```
                                -- Input --
?> Number of different resource types: 4
?> Names of each resource type: CPU A B C
?> Number of instances of each resource type: 3 2 4 1

?> Number of processes: 3
?> Details of process-1: P1 1 2 1 1 10 5
?> Details of process-2: P2 1 1 0 1 12 7
?> Details of process-3: P3 1 0 3 0 14 3

                            -- End of Input –
```

	Allocation	Max	Available	Need
	CPU A B C	CPU A B C	CPU A B C	CPU A B C
P_1 (10, 5)	0 0 0 0	1 2 1 1	3 2 4 1	1 2 1 1

	Allocation	Max	Available	Need
	CPU A B C	CPU A B C	CPU A B C	CPU A B C
P_1 (10, 5)	1 2 1 1	1 2 1 1	2 0 3 0	0 0 0 0
P_2 (12, 7)	0 0 0 0	1 1 0 1		1 1 0 1

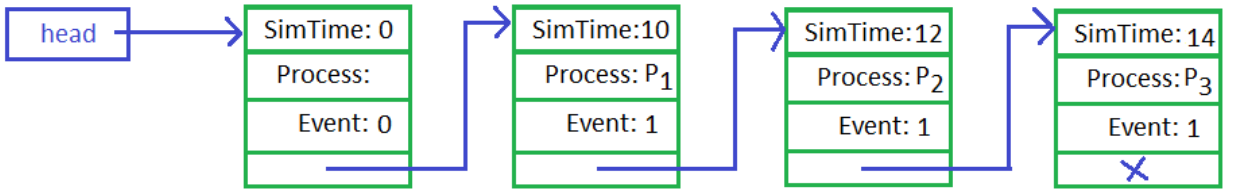
	Allocation	Max	Available	Need
	CPU A B C	CPU A B C	CPU A B C	CPU A B C
P_1 (10, 5)	1 2 1 1	1 2 1 1	2 0 3 0	0 0 0 0
P_2 (12, 7)	0 0 0 0	1 1 0 1		1 1 0 1
P_3 (14, 3)	0 0 0 0	1 0 3 0		1 0 3 0

	Allocation	Max	Available	Need
	CPU A B C	CPU A B C	CPU A B C	CPU A B C
P_1 (10, 5)	1 2 1 1	1 2 1 1	1 0 0 0	0 0 0 0
P_2 (12, 7)	0 0 0 0	1 1 0 1		1 1 0 1
P_3 (14, 3)	1 0 3 0	1 0 3 0		0 0 0 0

Event List:

Start of Simulation (0)
Arrival of Process (1)
Start of Process Execution (2)
End of Process Execution (3)

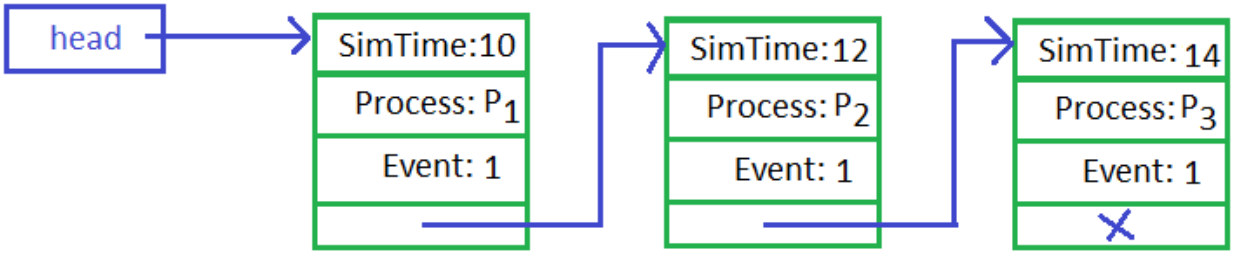
Simulation event list (after input are given)



Remove head element from the list and describe the system status as

```
?> Simulation time: 0
?> Simulation has been started.
?> No process is available.

New simulation event list
```



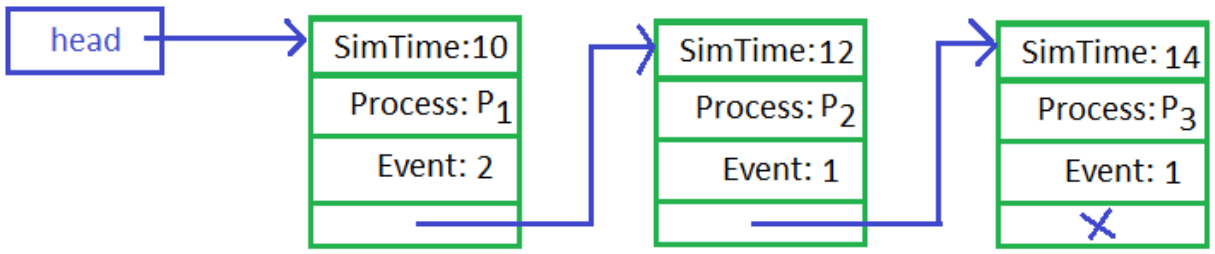
Remove head element from the list and describe the system status as

```
?> Simulation time: 10
?> Process P1 has just arrived at the system.
?> Process P1 has just started execution.
```

OR

```
?> Simulation time: 10
?> Process P1 has just arrived at the system.
```

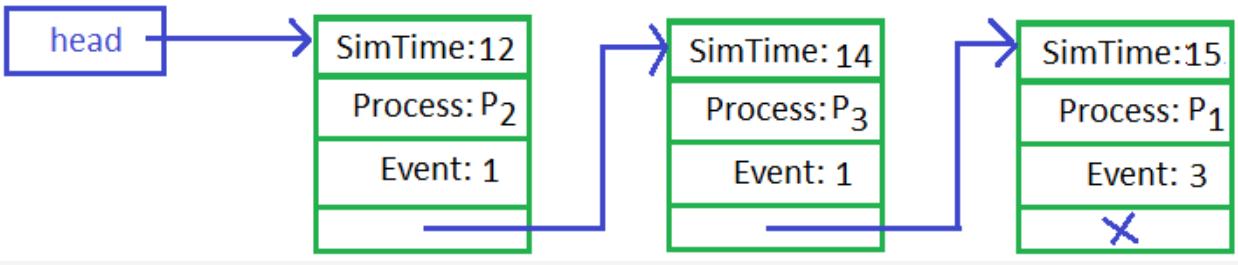
New simulation event list



Remove head element from the list and describe the system status as

```
?> Simulation time: 10
?> Process P1 has just started execution.
```

New simulation event list



Each time a process finishes execution, you need to check whether another process can start execution. When simulation event list becomes empty, simulation would end up.

You have also to maintain a separate list to store information about all available processes in the system in order to describe system status at the occurrence of every event.