)

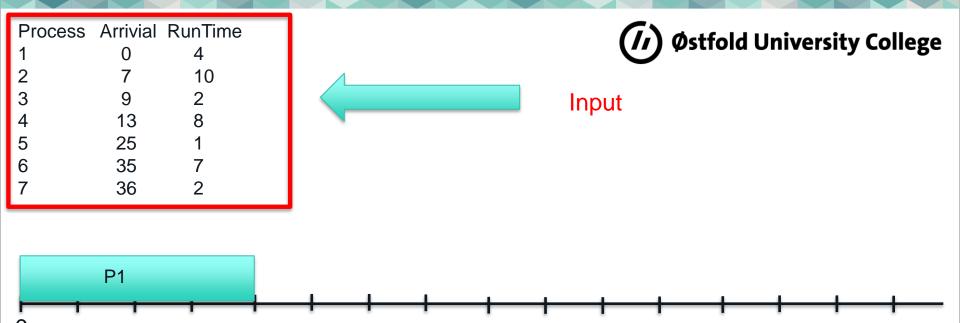


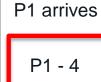


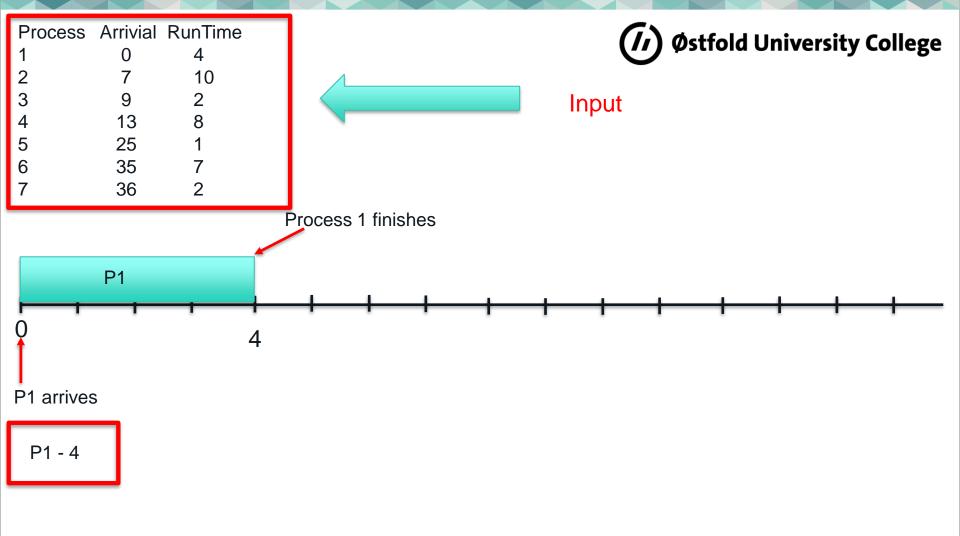


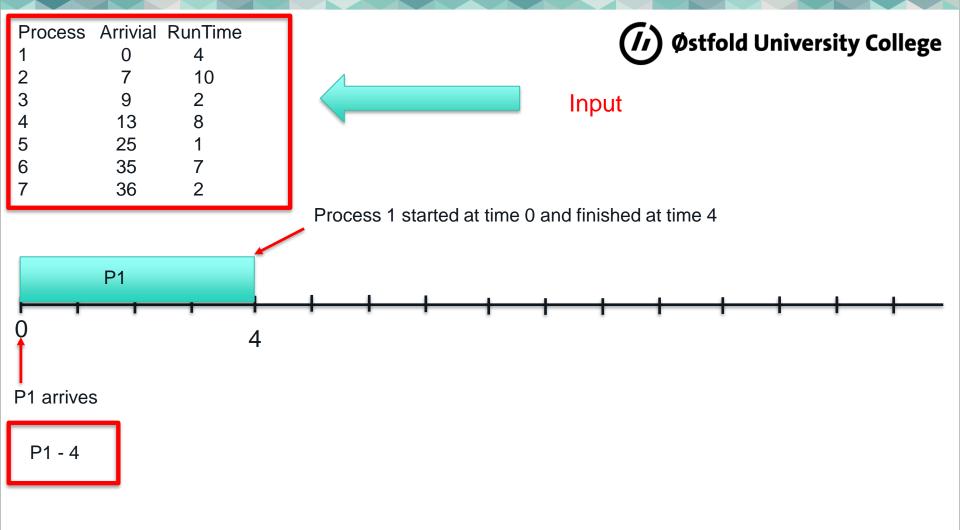


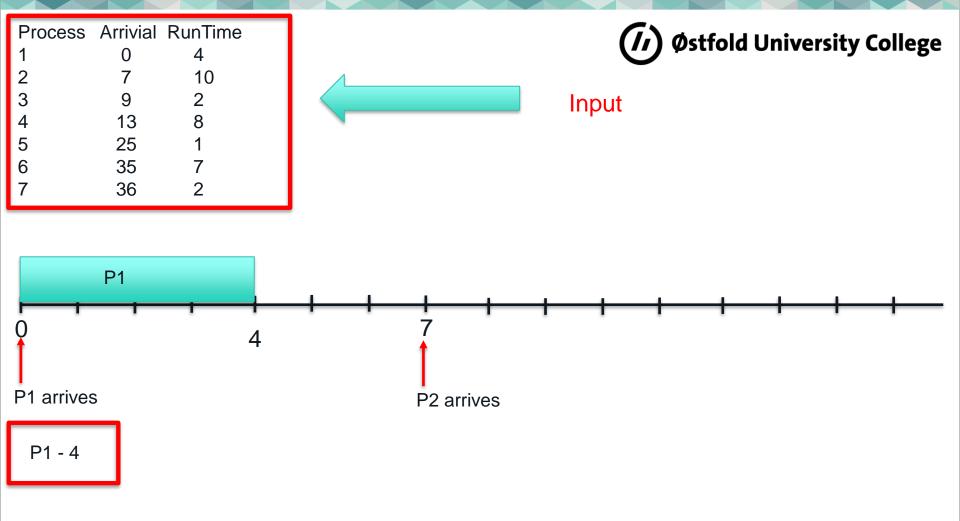
P1 - 4

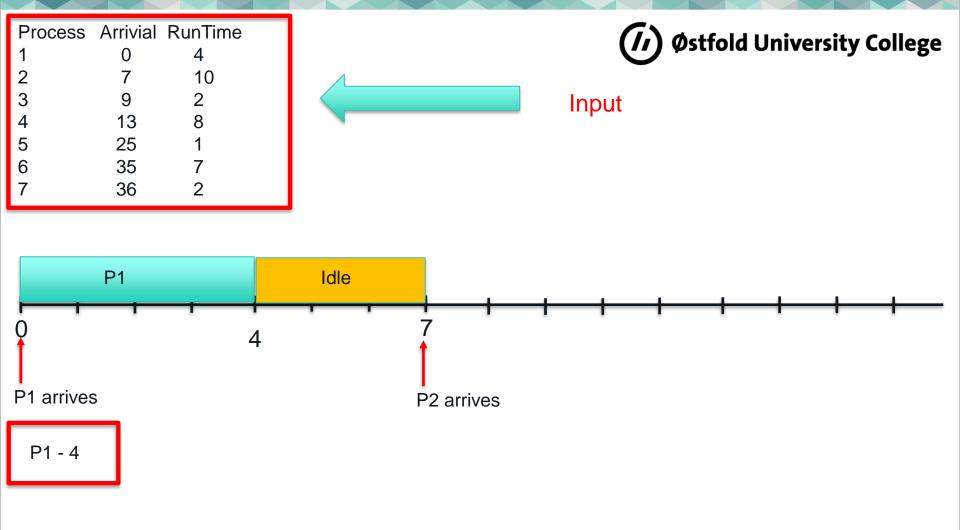


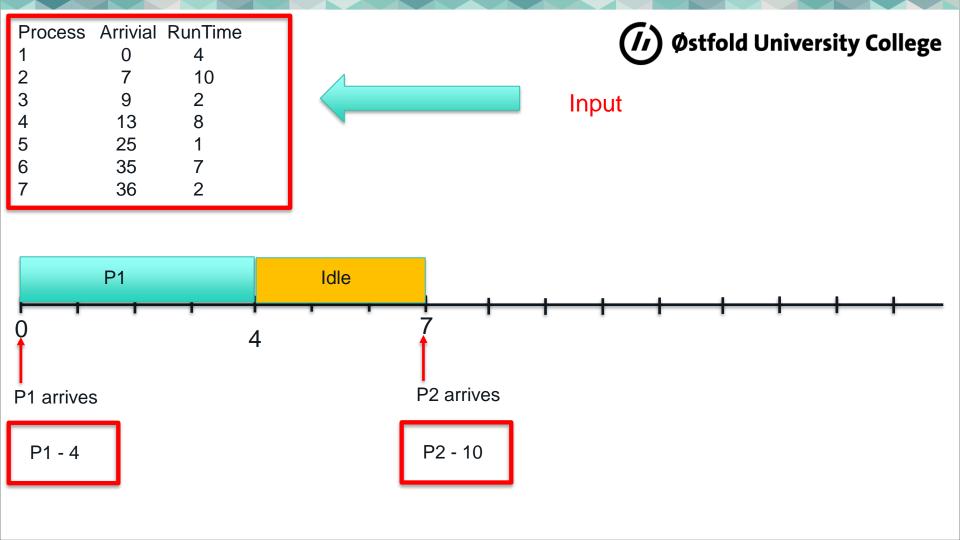


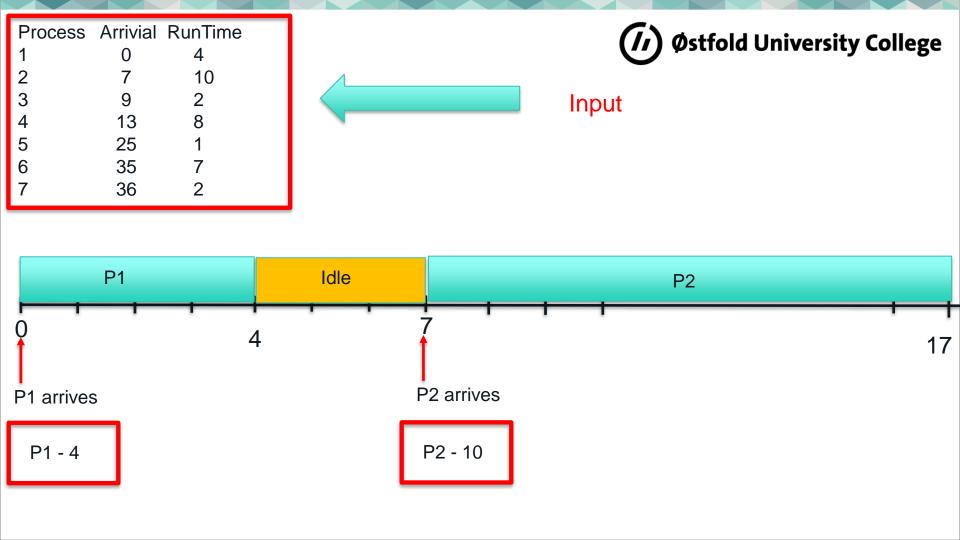


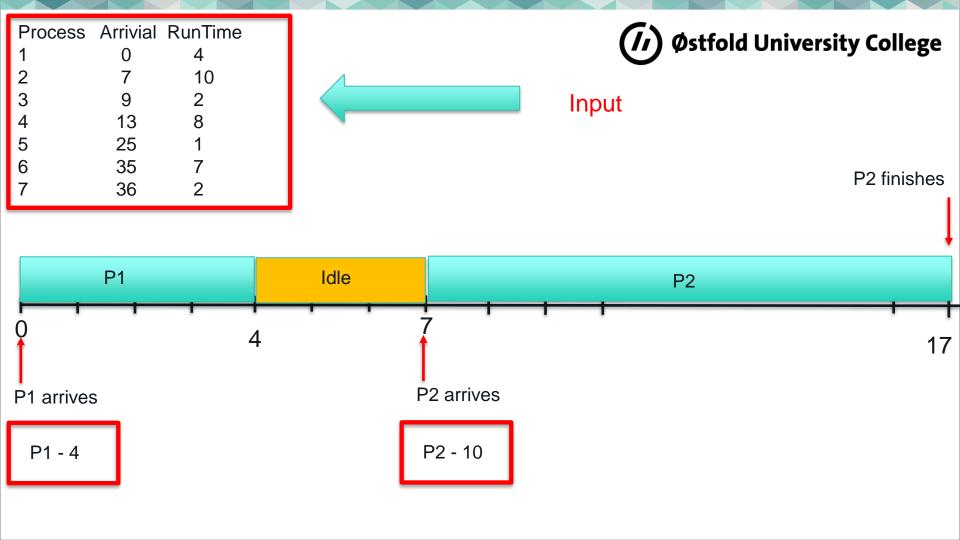


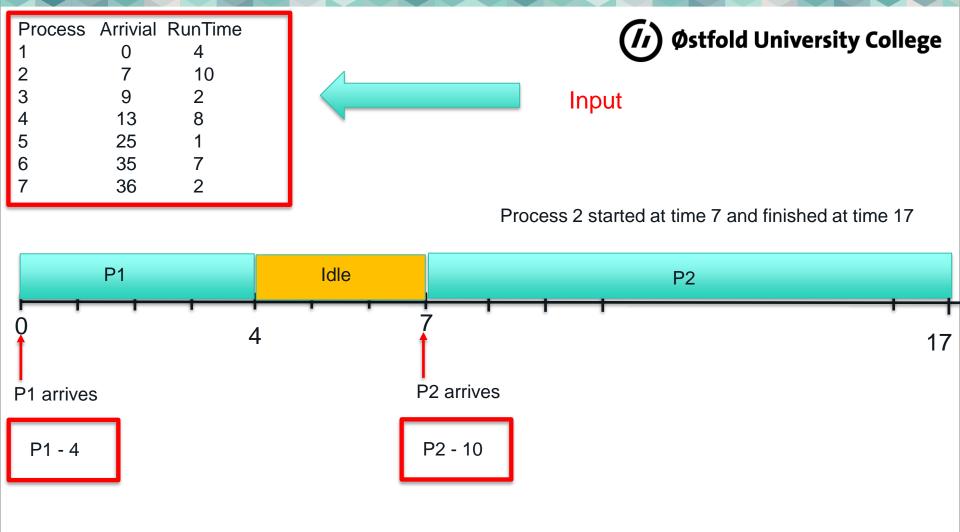


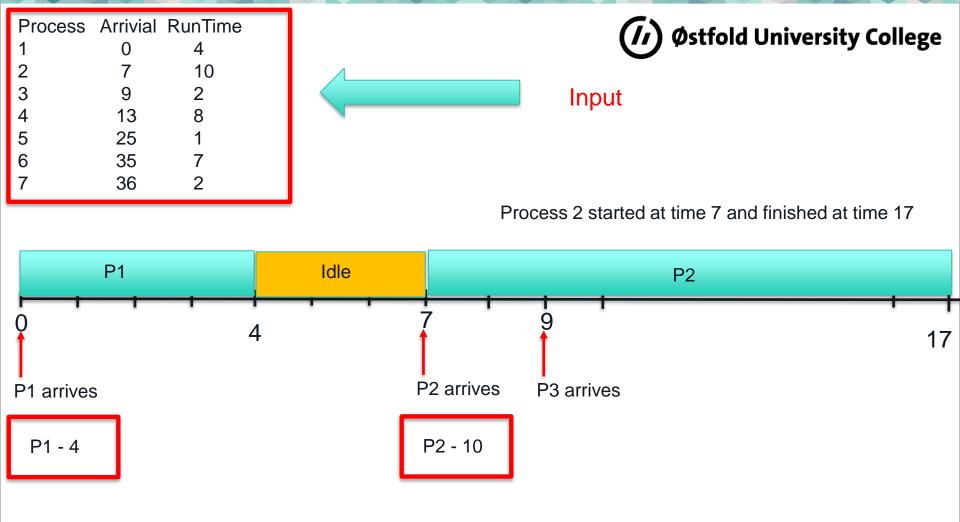


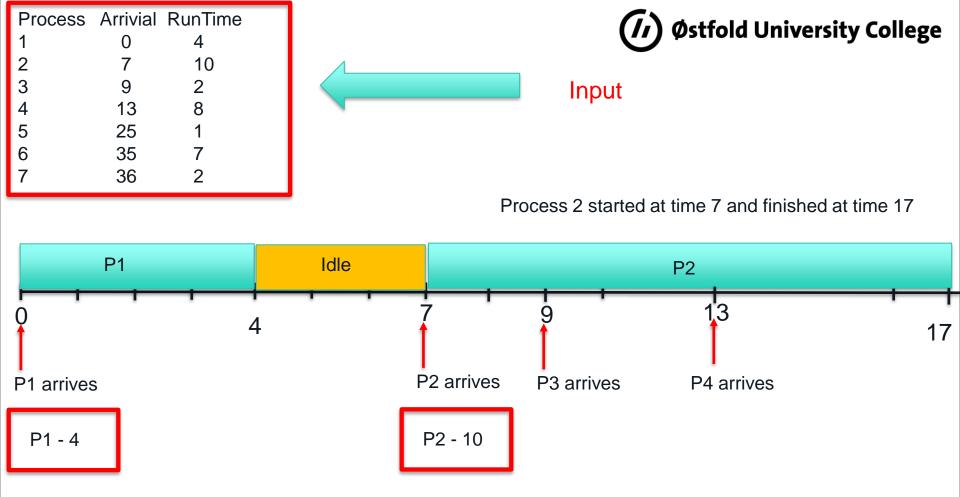


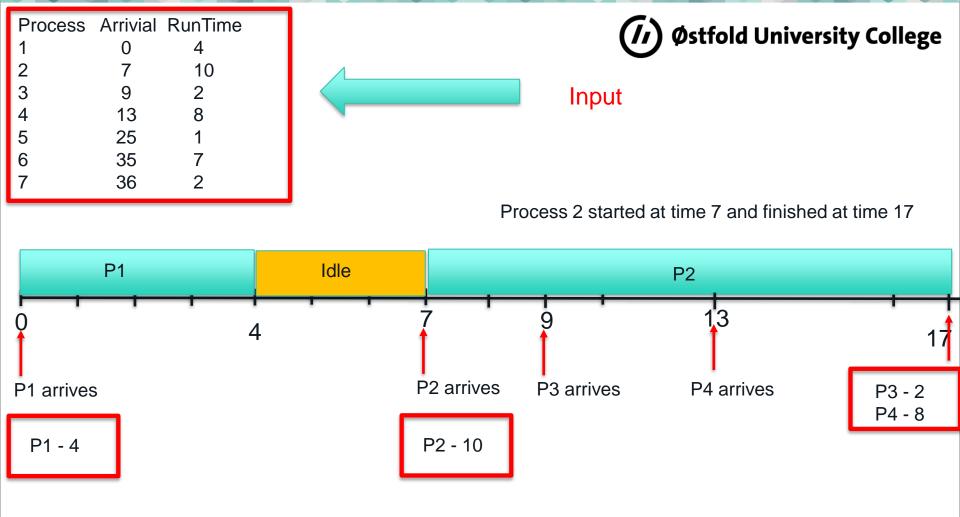


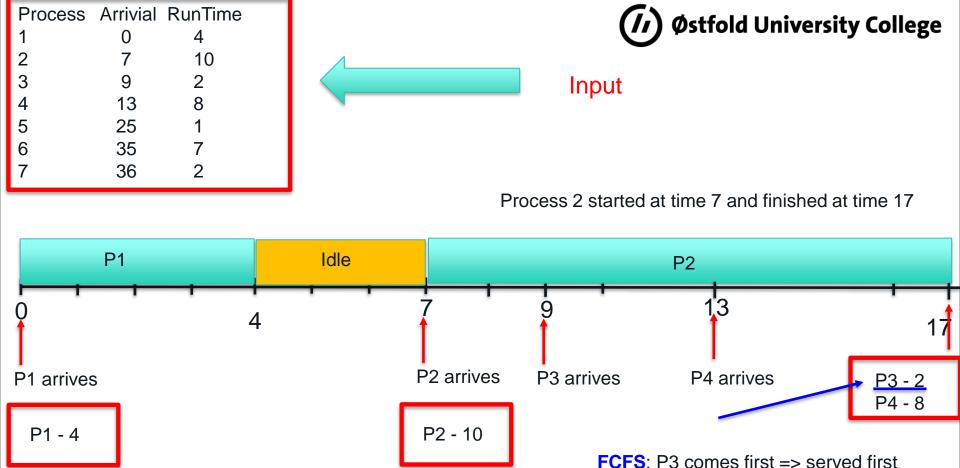


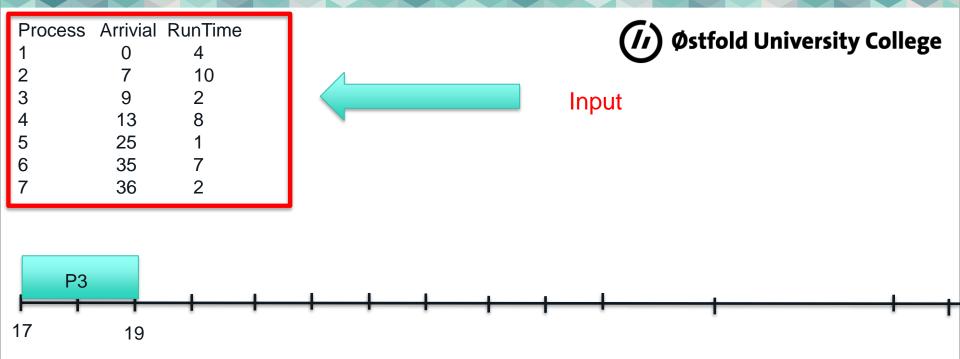


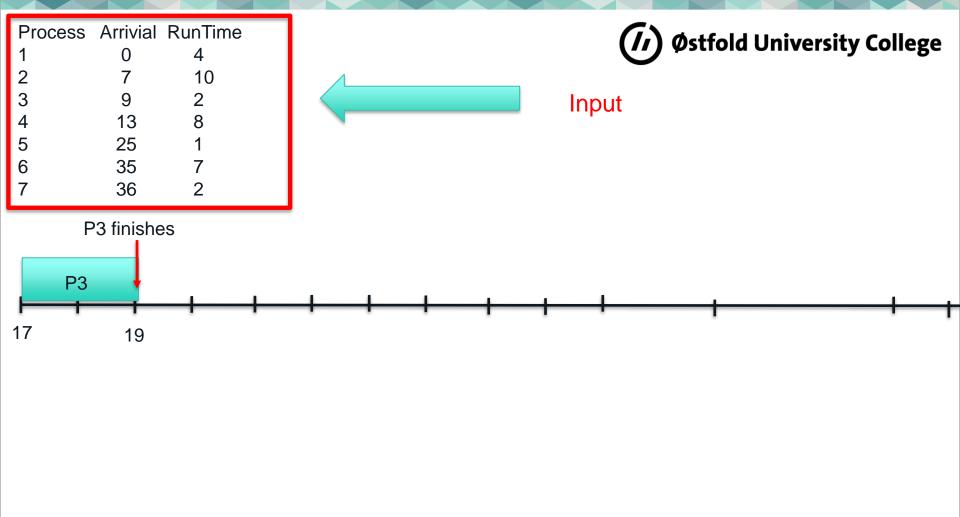










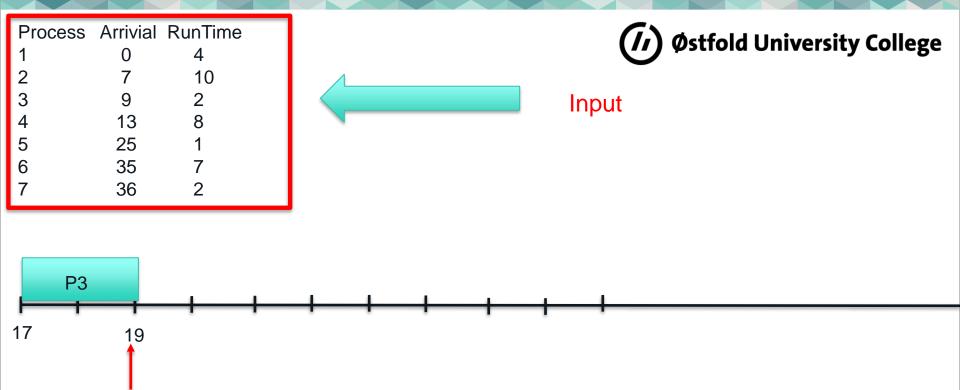




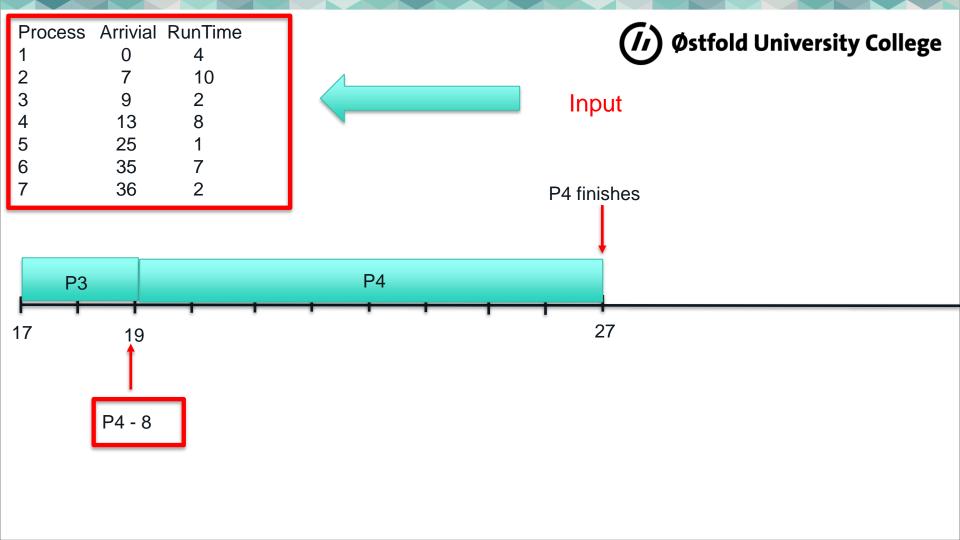


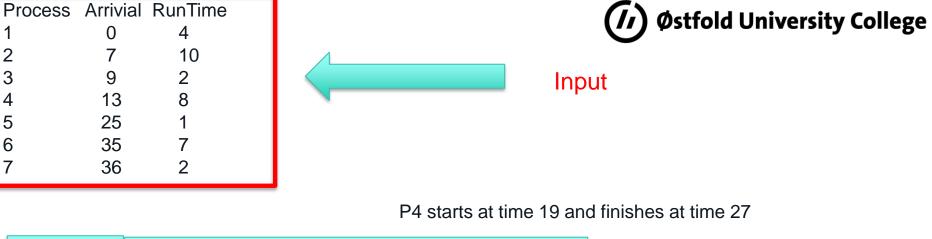
Input

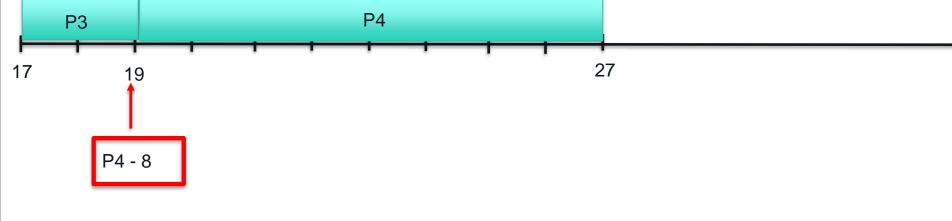


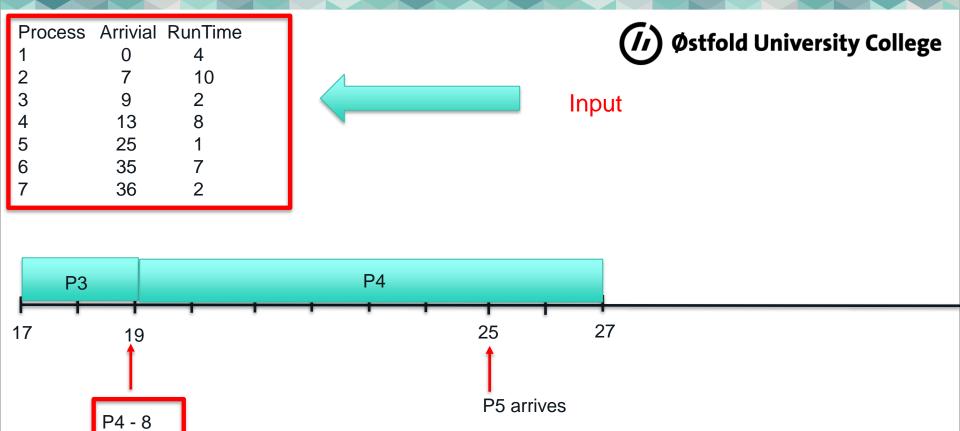


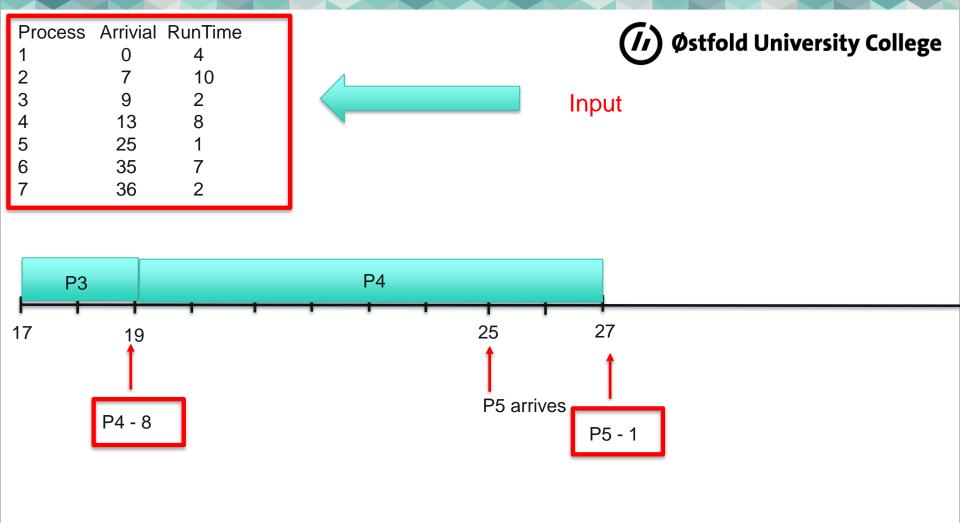
P4 - 8

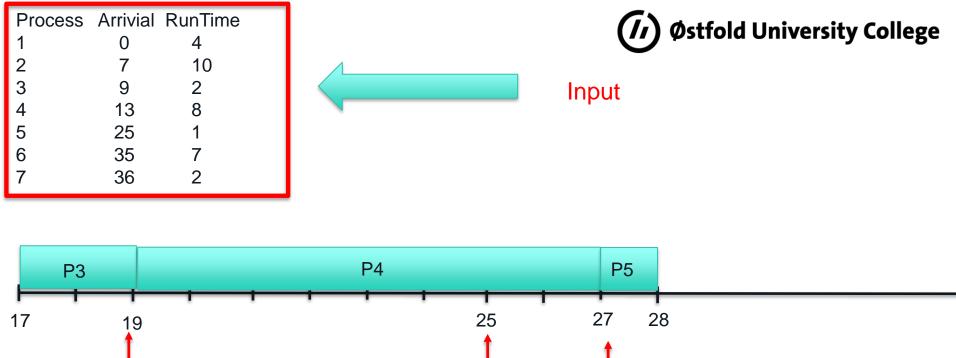


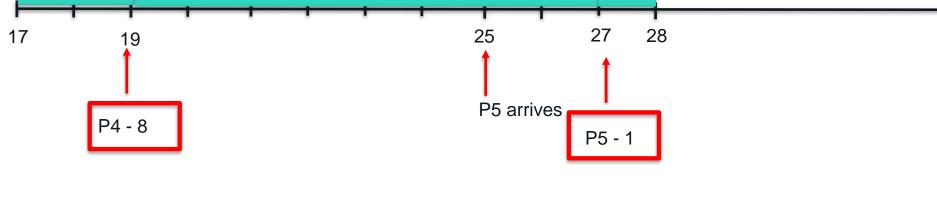


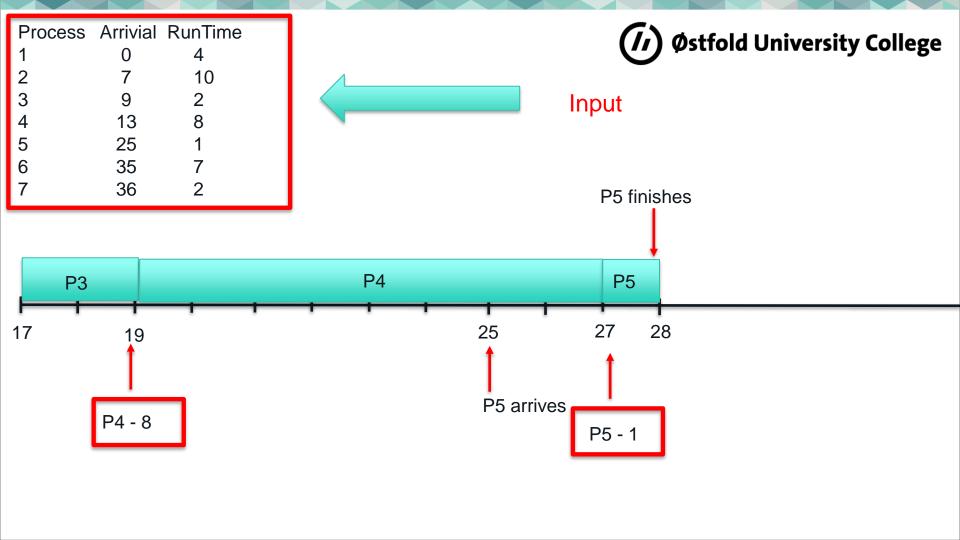


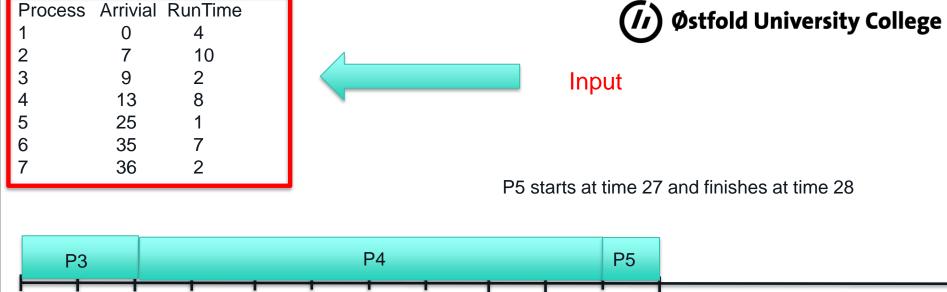


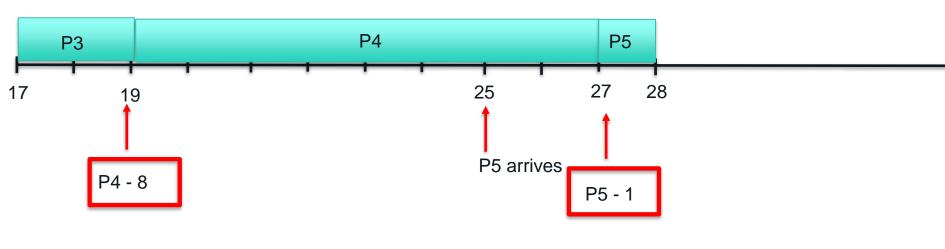


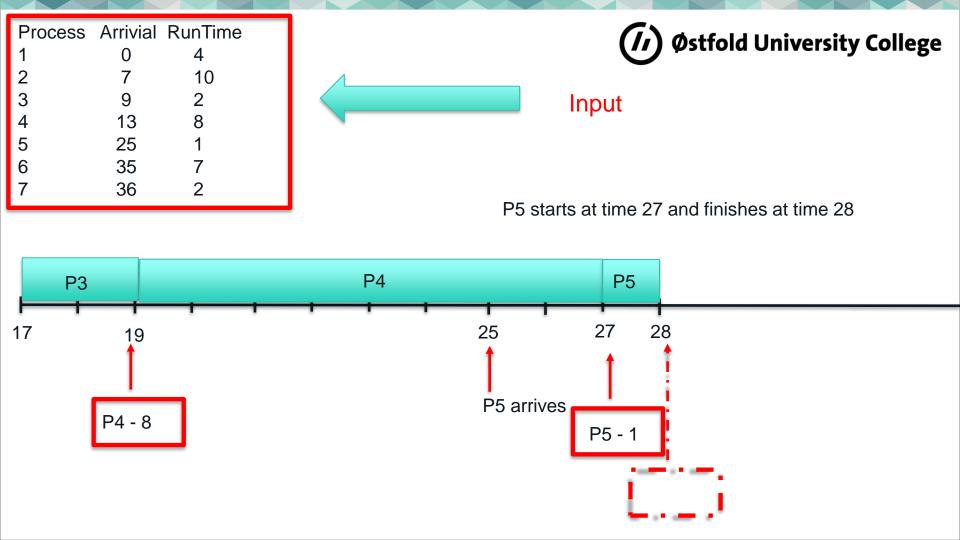


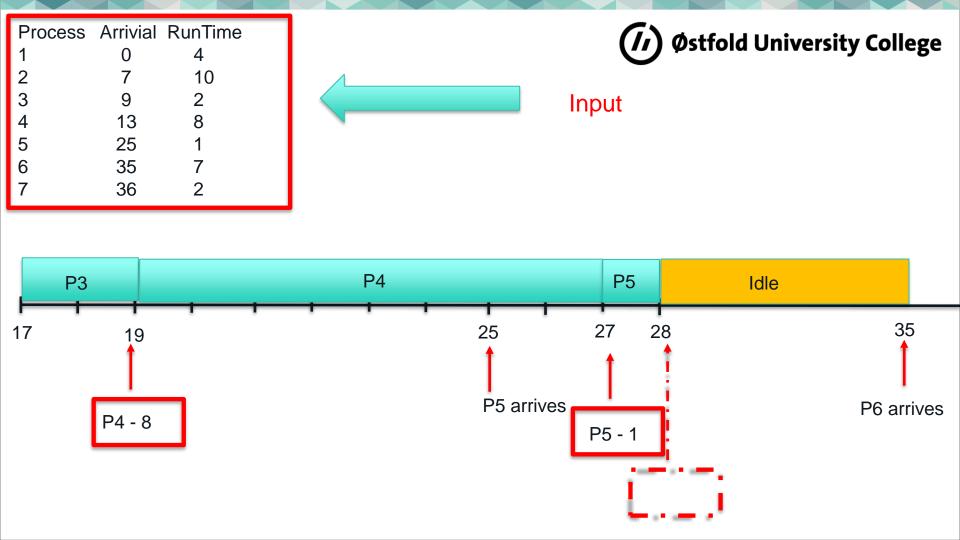


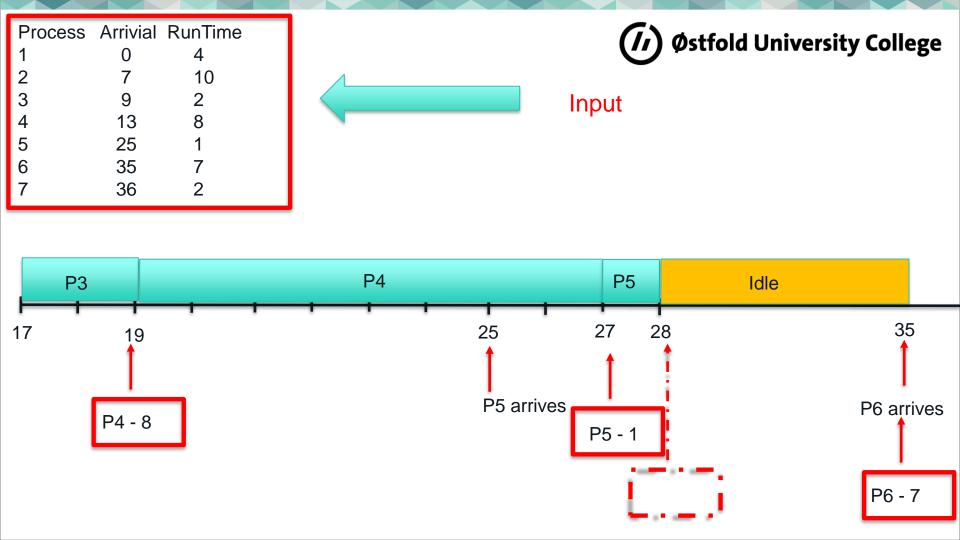


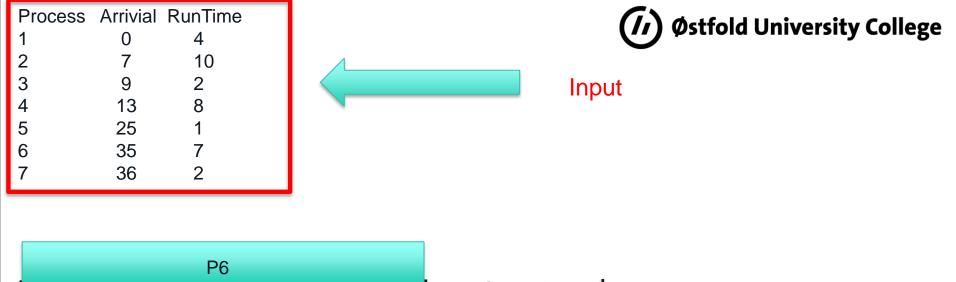


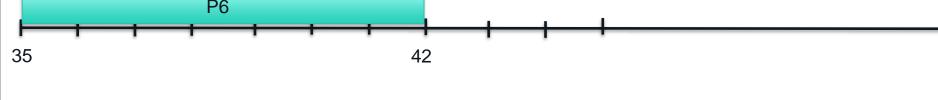


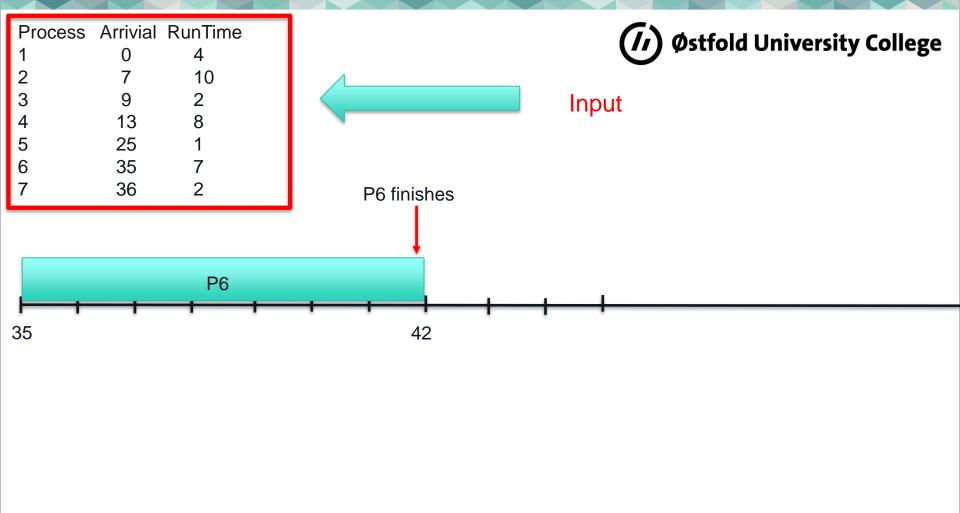


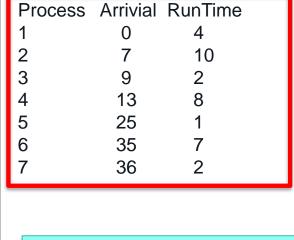








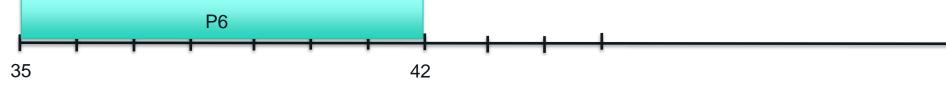


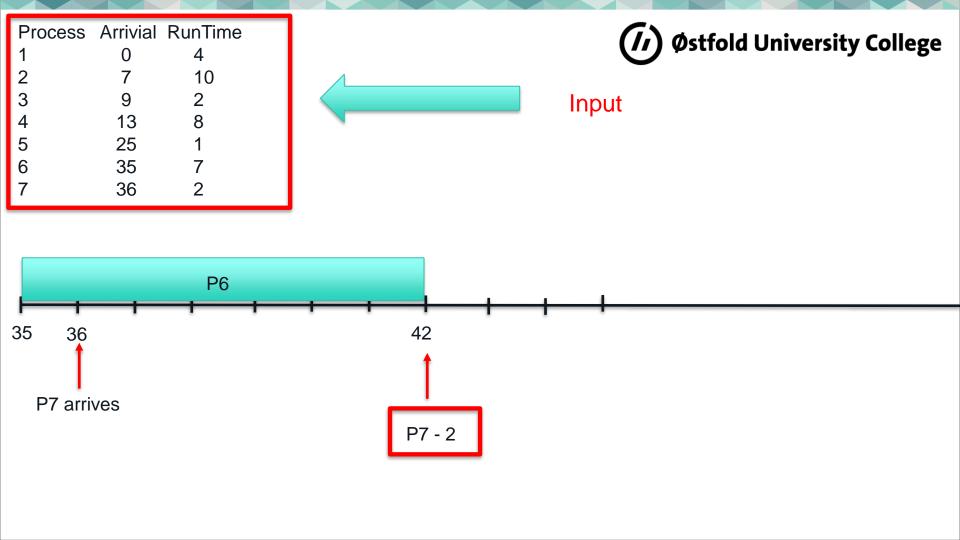


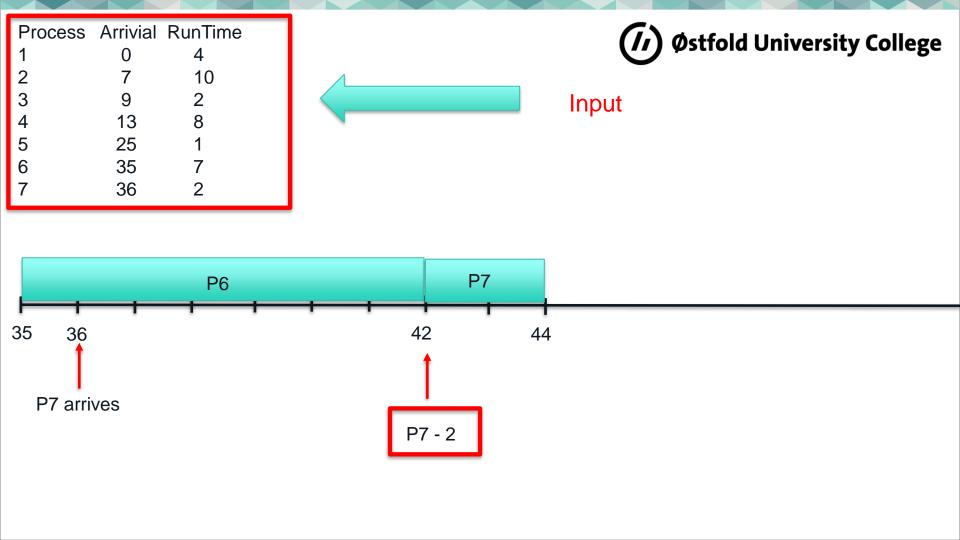


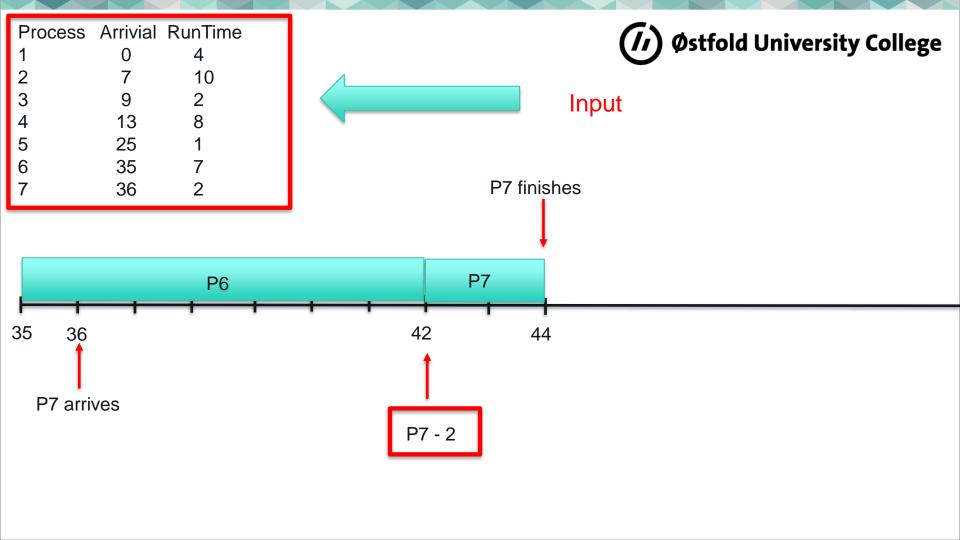


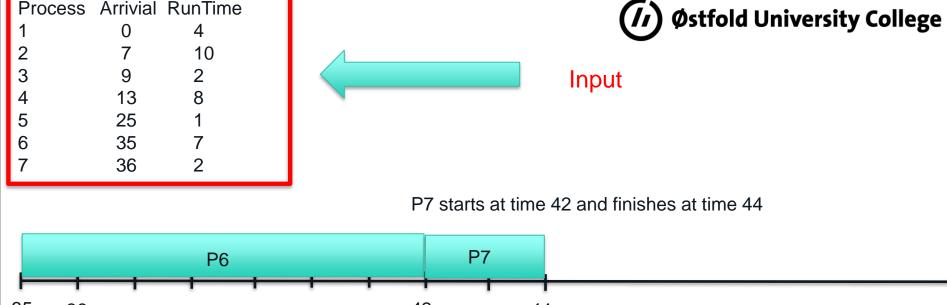
P6 starts at time 35 and finishes at time 42



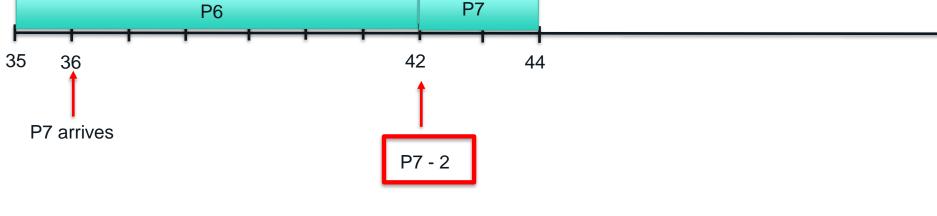


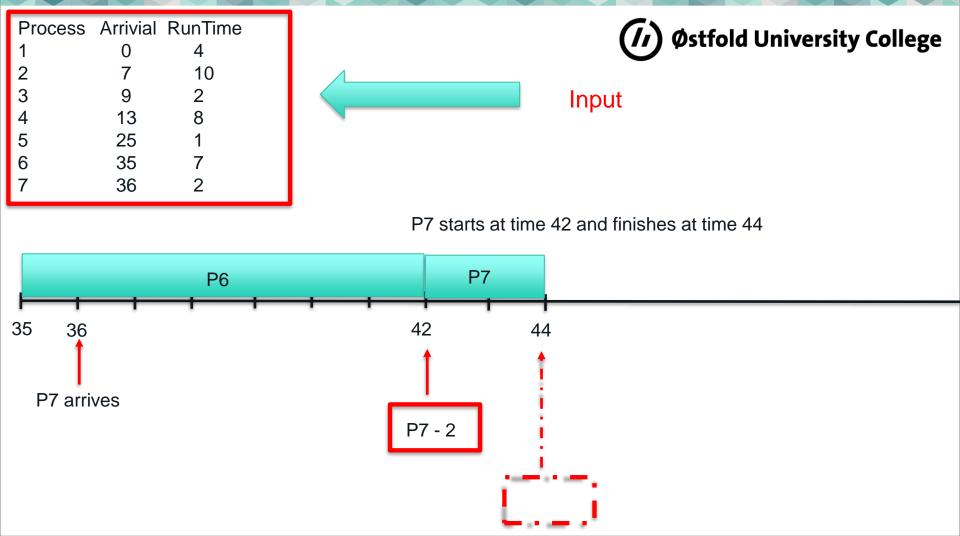


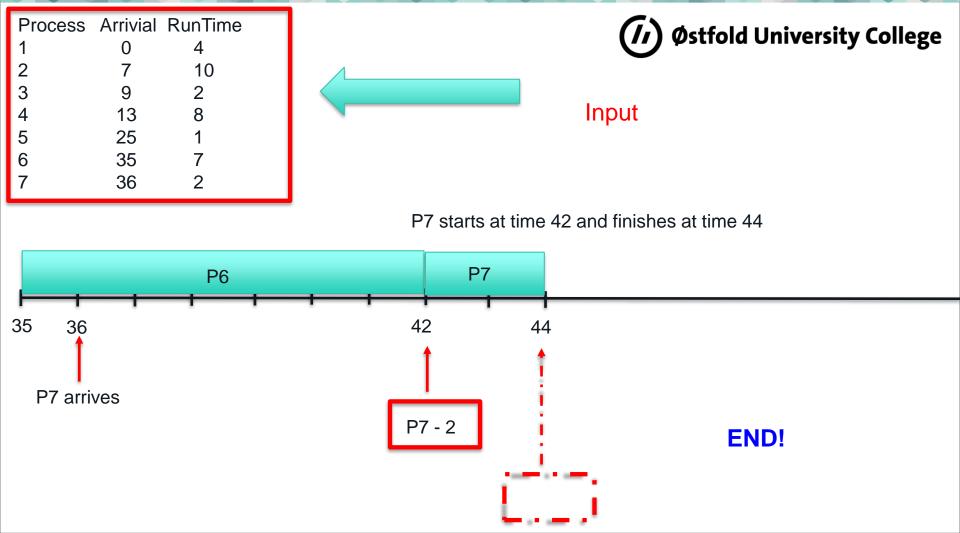




Process Arrivial RunTime

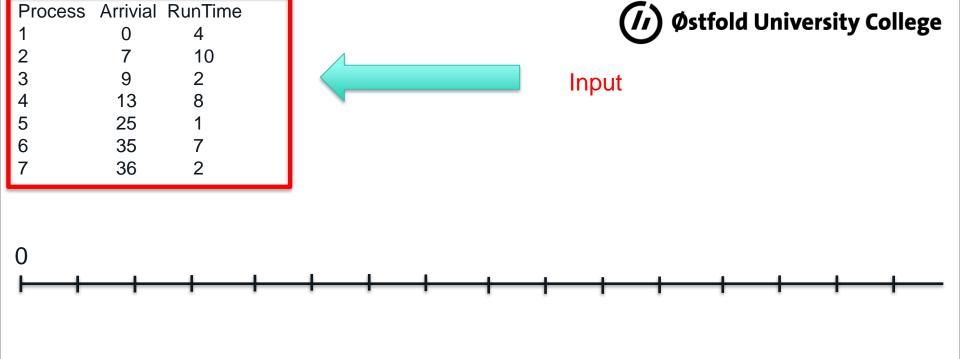


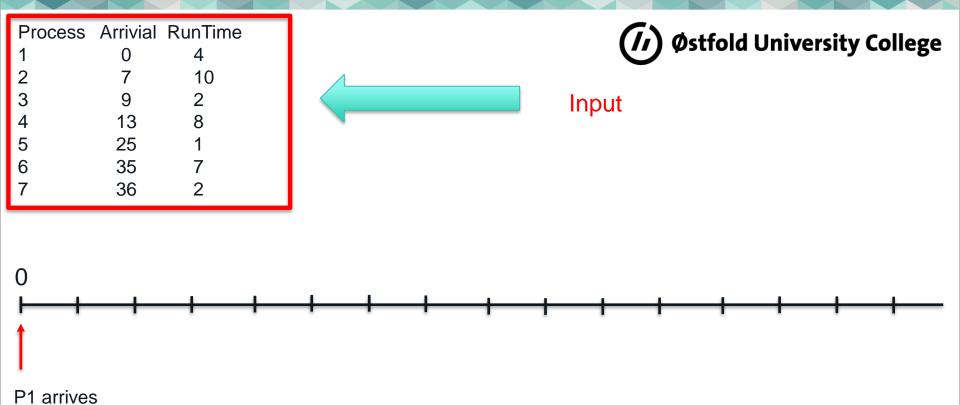


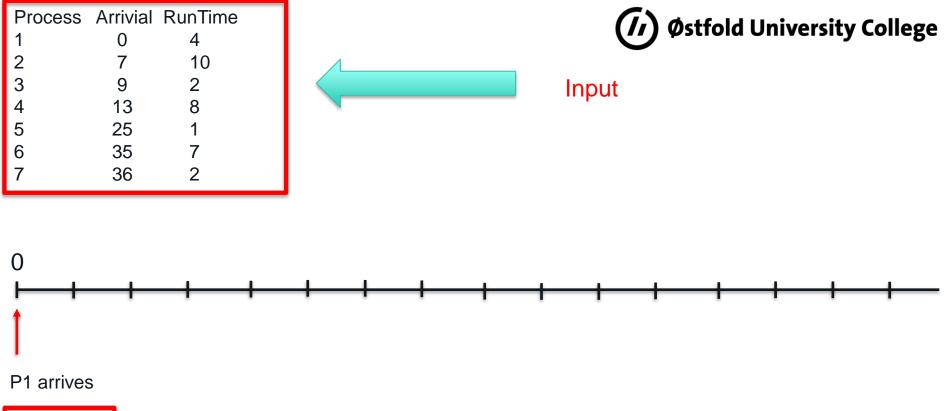




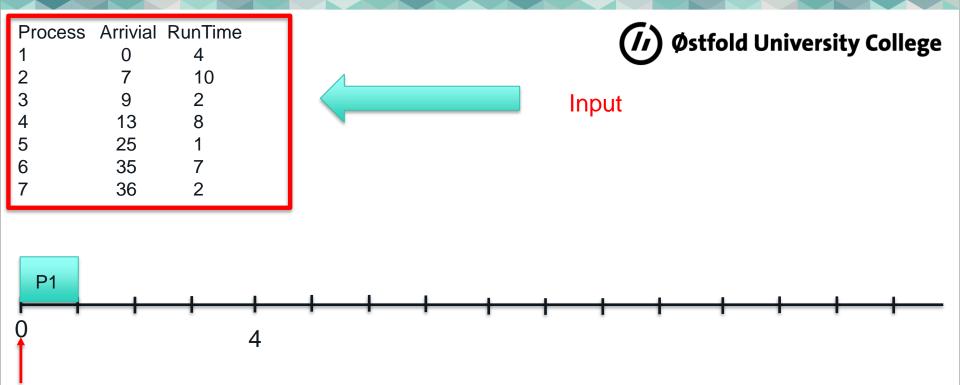
Shortest remaining time next (SRTN)





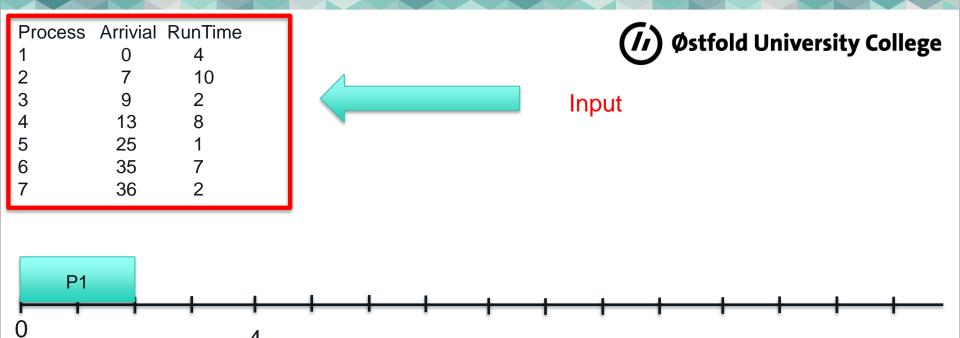


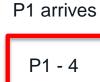
P1 - 4

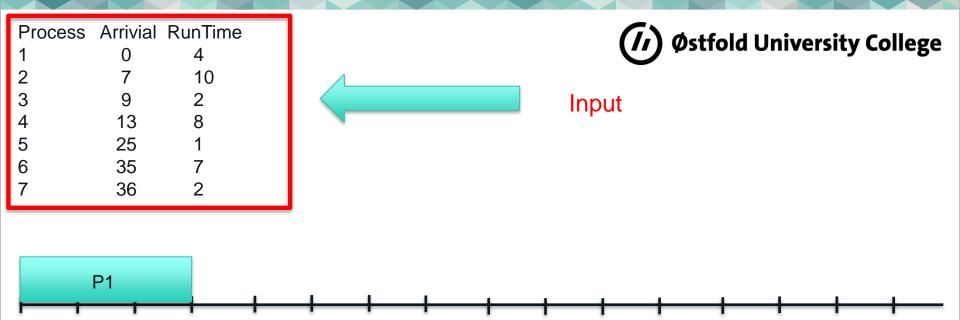


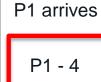
P1 - 4

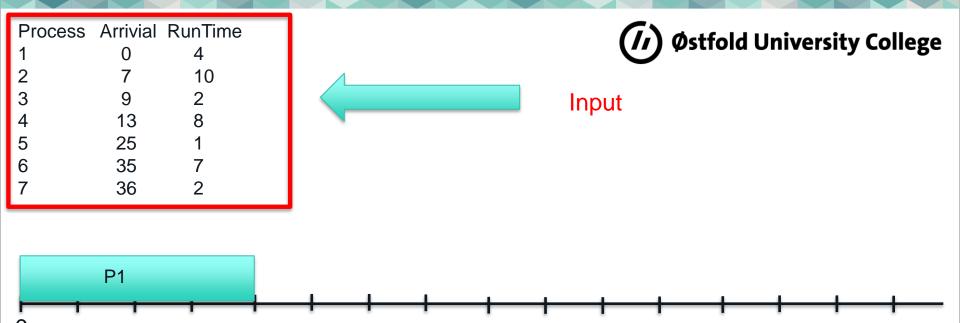
P1 arrives

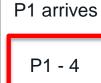


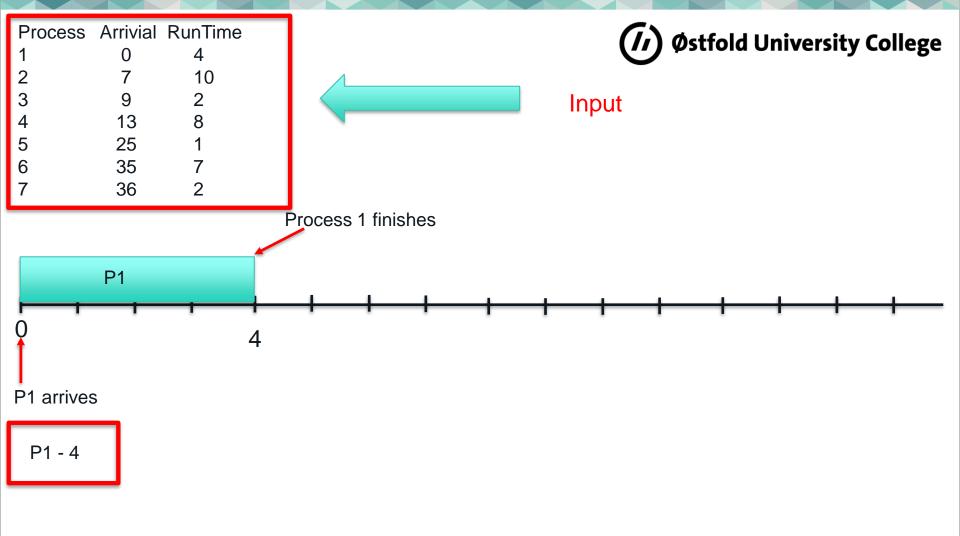


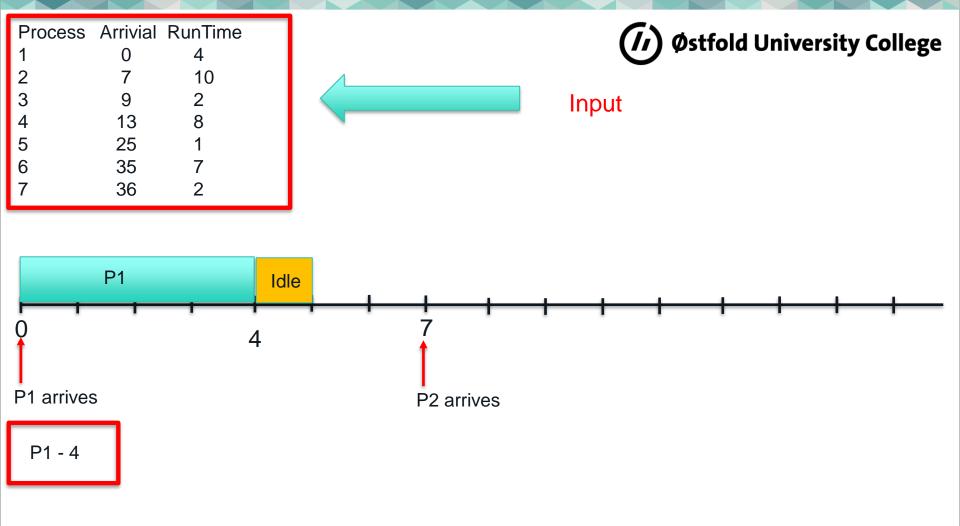


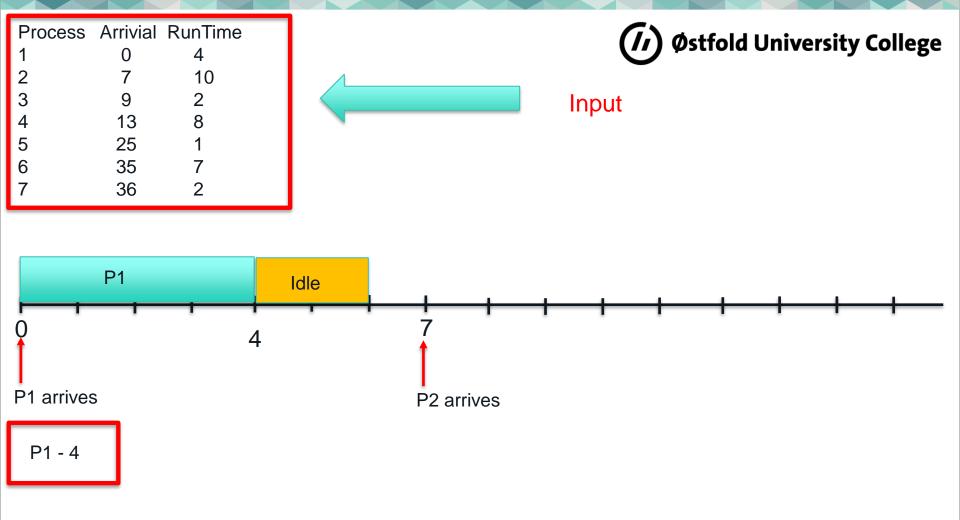


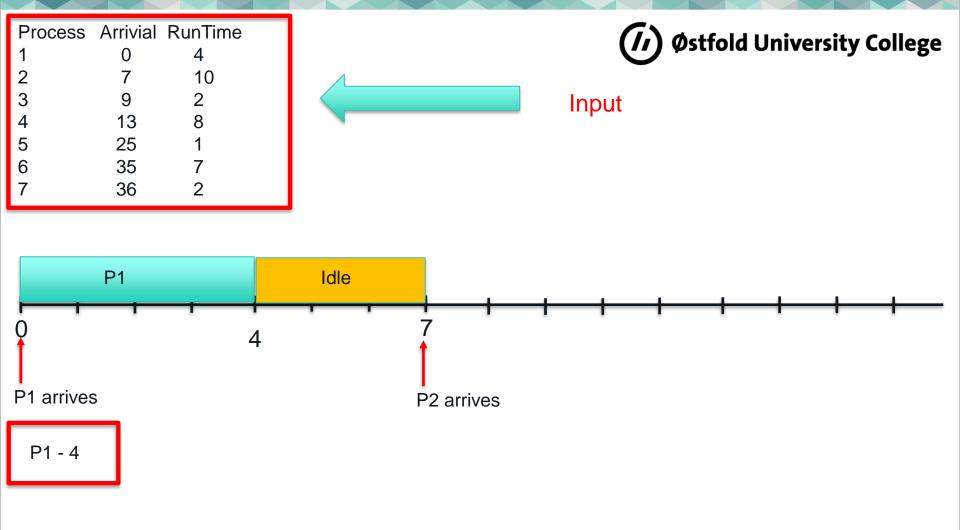


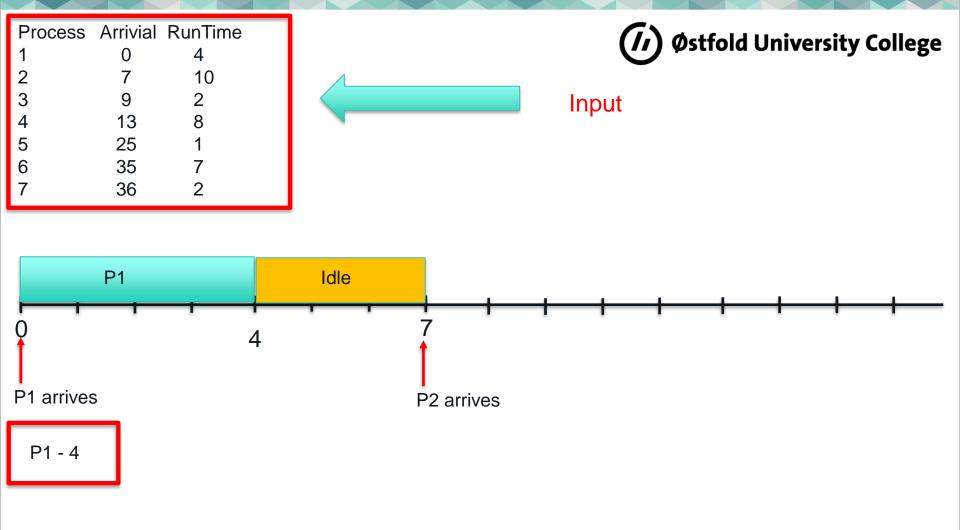


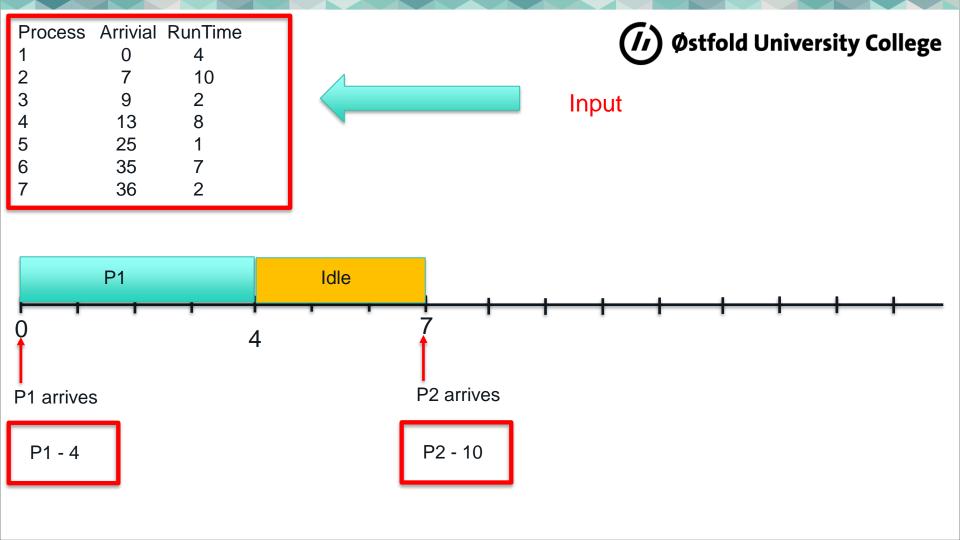


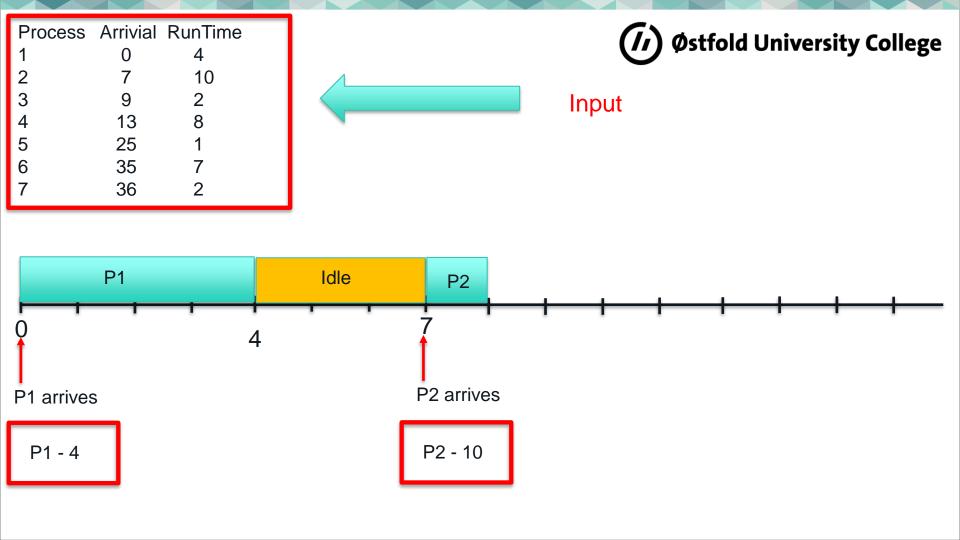


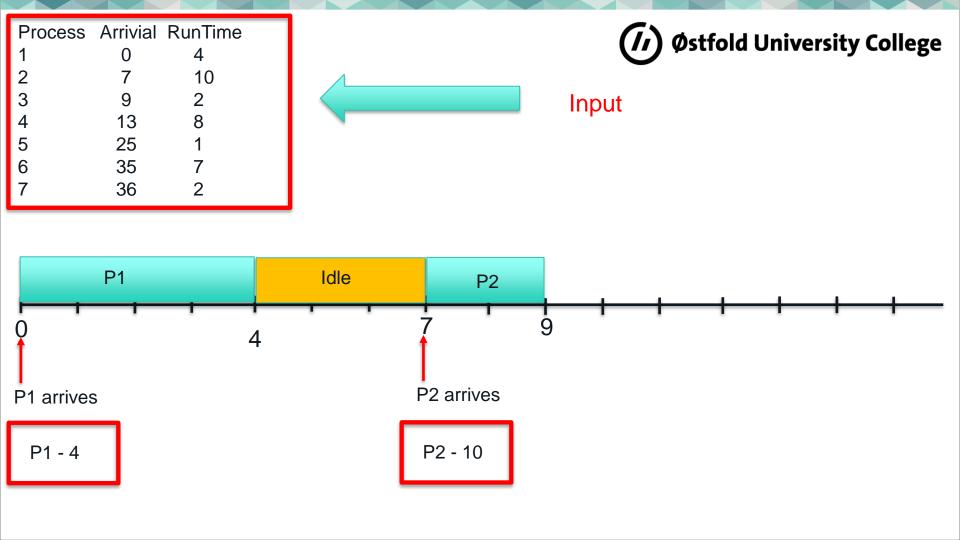


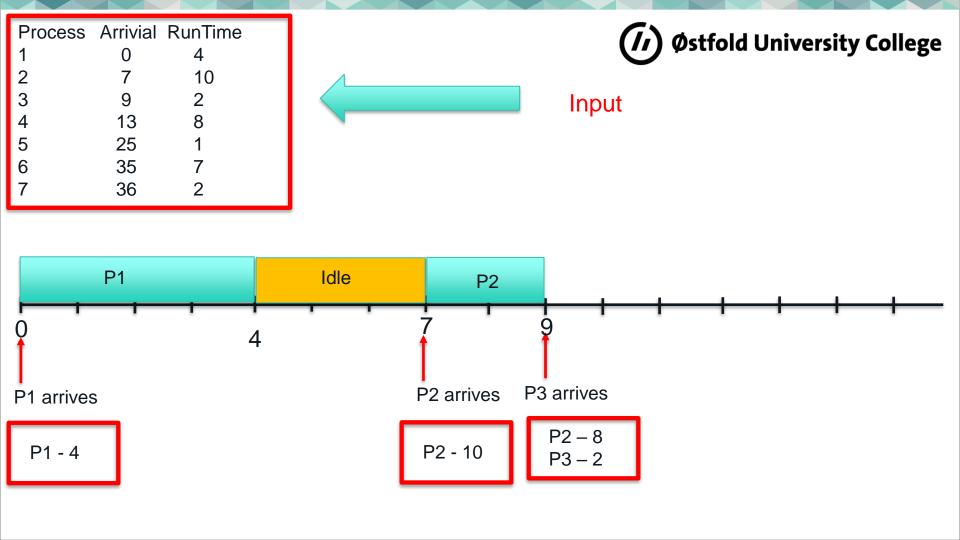


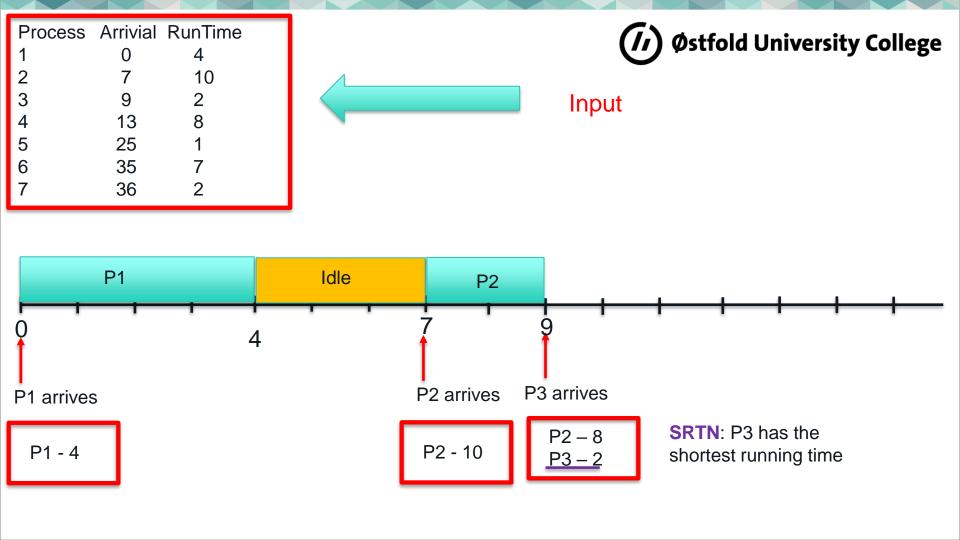


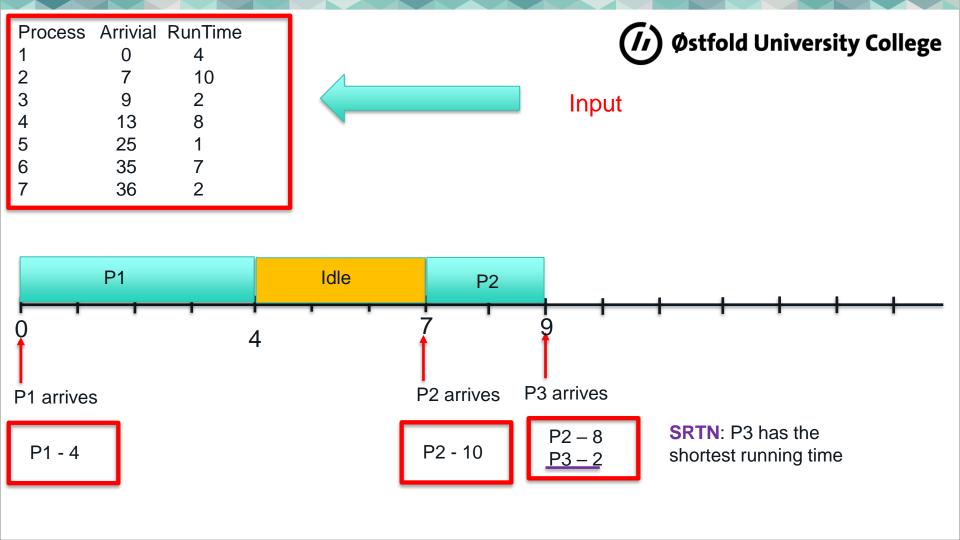


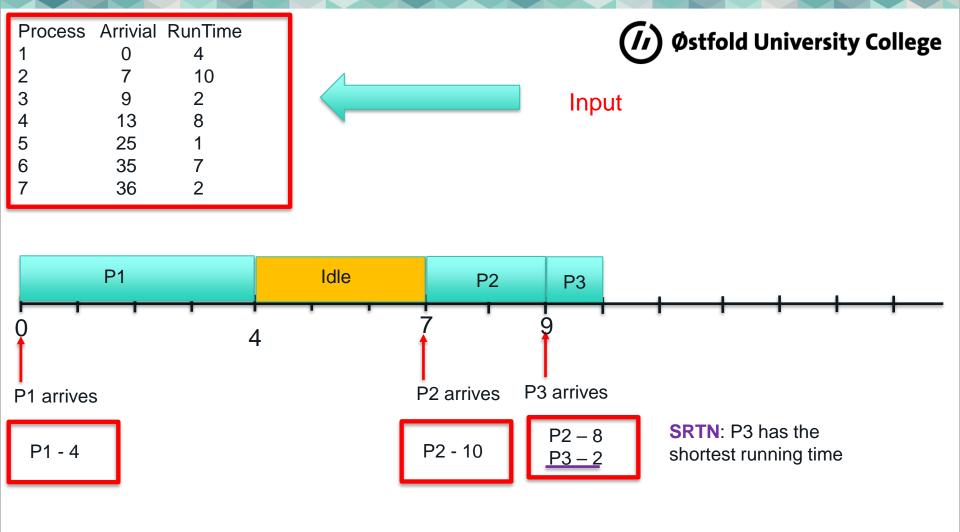


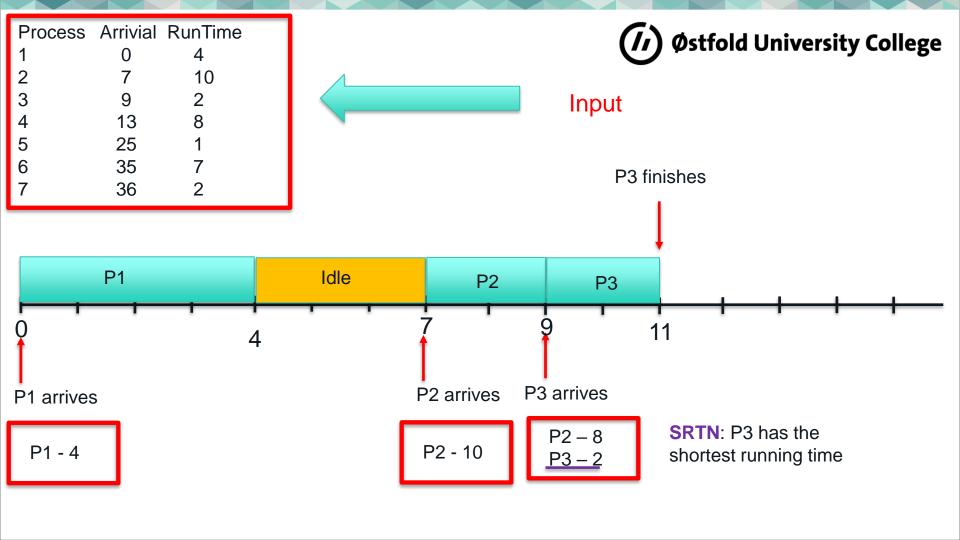


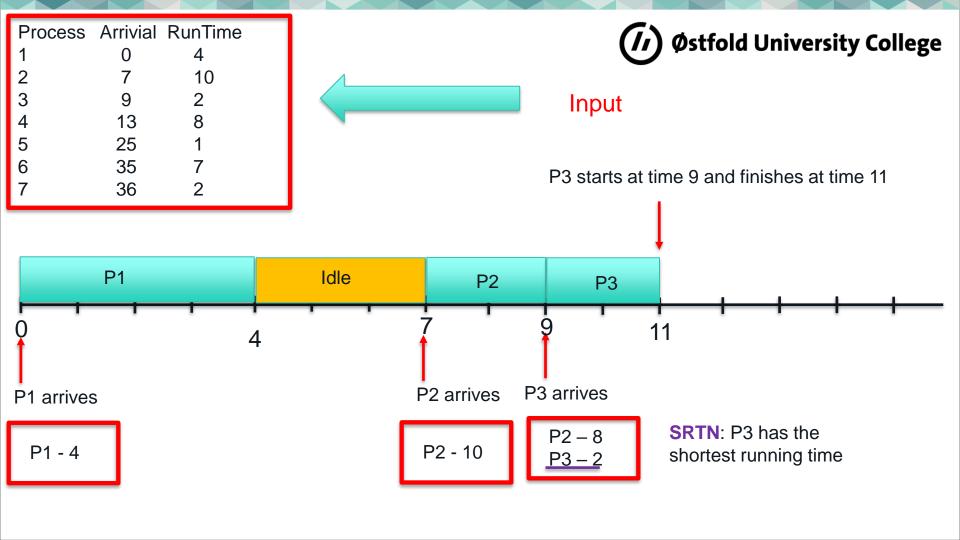


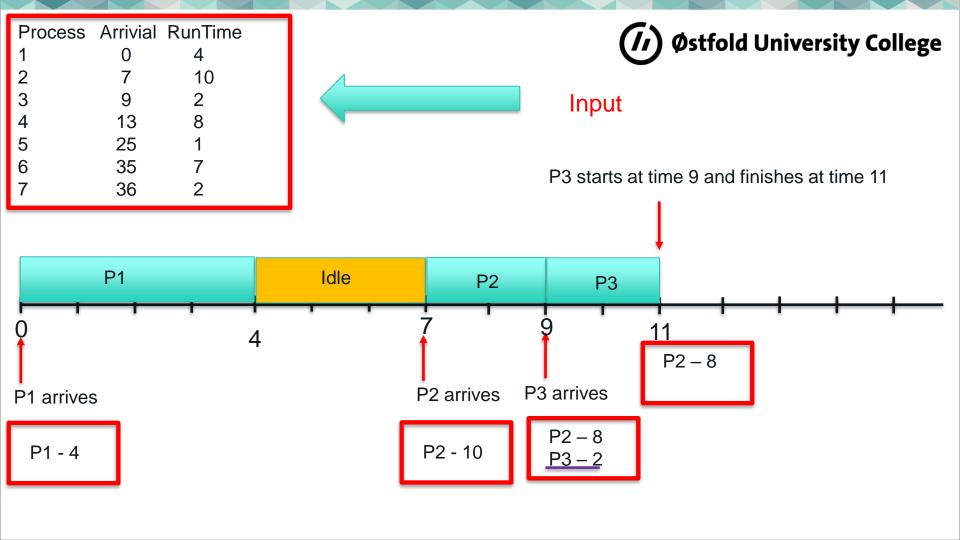


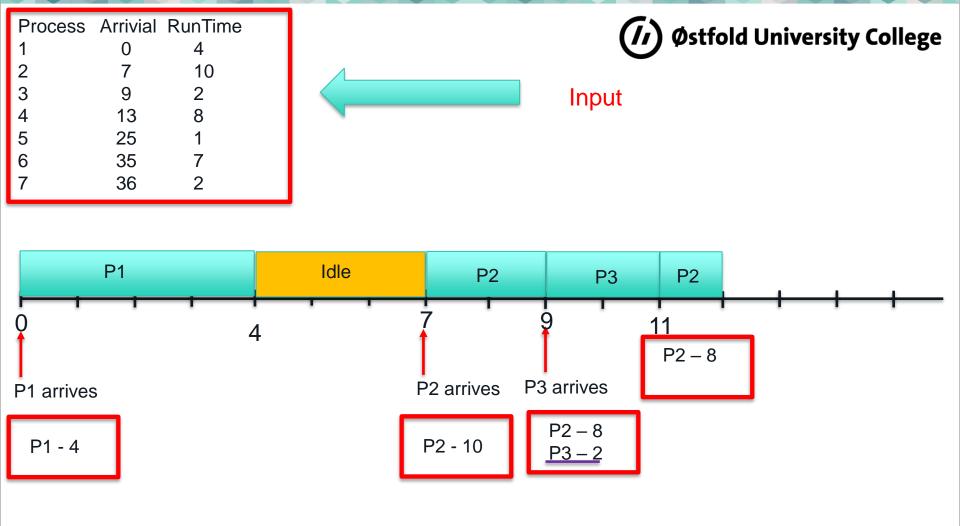


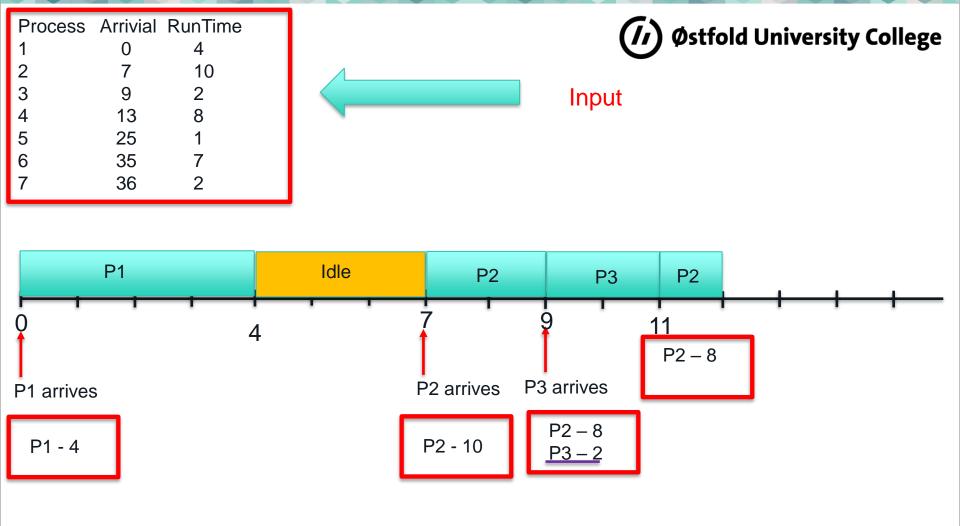


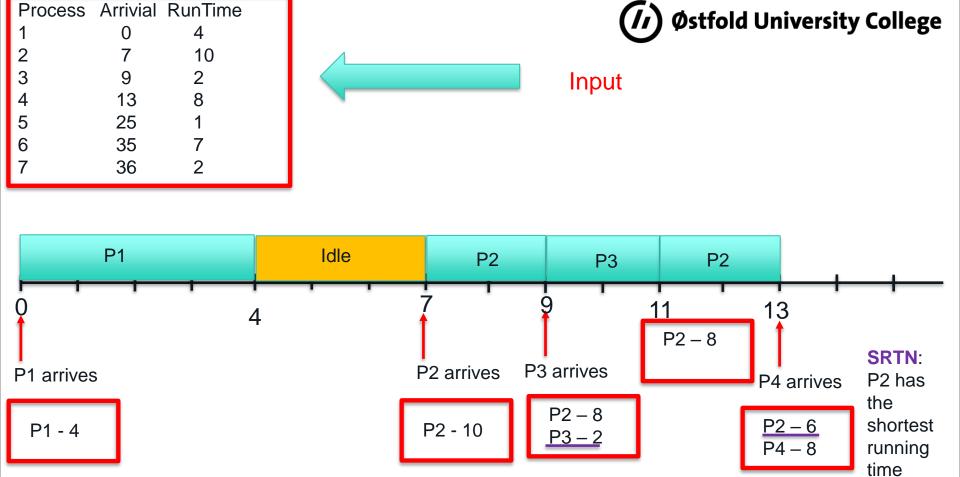


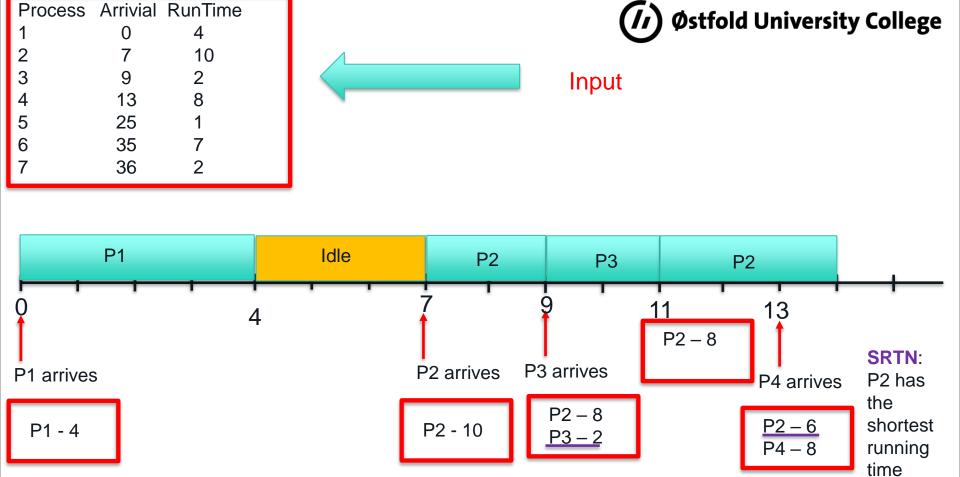


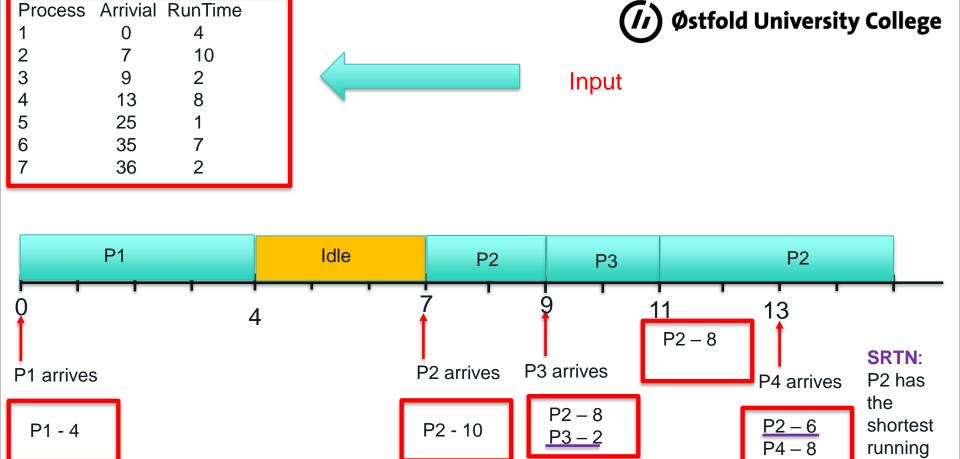




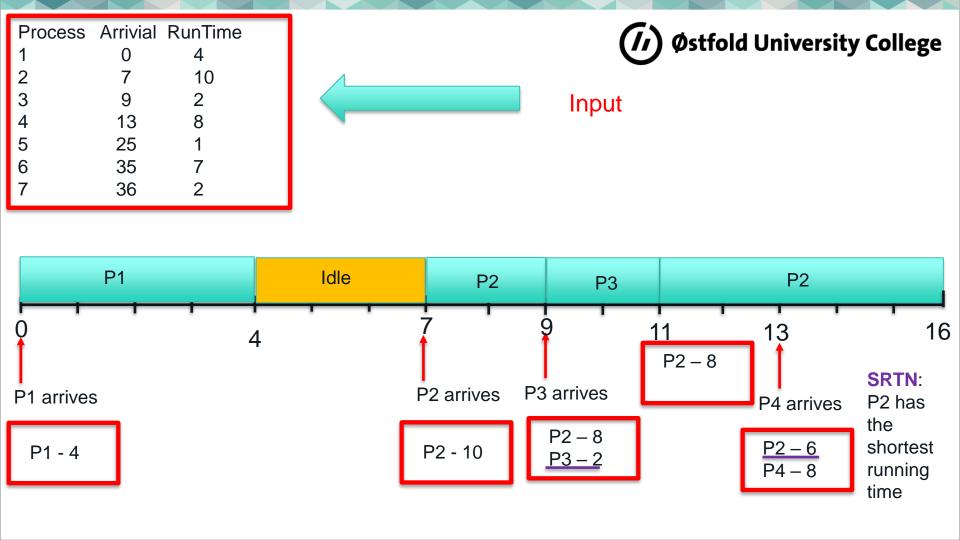


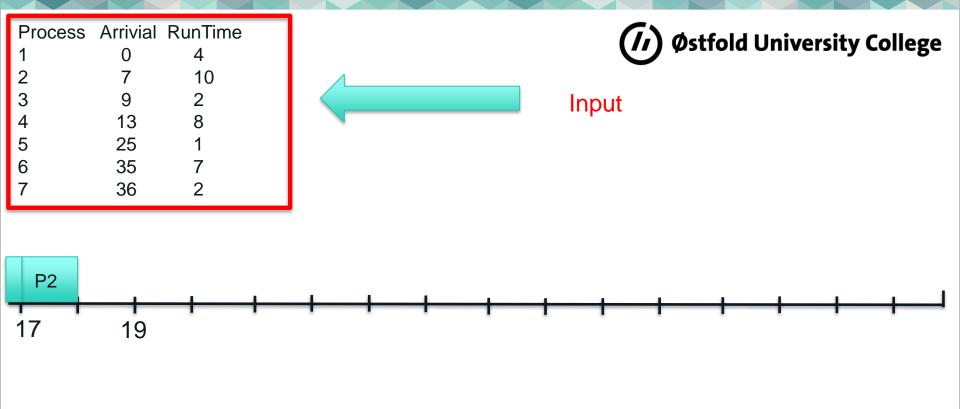


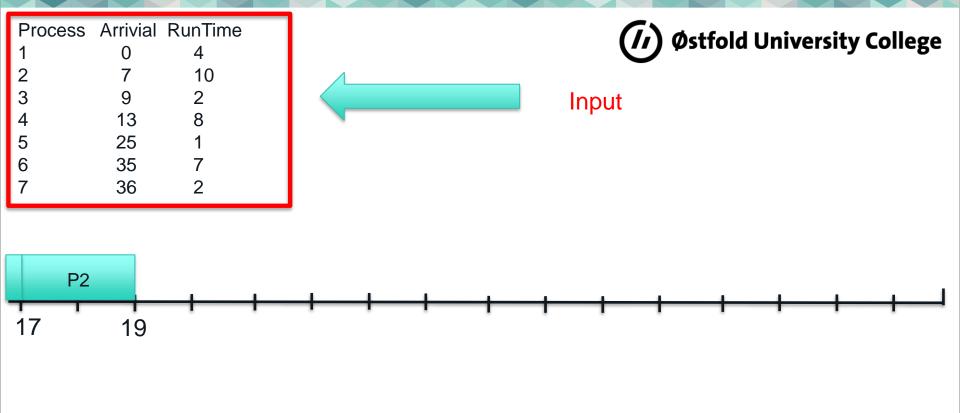


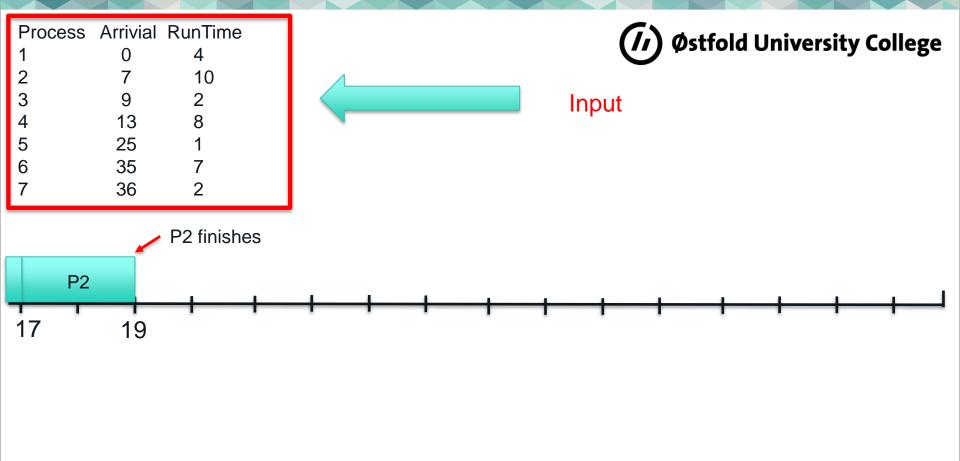


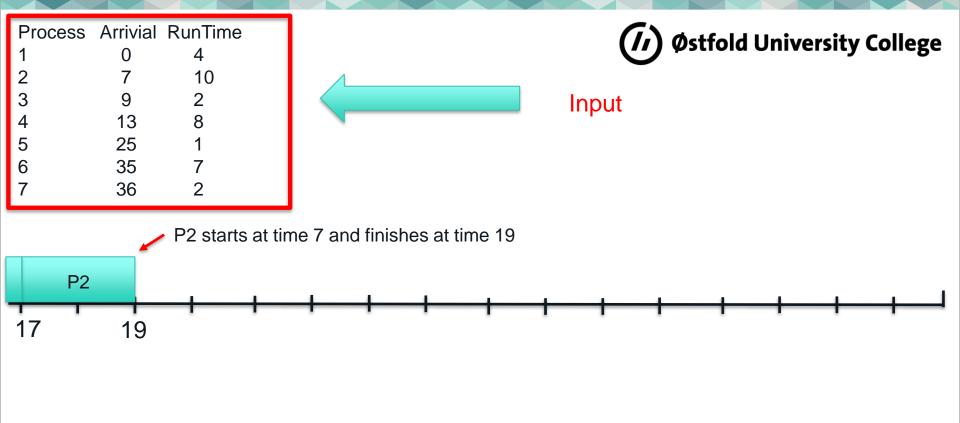
time

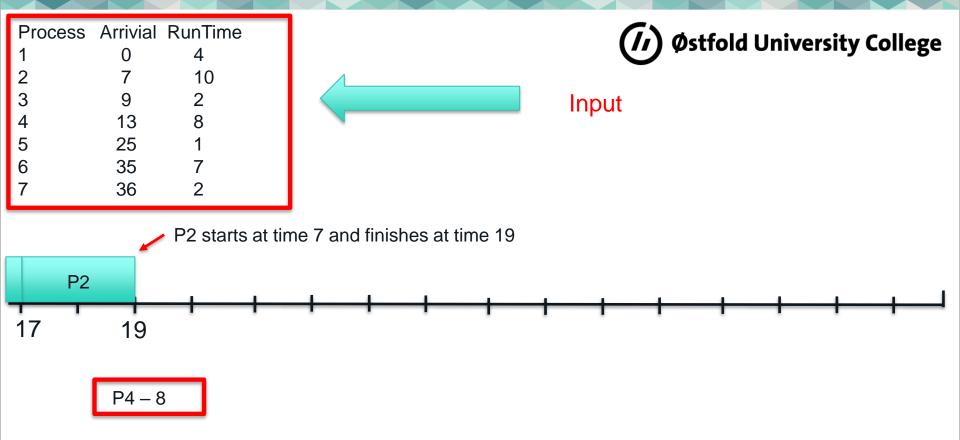


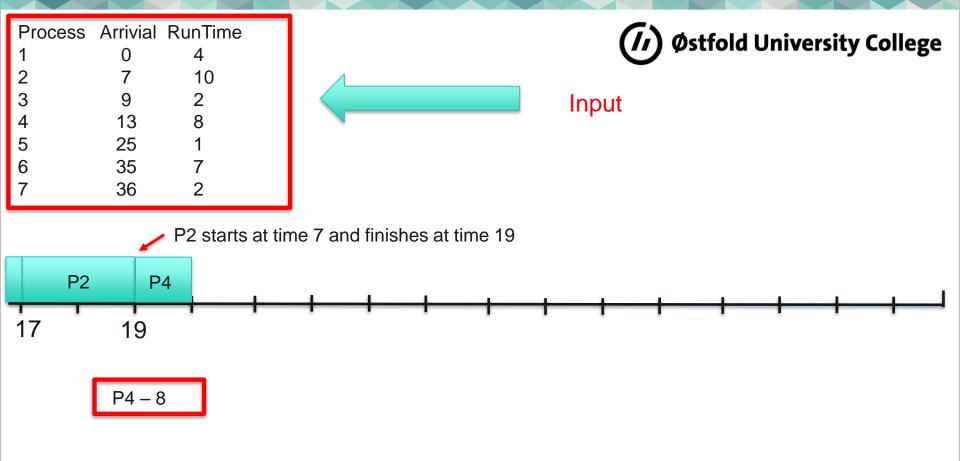


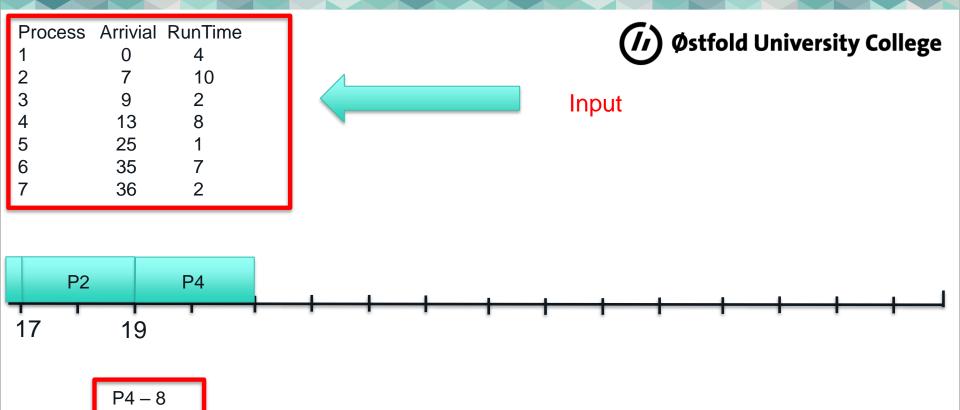


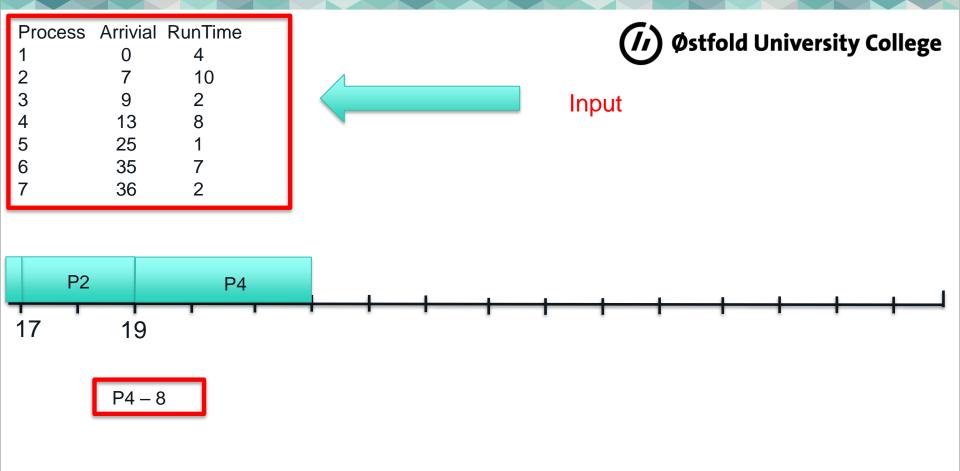


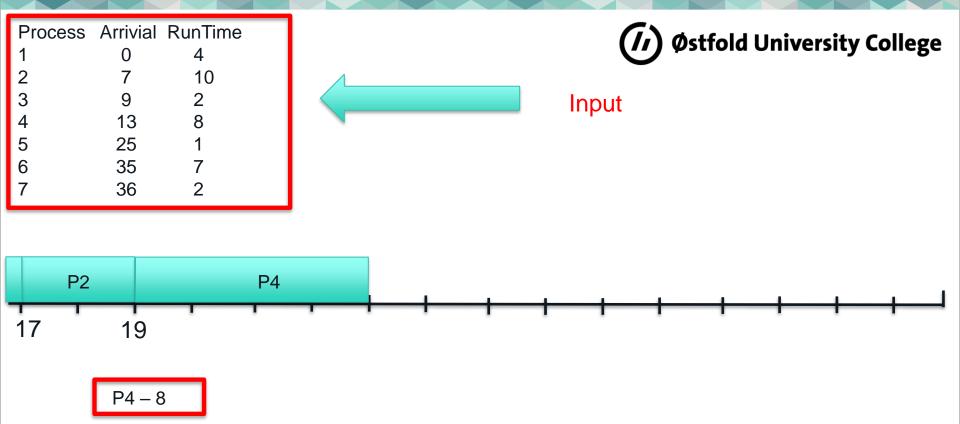


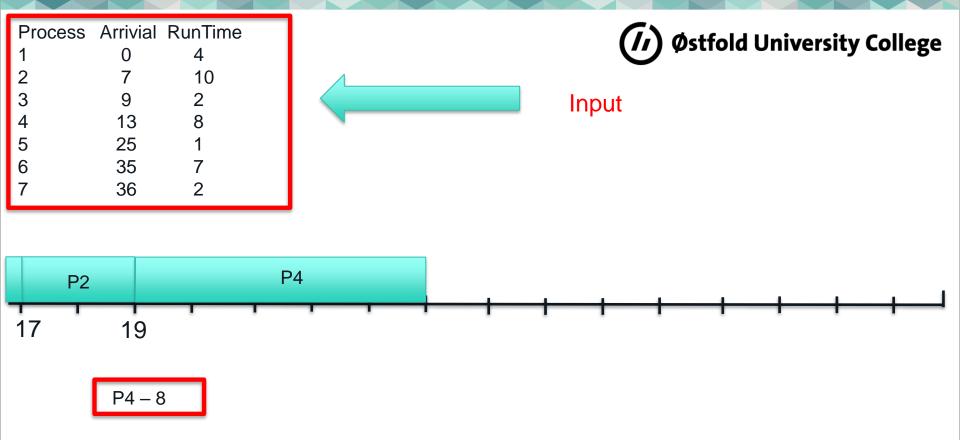


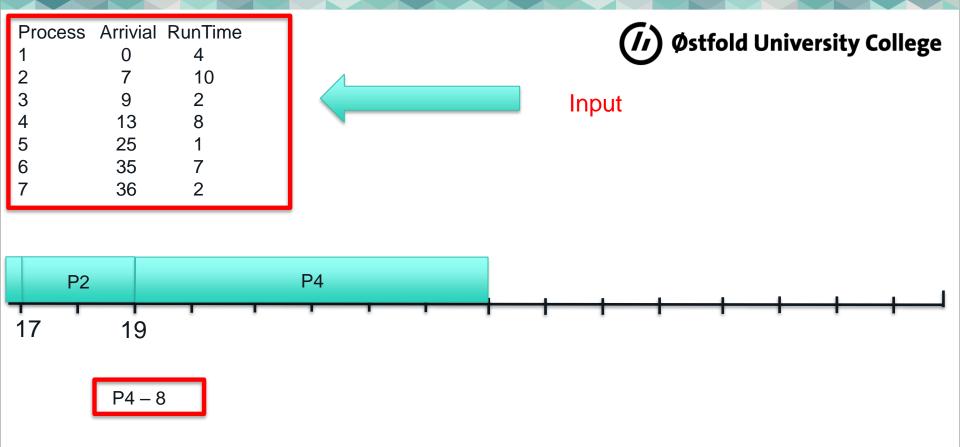


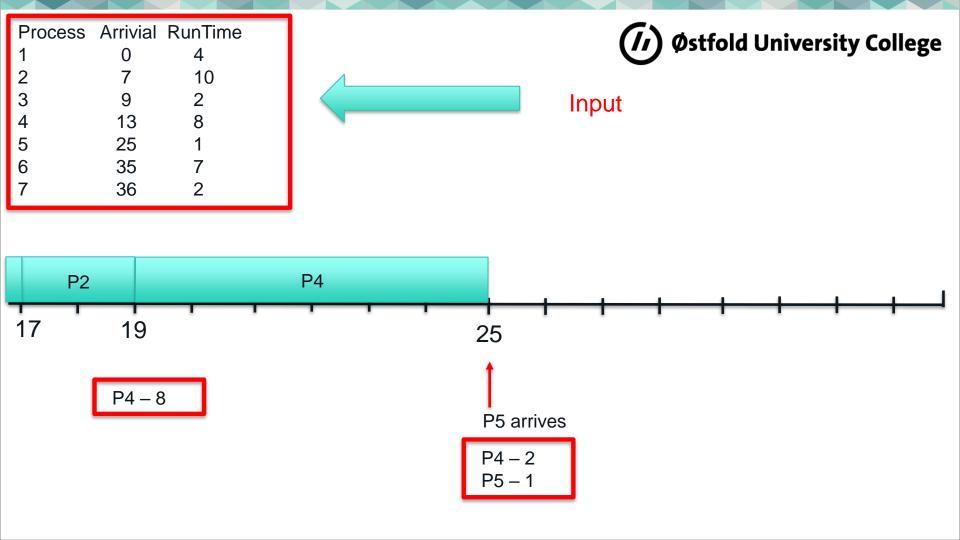


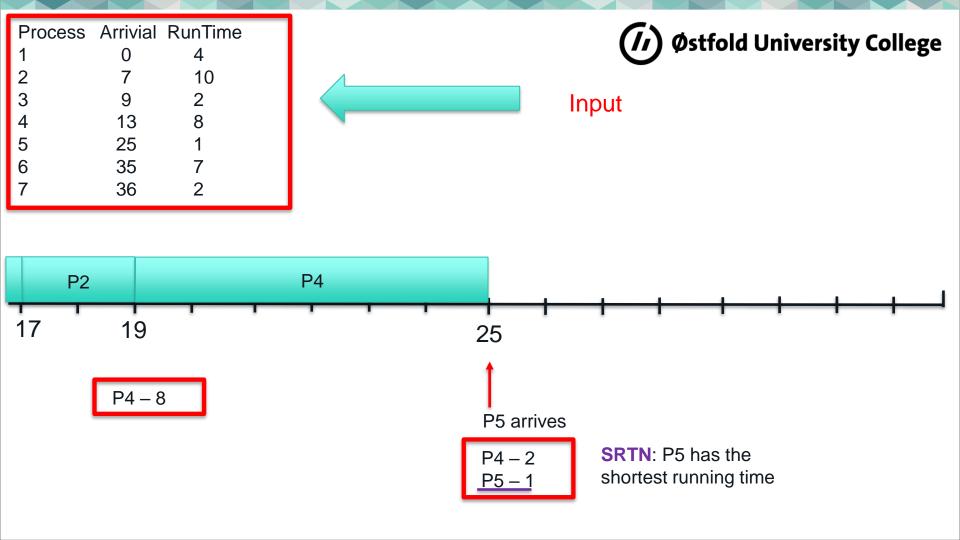


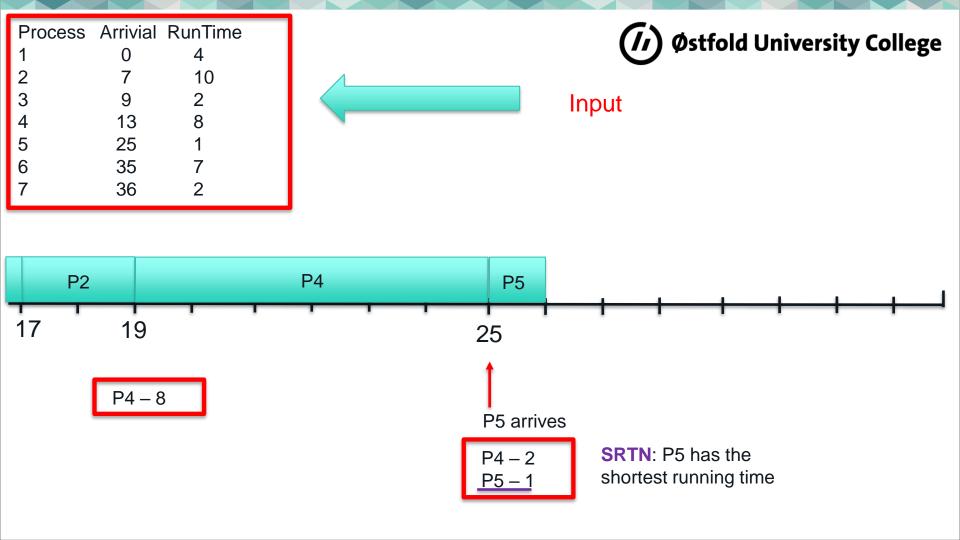


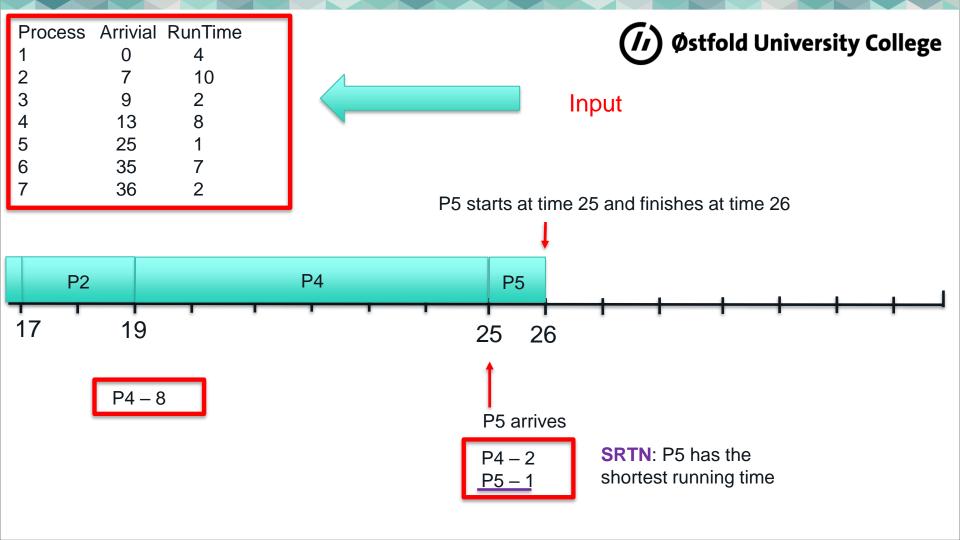


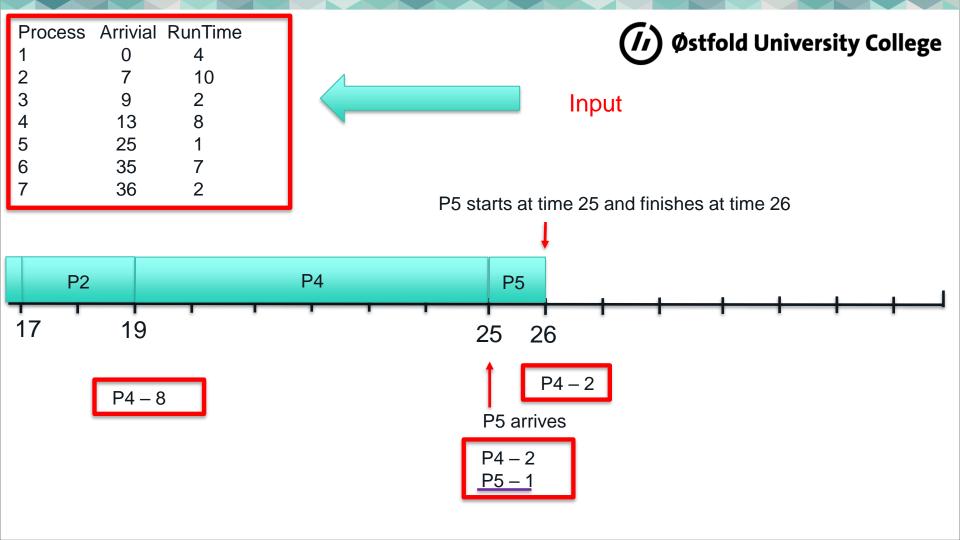


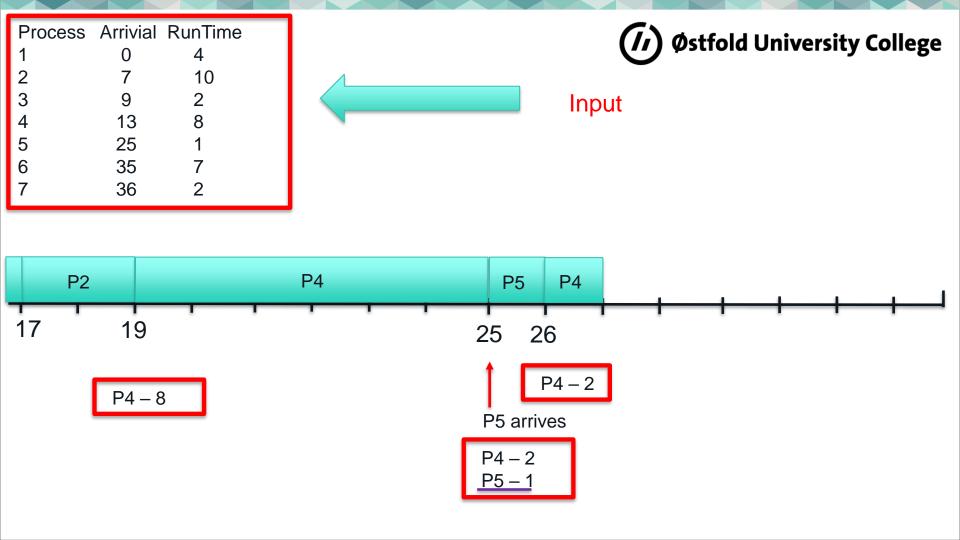


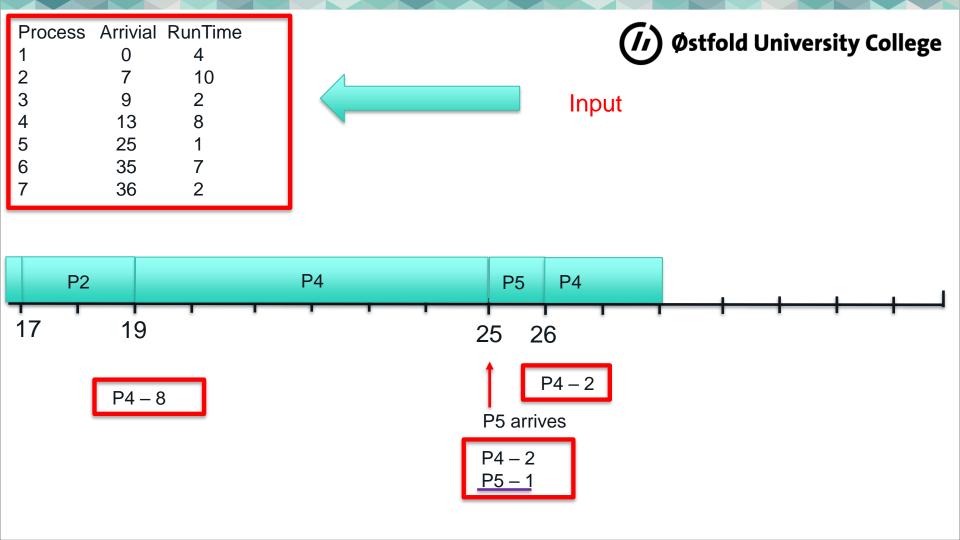


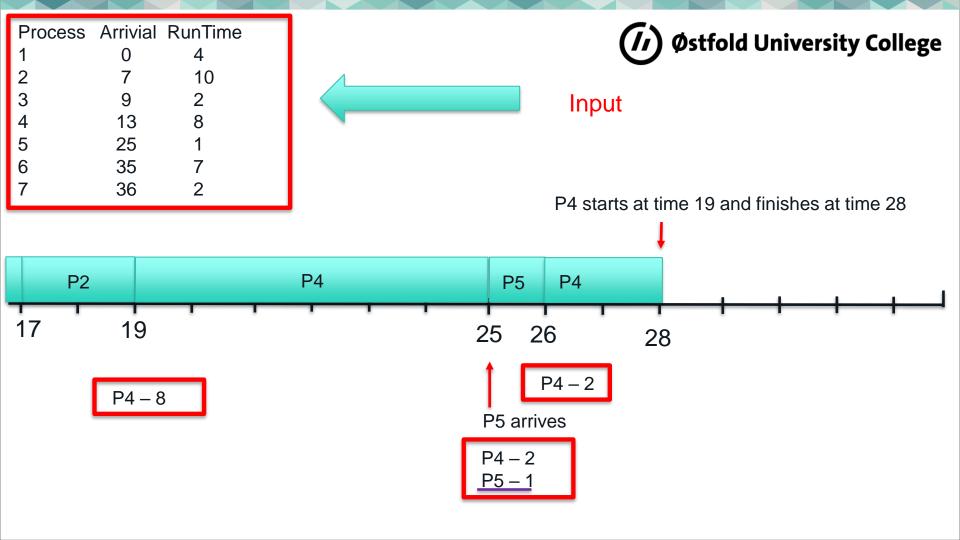


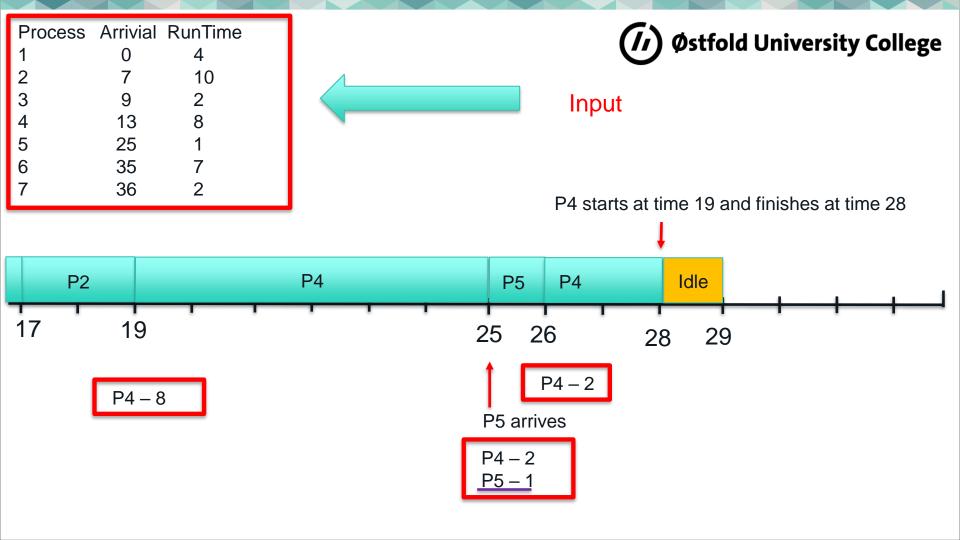


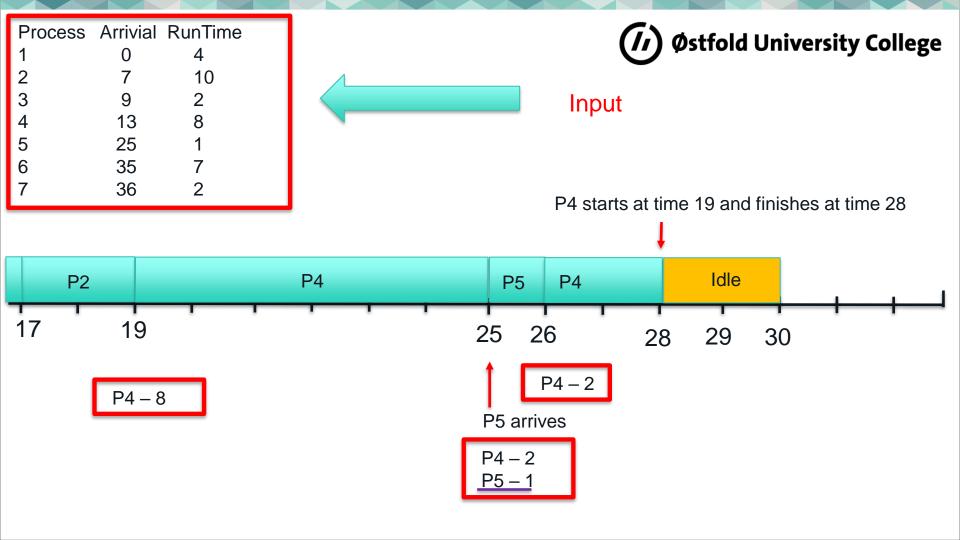


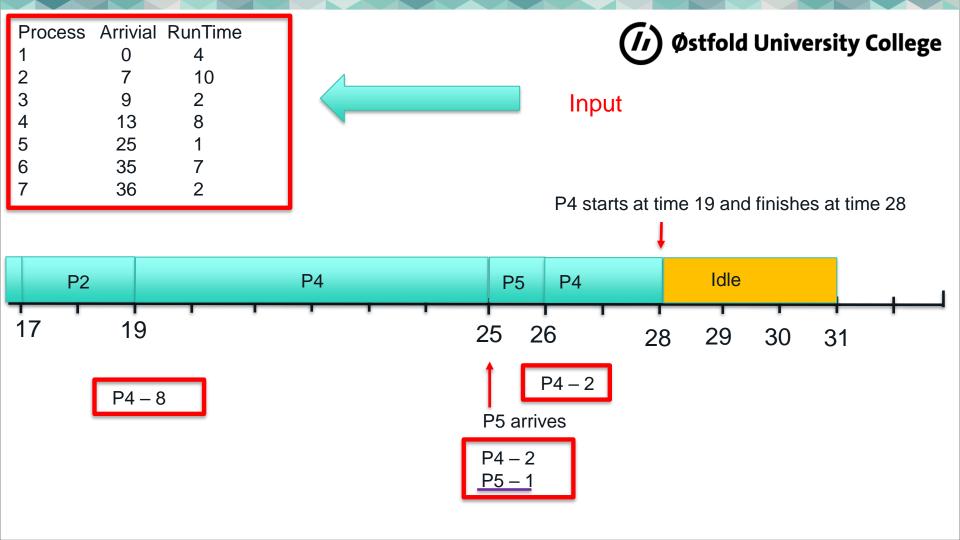


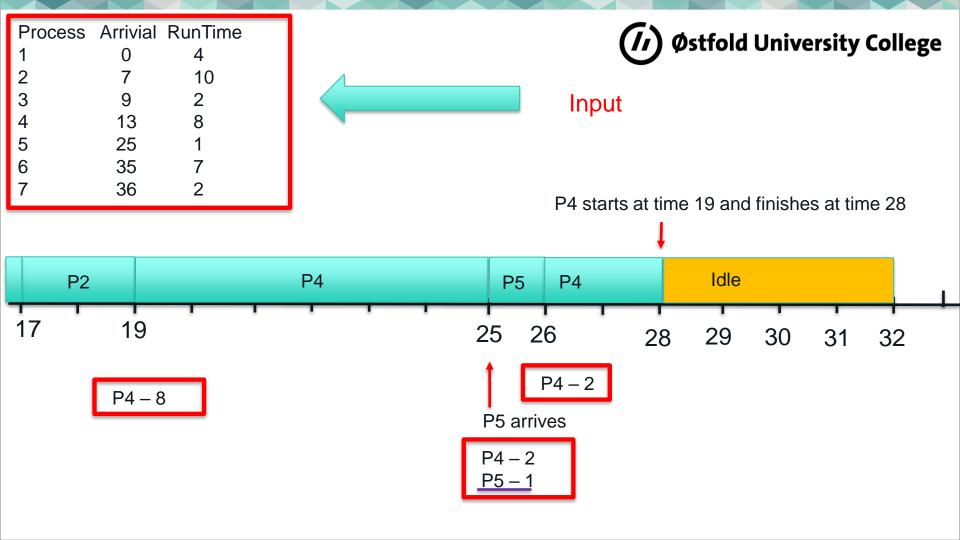


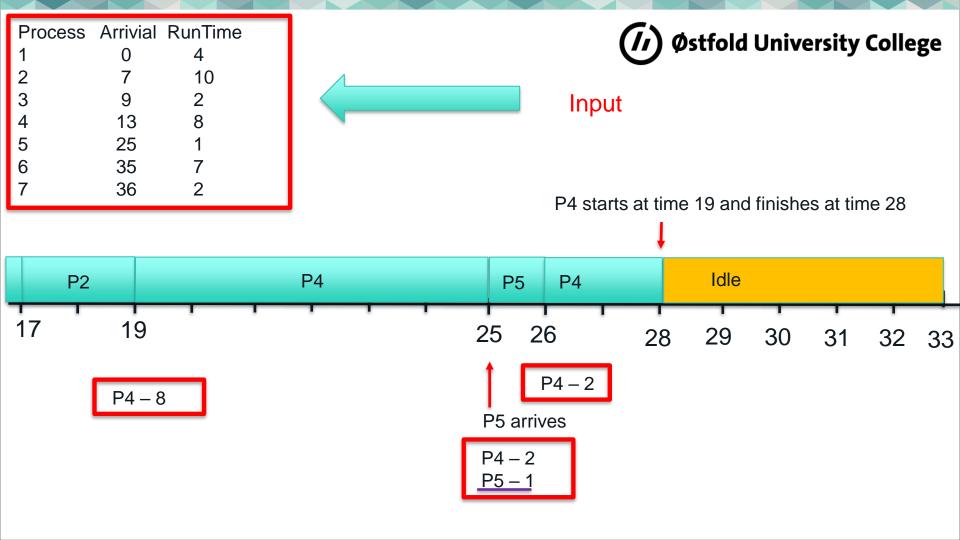


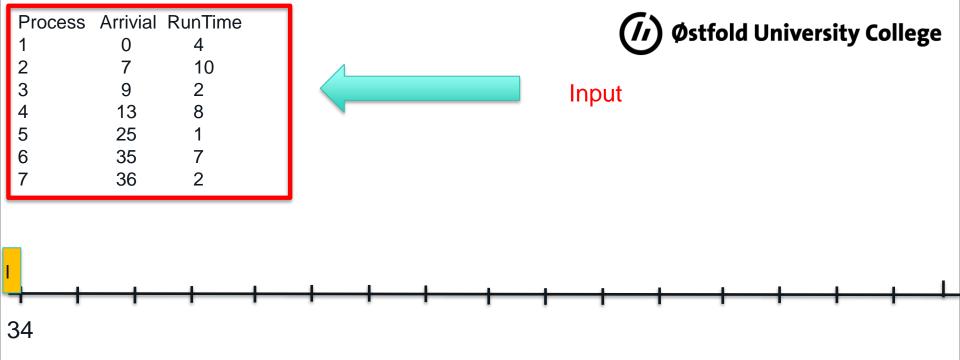


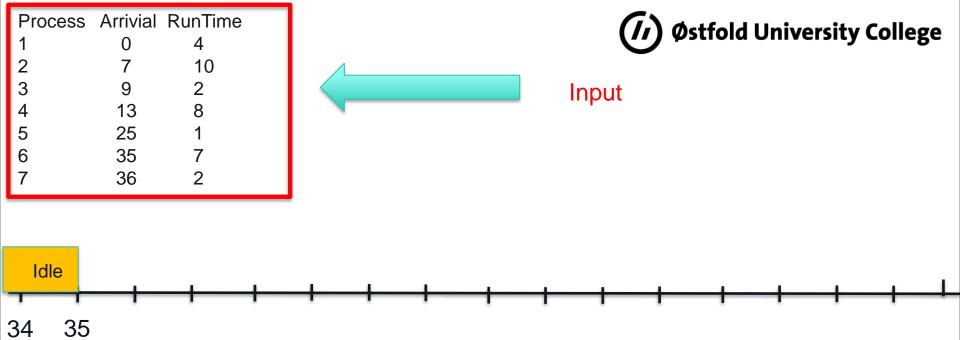


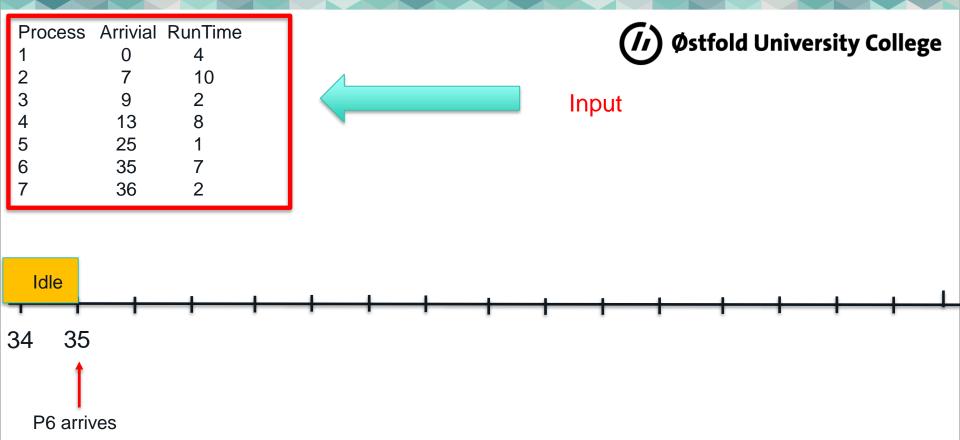


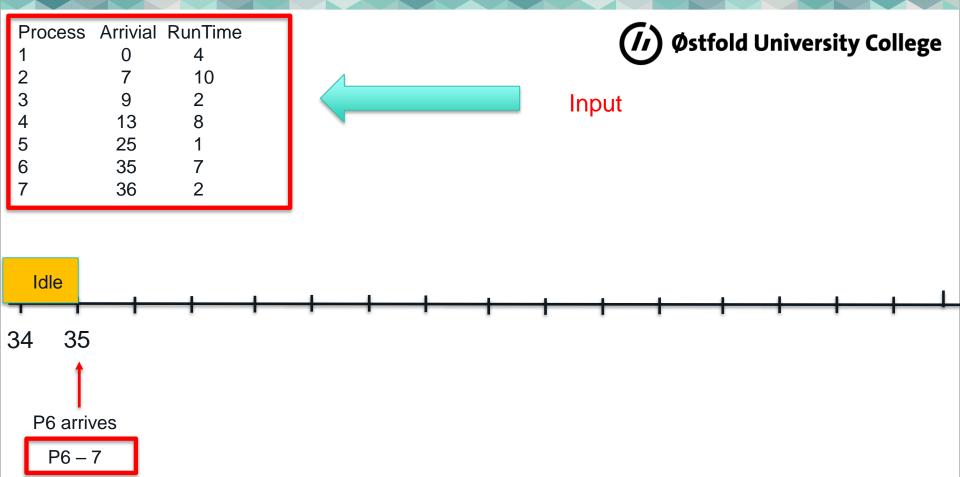


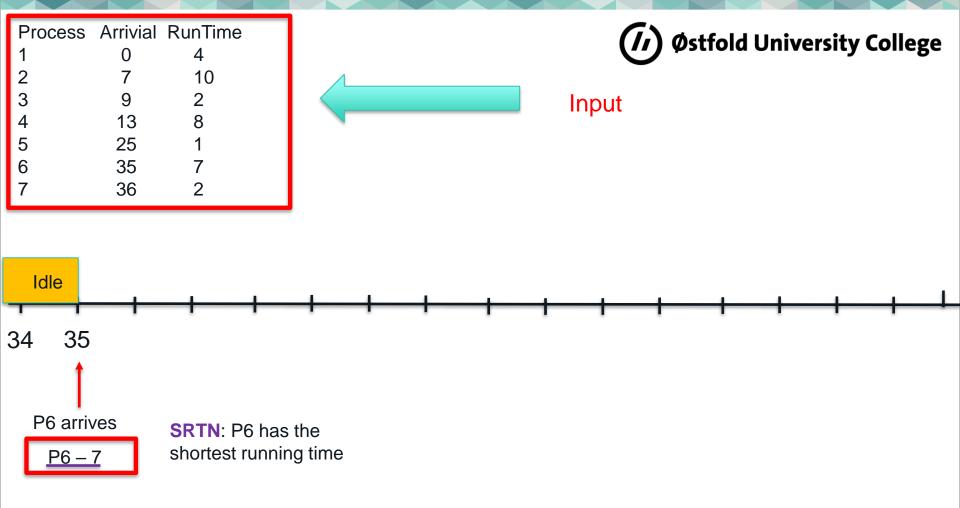


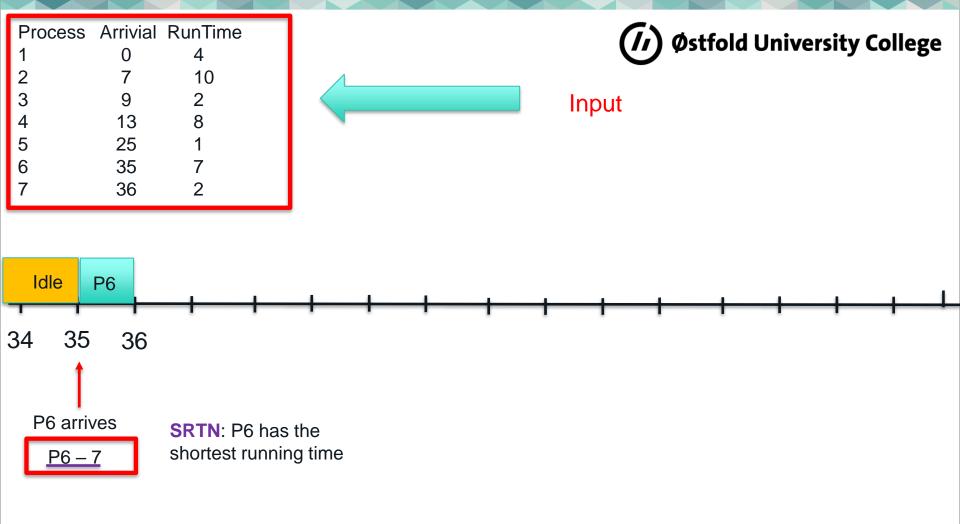


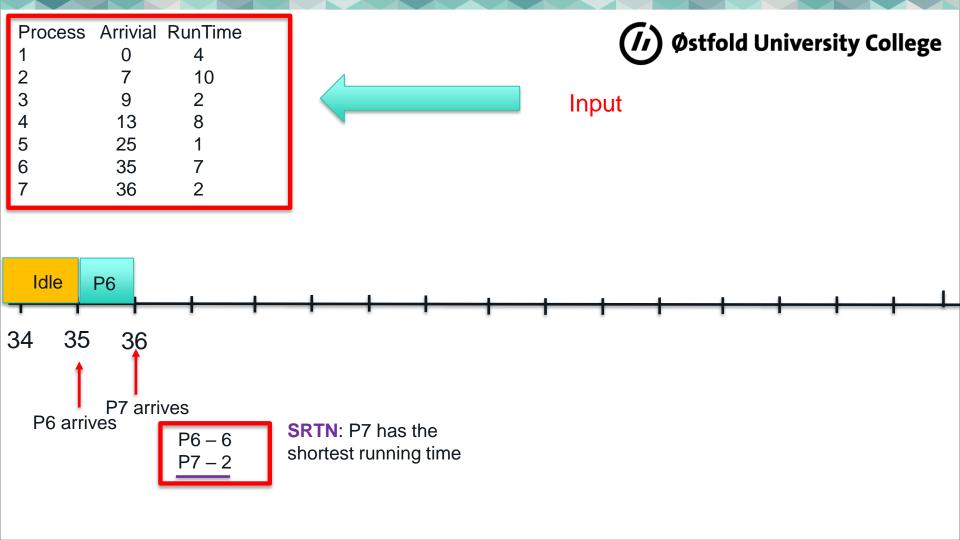


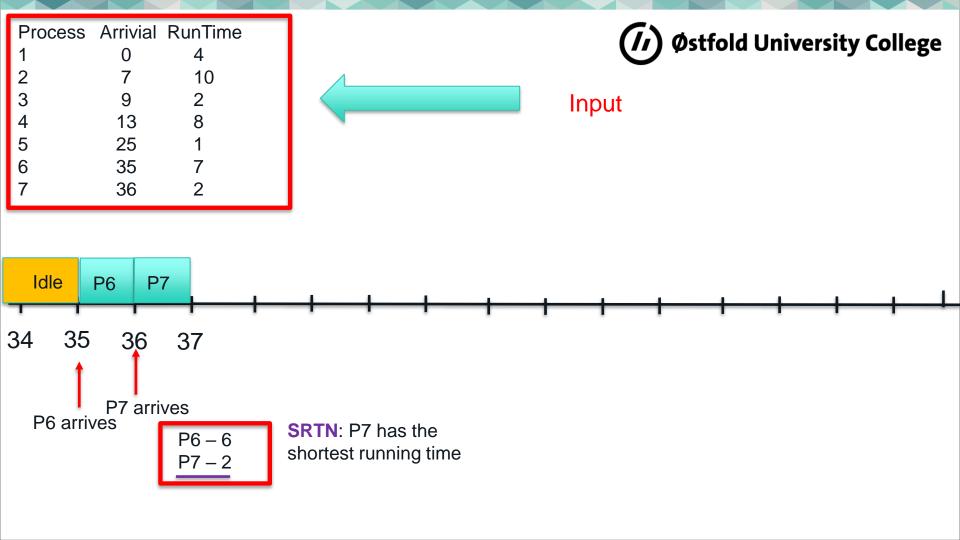


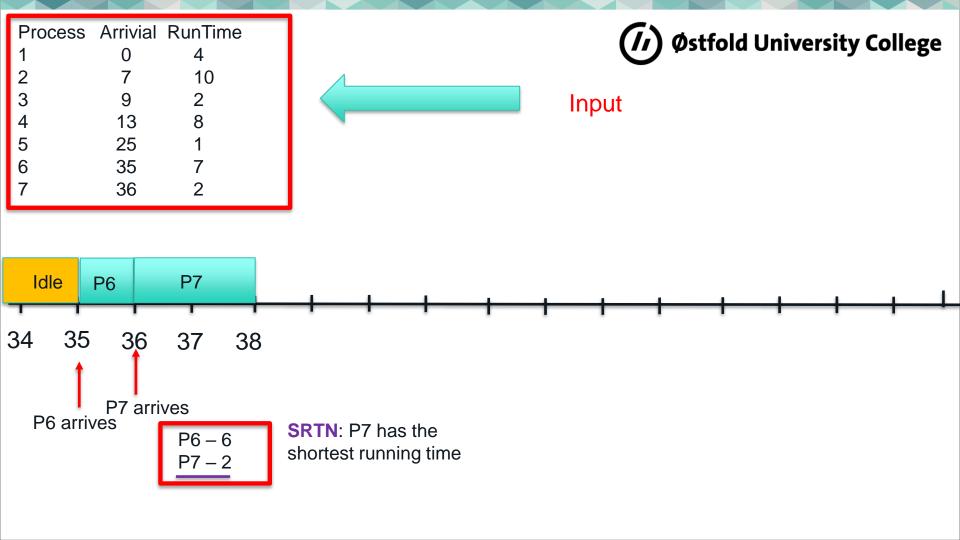


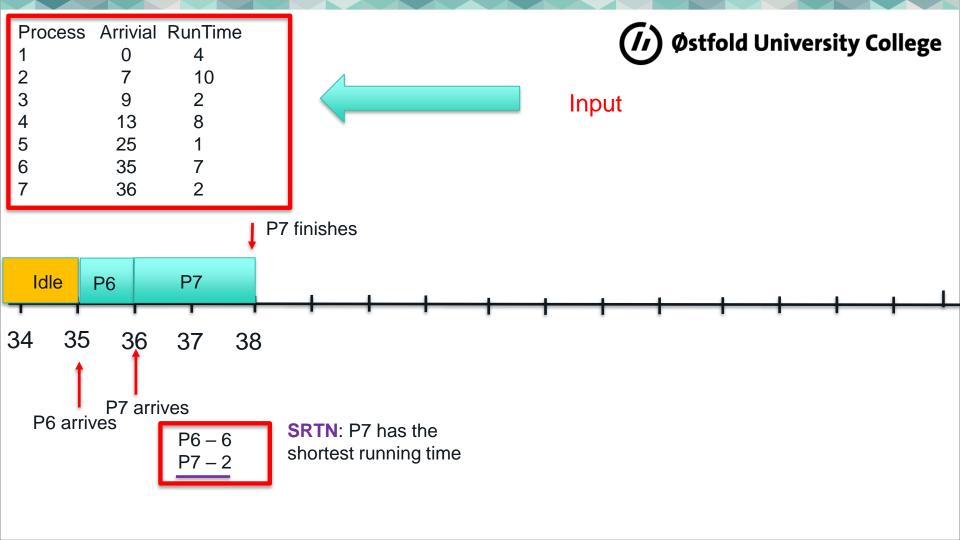


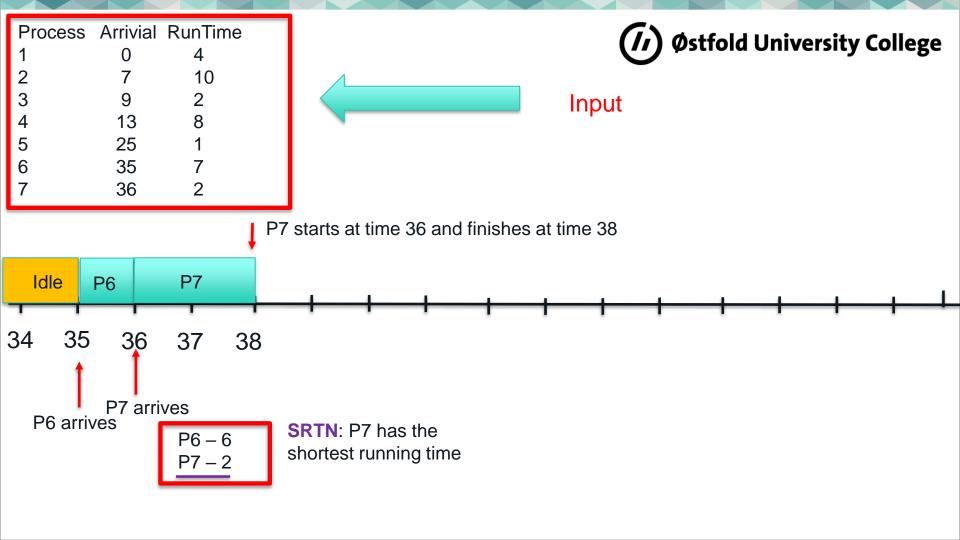


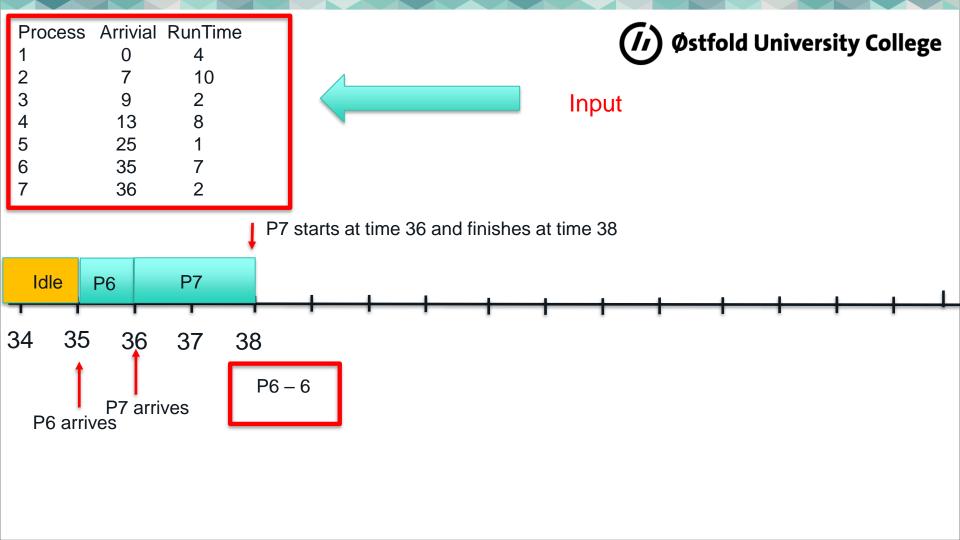


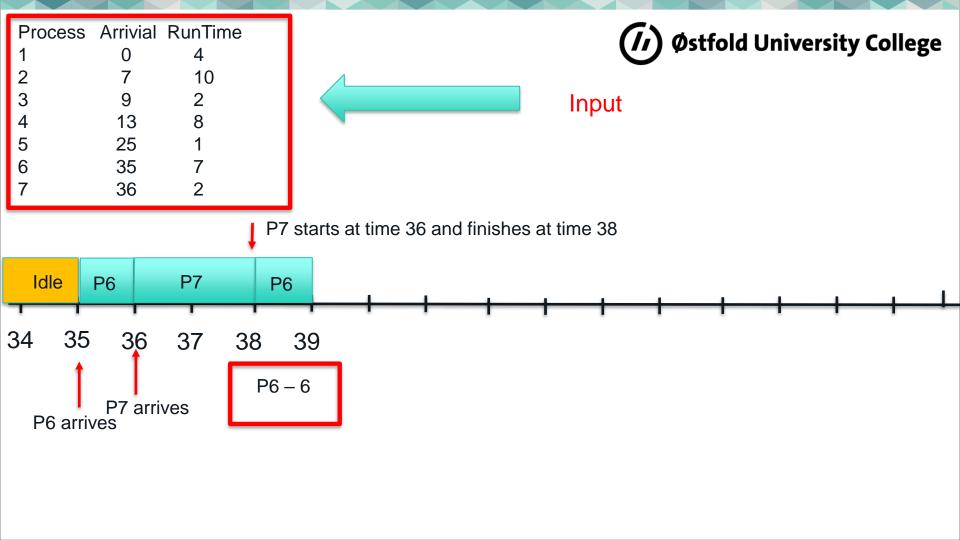


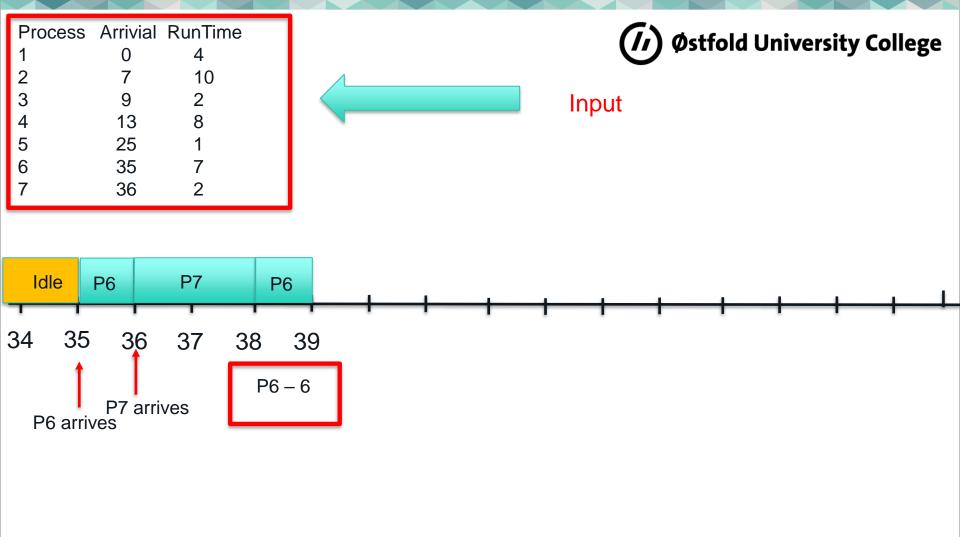


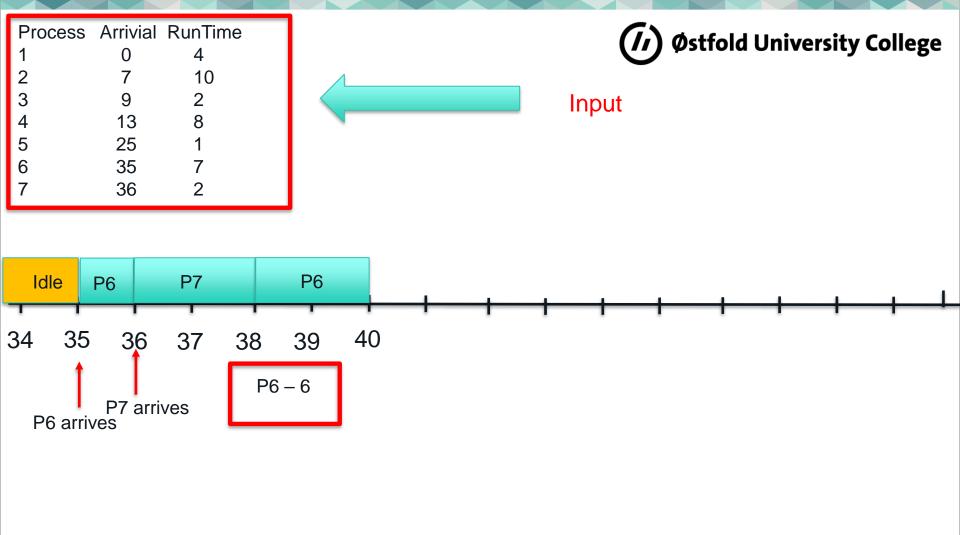


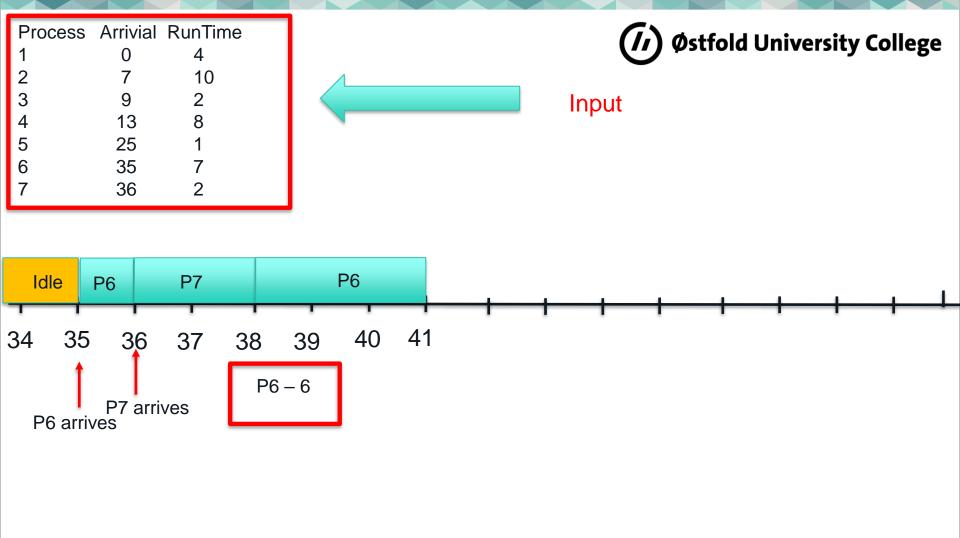


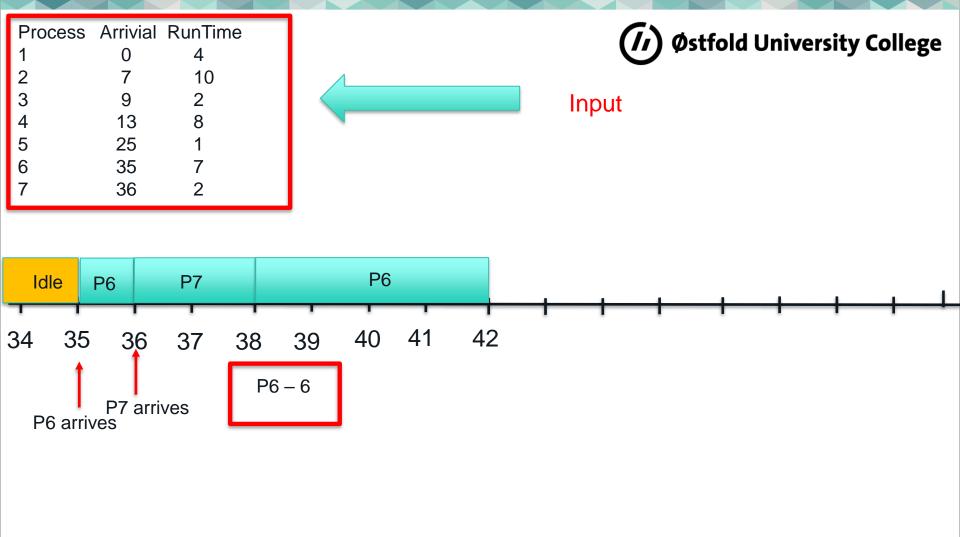


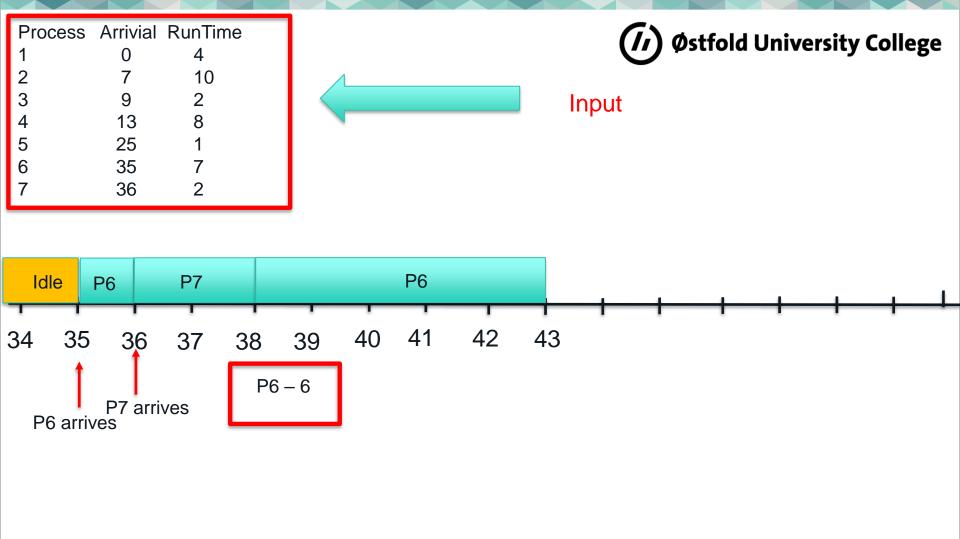


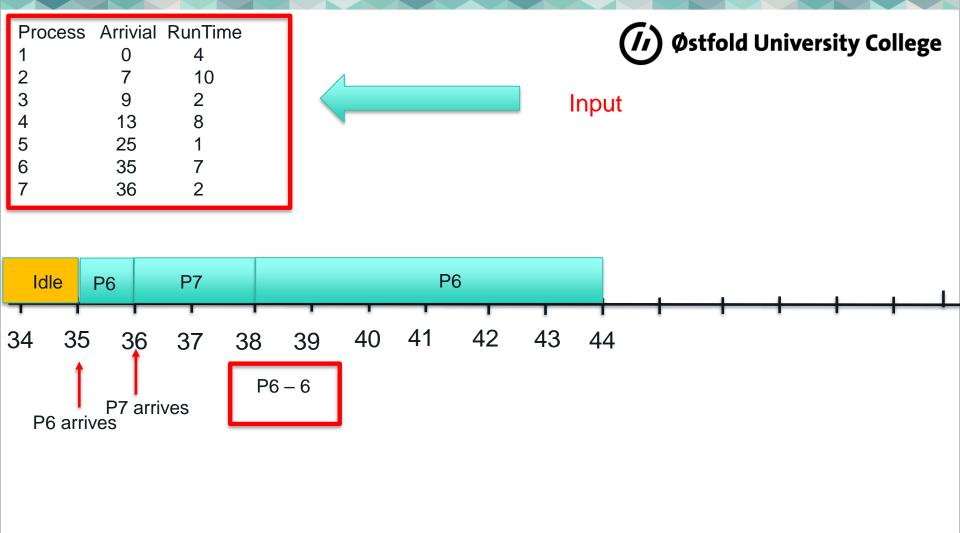


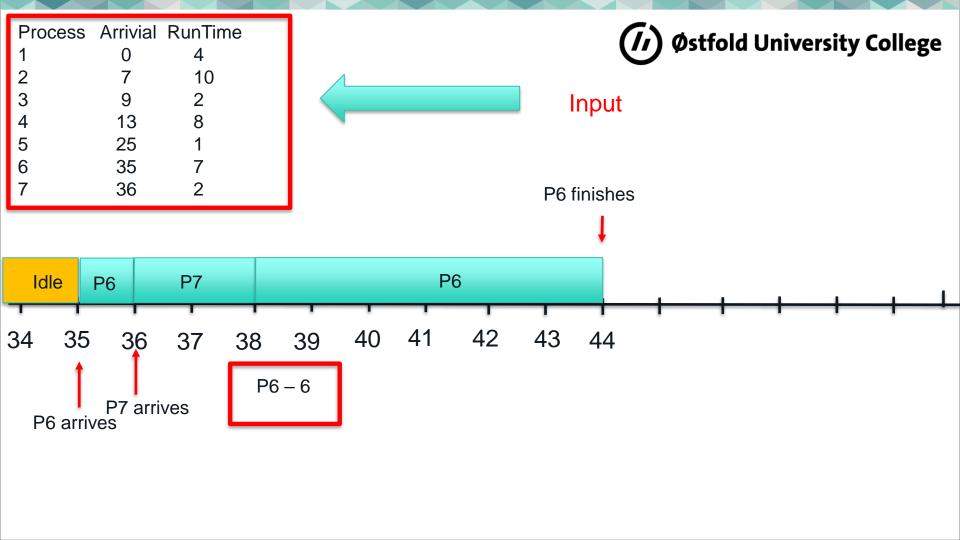


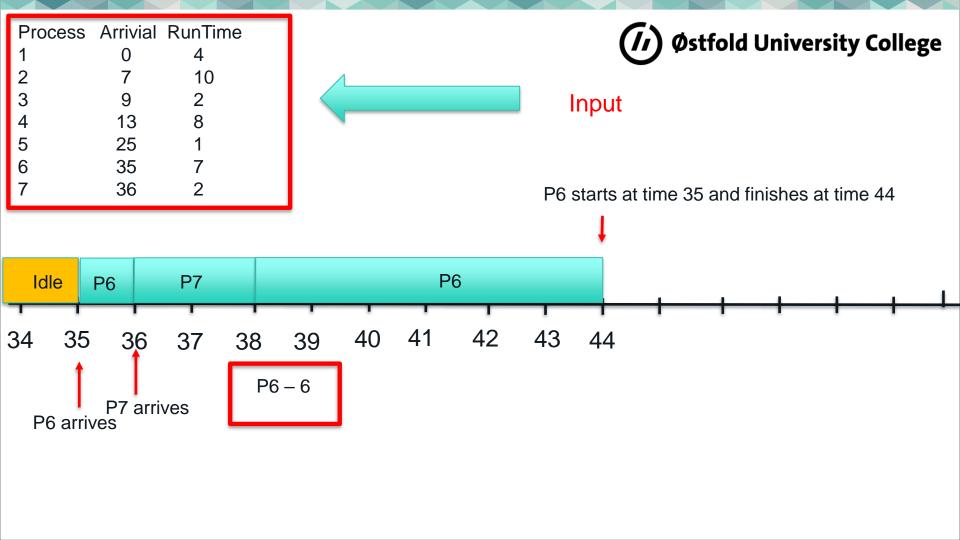


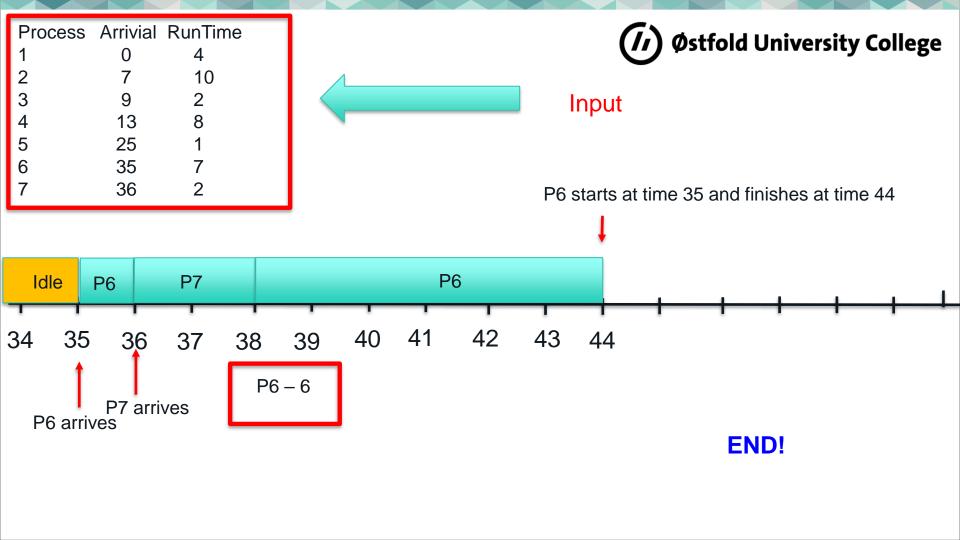














There can be several ways implement an algorithm!

