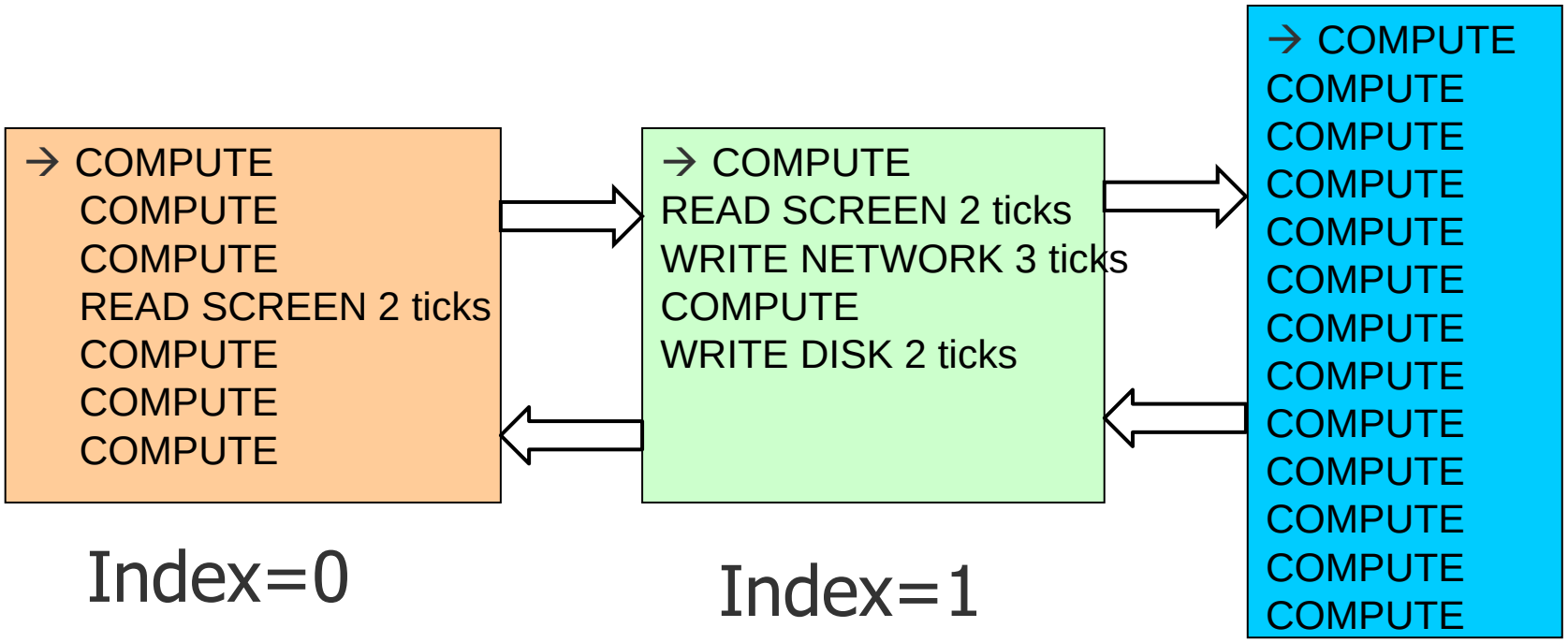
Process Scheduling Simulator

Process List



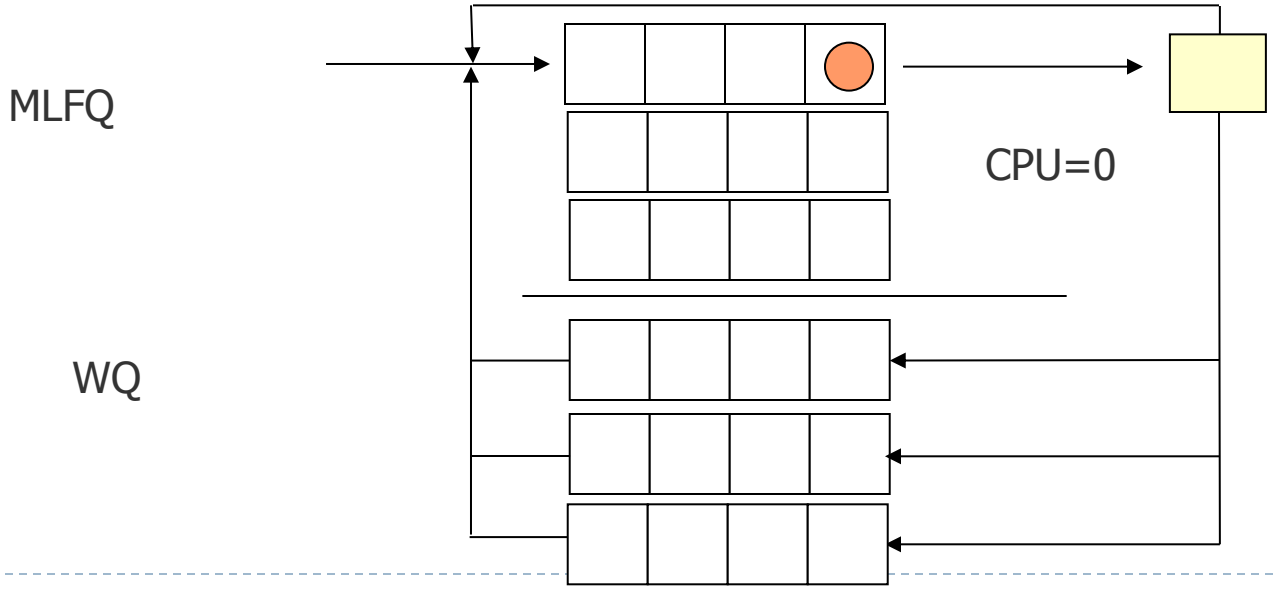
Read job.txt file & ProcessName files and Load processes in the Process List (doubly Linked List)

Process Scheduling Simulator

Global Time 0

Ready

→ COMPUTE
COMPUTE
COMPUTE
READ SCREEN 2
COMPUTE
COMPUTE
COMPUTE

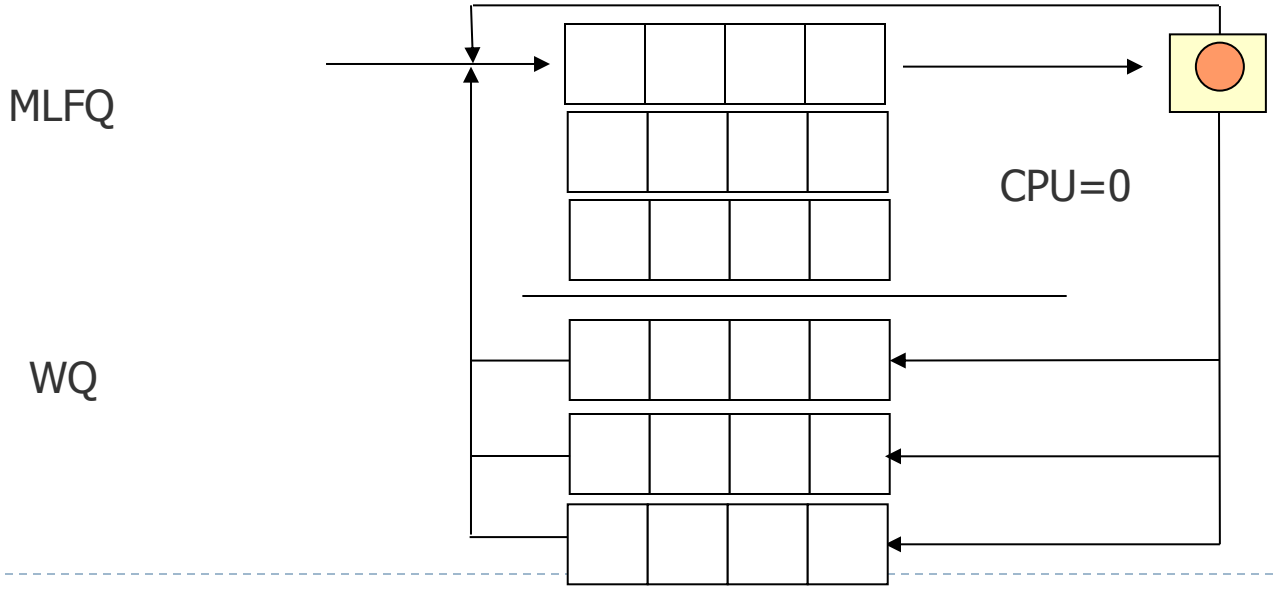


Process Scheduling Simulator

Global Time 0

Running

➔ COMPUTE
COMPUTE
COMPUTE
READ SCREEN 2
COMPUTE
COMPUTE
COMPUTE



Process Scheduling Simulator

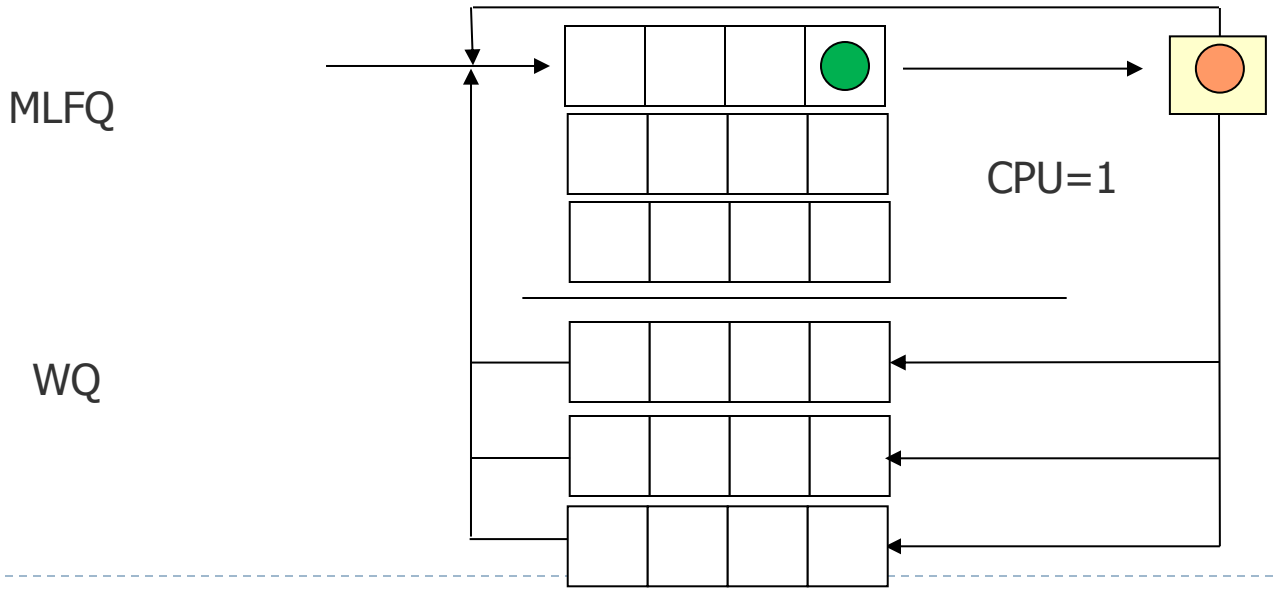
Global Time 1

Running

COMPUTE
➔ COMPUTE
COMPUTE
READ SCREEN 2
COMPUTE
COMPUTE
COMPUTE

Ready

→ COMPUTE
READ SCREEN 2
WRITE NETWORK 3
COMPUTE
WRITE DISK 2



Process Scheduling Simulator

Global Time 2

Running

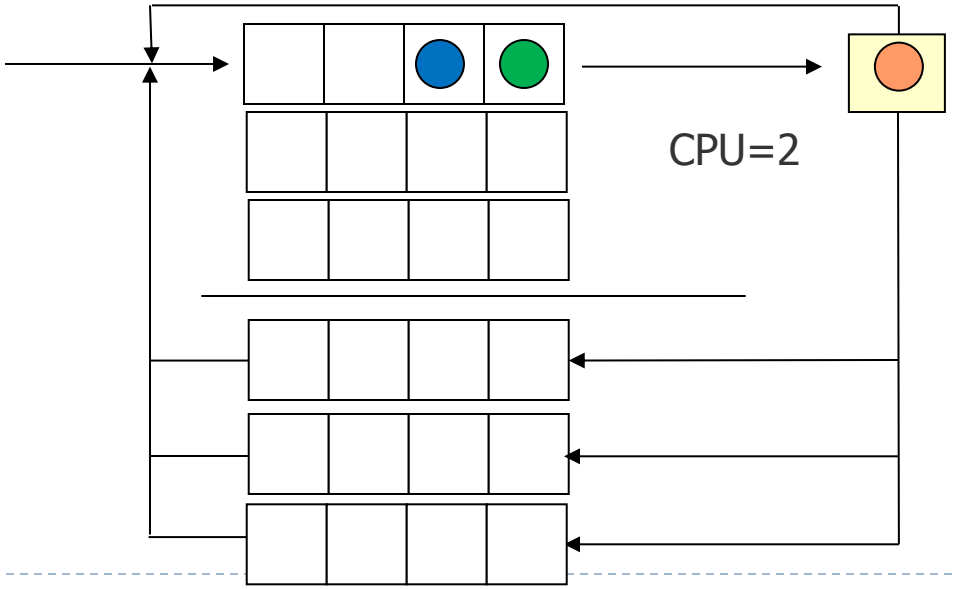
COMPUTE
COMPUTE
→ COMPUTE
READ SCREEN 2
COMPUTE
COMPUTE
COMPUTE

Ready

→ COMPUTE
READ SCREEN 2
WRITE NETWORK 3
COMPUTE
WRITE DISK 2

Ready

→ COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE



Process Scheduling Simulator

Global Time 3

Ready

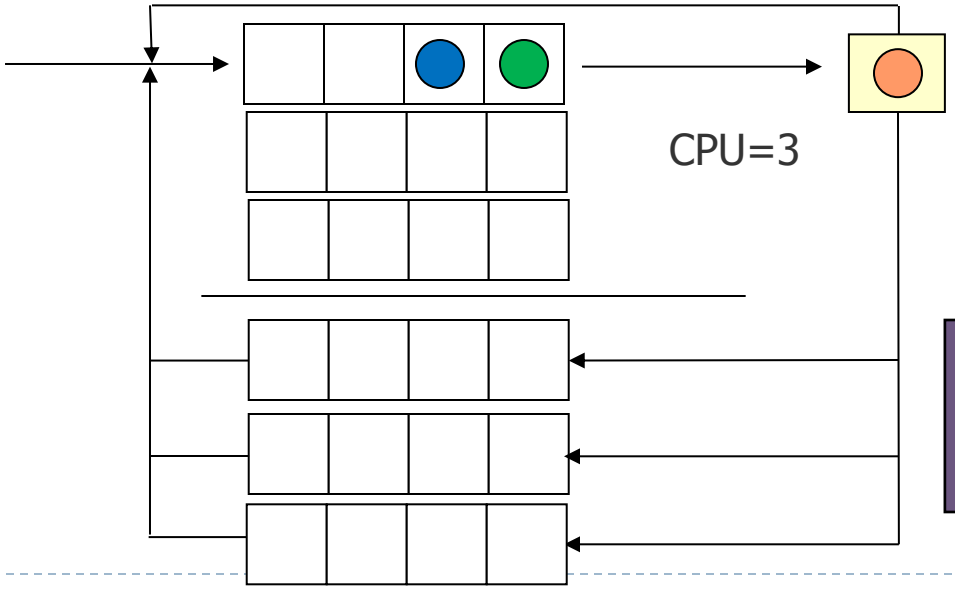
COMPUTE
COMPUTE
COMPUTE
→READ SCREEN 2
COMPUTE
COMPUTE
COMPUTE

Ready

→ COMPUTE
READ SCREEN 2
WRITE NETWORK 3
COMPUTE
WRITE DISK 2

Ready

→ COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE

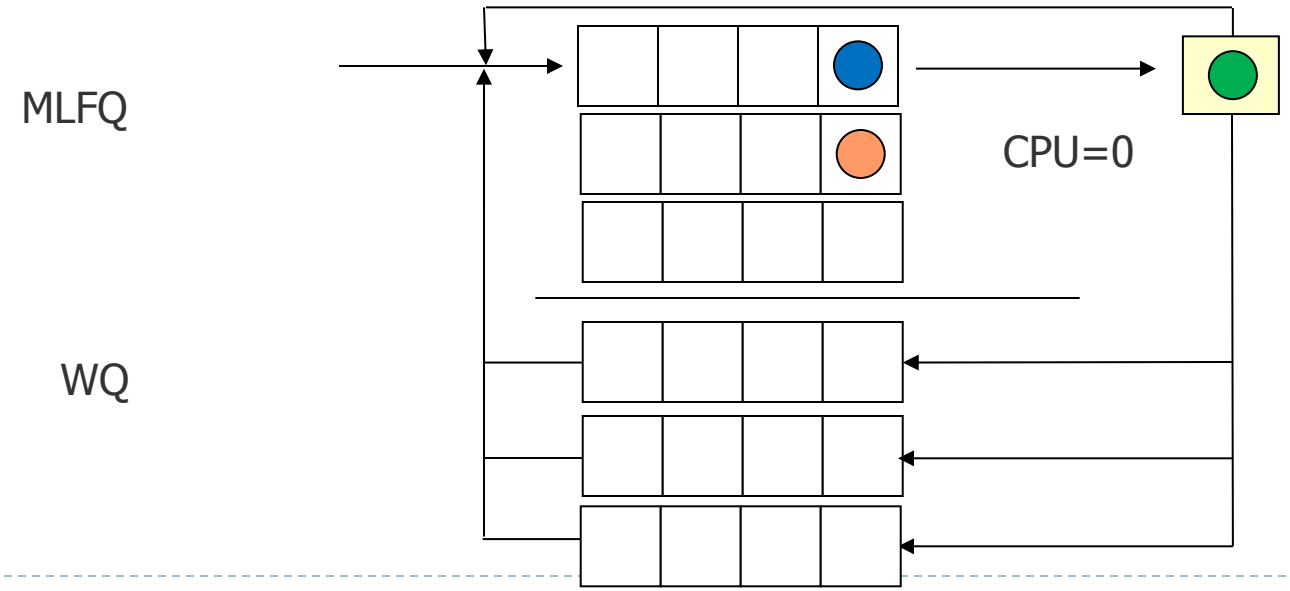


Timeout: CPU Cycle Completed

Process Scheduling Simulator

Global Time 3

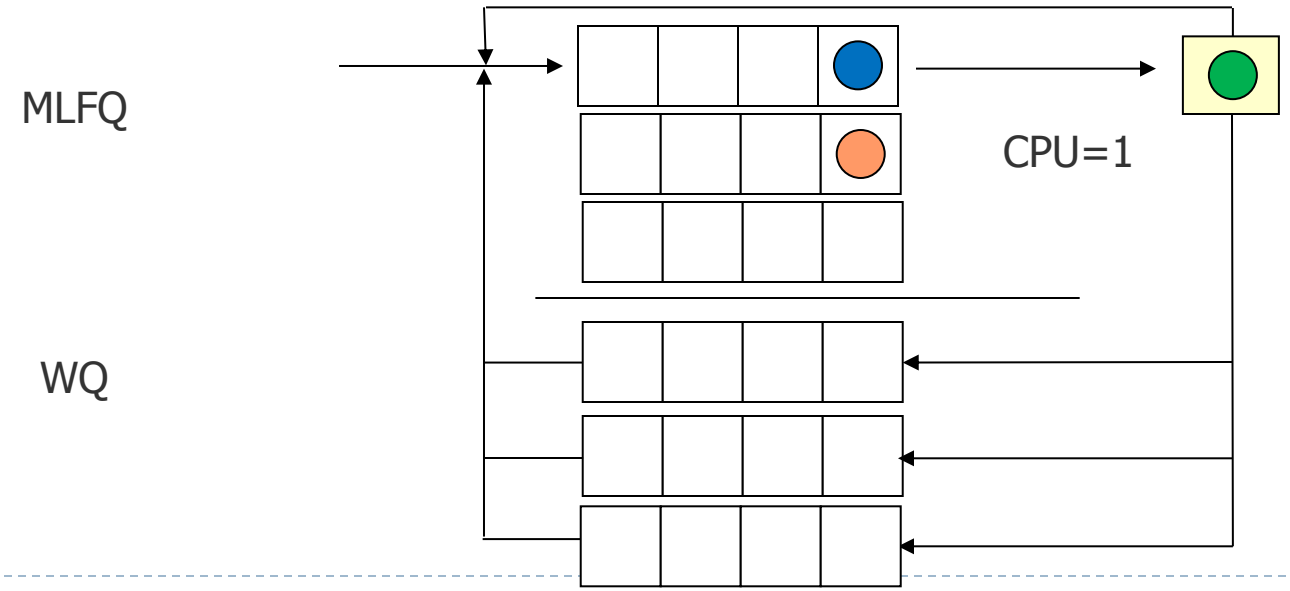
Ready	Running	Ready
COMPUTE COMPUTE COMPUTE →READ SCREEN 2 COMPUTE COMPUTE COMPUTE	→ COMPUTE READ SCREEN 2 WRITE NETWORK 3 COMPUTE WRITE DISK 2	→ COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE



Process Scheduling Simulator

Global Time 4

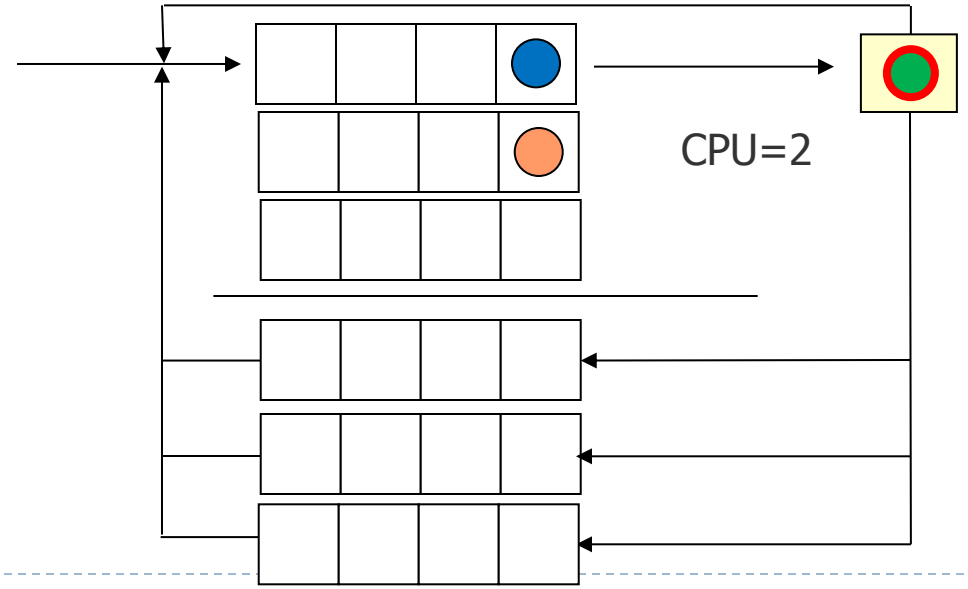
Ready	Running	Ready
COMPUTE COMPUTE COMPUTE →READ SCREEN 2 COMPUTE COMPUTE COMPUTE	COMPUTE ➔ READ SCREEN 2 WRITE NETWORK 3 COMPUTE WRITE DISK 2	→ COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE



Process Scheduling Simulator

Global Time 5

Ready	Waiting	Ready
COMPUTE COMPUTE COMPUTE →READ SCREEN 2 COMPUTE COMPUTE COMPUTE	COMPUTE ★ READ SCREEN 2 WRITE NETWORK 3 COMPUTE WRITE DISK 2	→ COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE



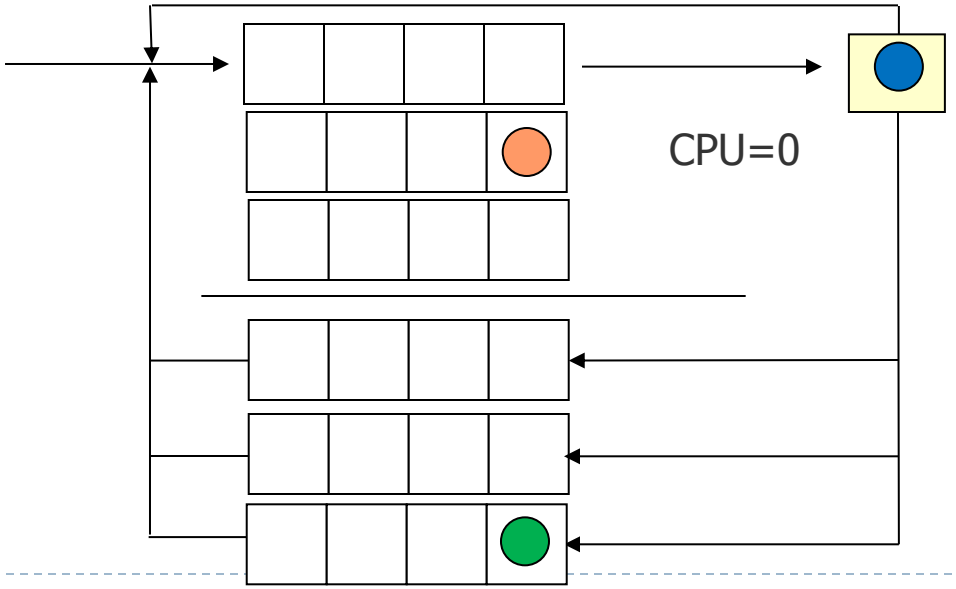
I/O

Process Scheduling Simulator

Global Time 5

Ready	Waiting	Running
COMPUTE COMPUTE COMPUTE →READ SCREEN 2 COMPUTE COMPUTE COMPUTE	COMPUTE ★ READ SCREEN 2 WRITE NETWORK 3 COMPUTE WRITE DISK 2	→ COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE

MLFQ



WQ

I/O=0

Process Scheduling Simulator

Global Time 6

Ready

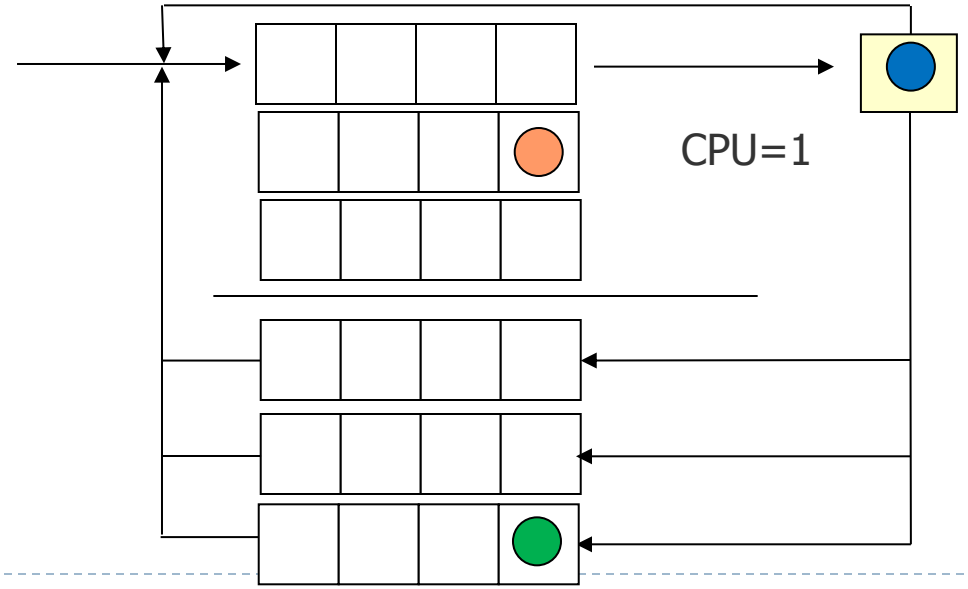
COMPUTE
COMPUTE
COMPUTE
→READ SCREEN 2
COMPUTE
COMPUTE
COMPUTE

Waiting

COMPUTE
★ READ SCREEN 2
WRITE NETWORK 3
COMPUTE
WRITE DISK 2

Running

COMPUTE
➔ COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE



I/O=1

Process Scheduling Simulator

Global Time 7

Ready

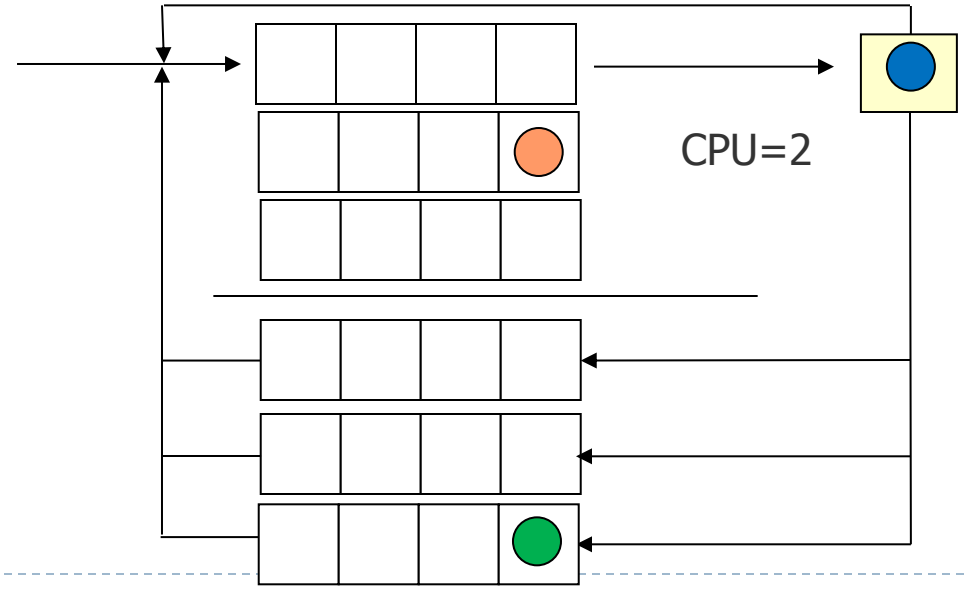
COMPUTE
COMPUTE
COMPUTE
→READ SCREEN 2
COMPUTE
COMPUTE
COMPUTE

Waiting

COMPUTE
★ READ SCREEN 2
WRITE NETWORK 3
COMPUTE
WRITE DISK 2

Running

COMPUTE
COMPUTE
➔ COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE



I/O=2

Process Scheduling Simulator

Global Time 7

Ready

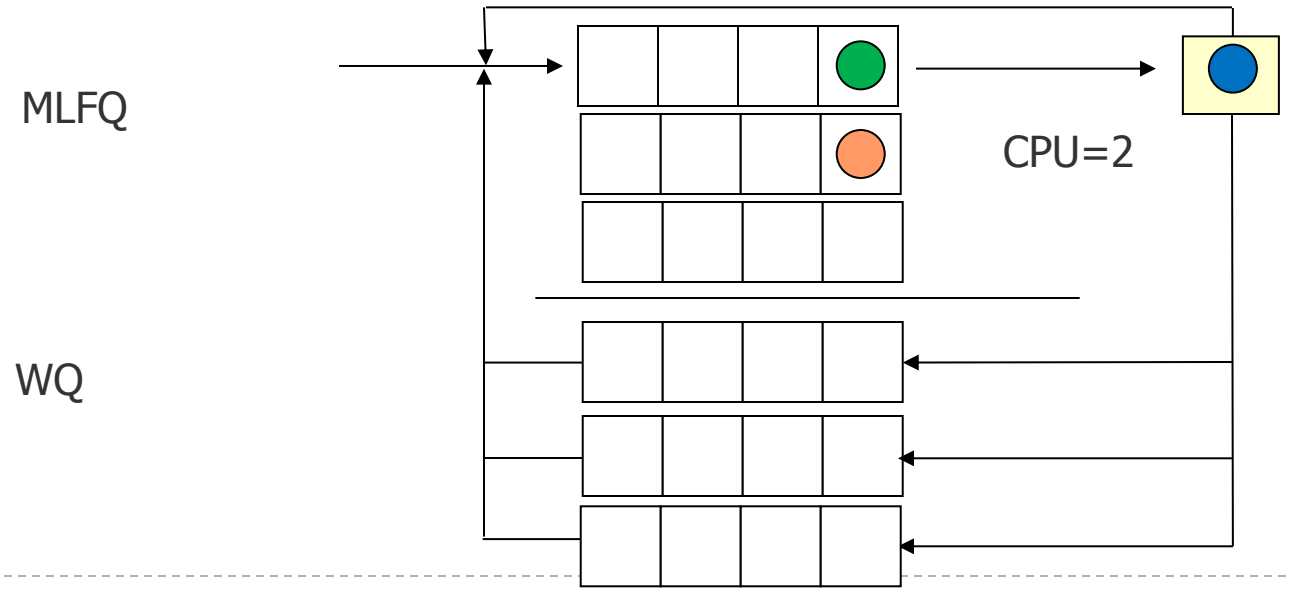
COMPUTE
COMPUTE
COMPUTE
→READ SCREEN 2
COMPUTE
COMPUTE
COMPUTE

Ready

COMPUTE
READ SCREEN 2
→ WRITE NETWORK 3
COMPUTE
WRITE DISK 2

Running

COMPUTE
COMPUTE
➔ COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE



Process Scheduling Simulator

Global Time 8

Ready

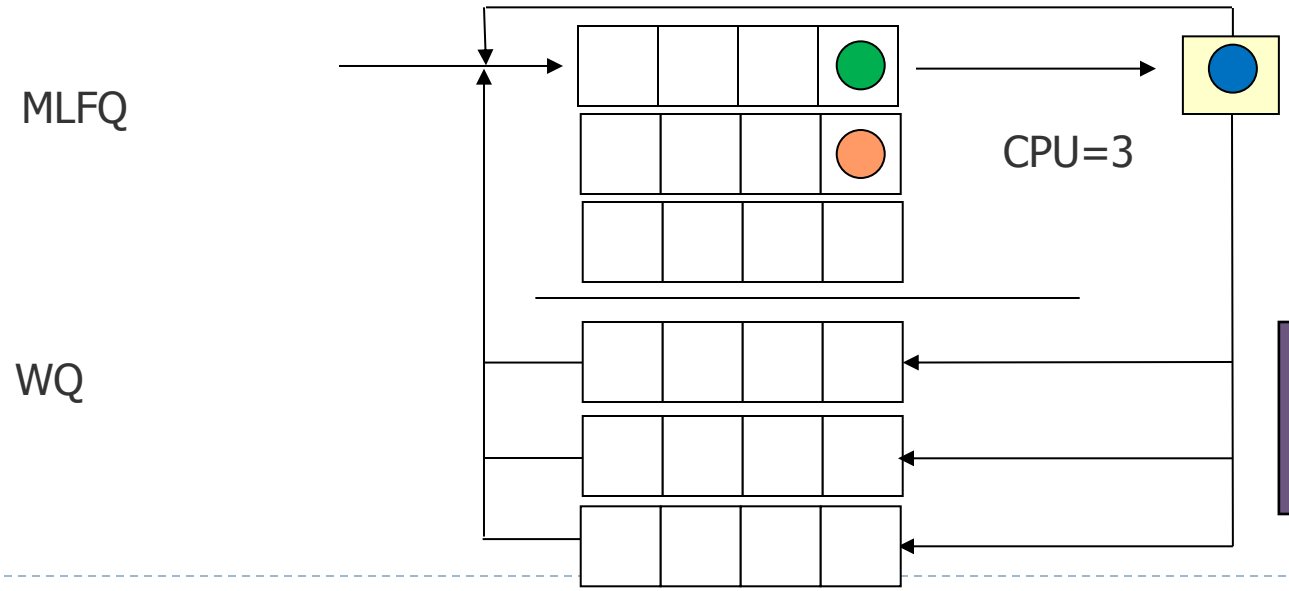
COMPUTE
COMPUTE
COMPUTE
→READ SCREEN 2
COMPUTE
COMPUTE
COMPUTE

Ready

COMPUTE
READ SCREEN 2
→ WRITE NETWORK 3
COMPUTE
WRITE DISK 2

Ready

COMPUTE
COMPUTE
COMPUTE
→ COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE

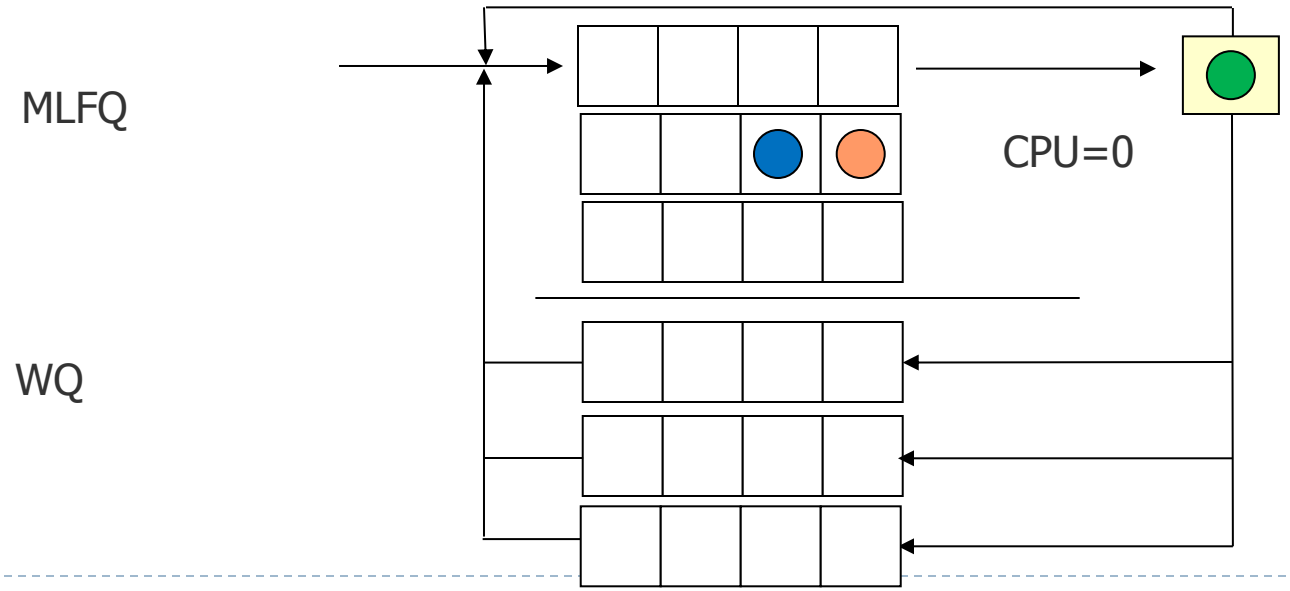


Timeout: CPU Cycle Completed

Process Scheduling Simulator

Global Time 8

Ready	Running	Ready
COMPUTE COMPUTE COMPUTE →READ SCREEN 2 COMPUTE COMPUTE COMPUTE	COMPUTE READ SCREEN 2 ➔ WRITE NETWORK 3 COMPUTE WRITE DISK 2	COMPUTE COMPUTE COMPUTE → COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE



Process Scheduling Simulator

Global Time 9

Ready

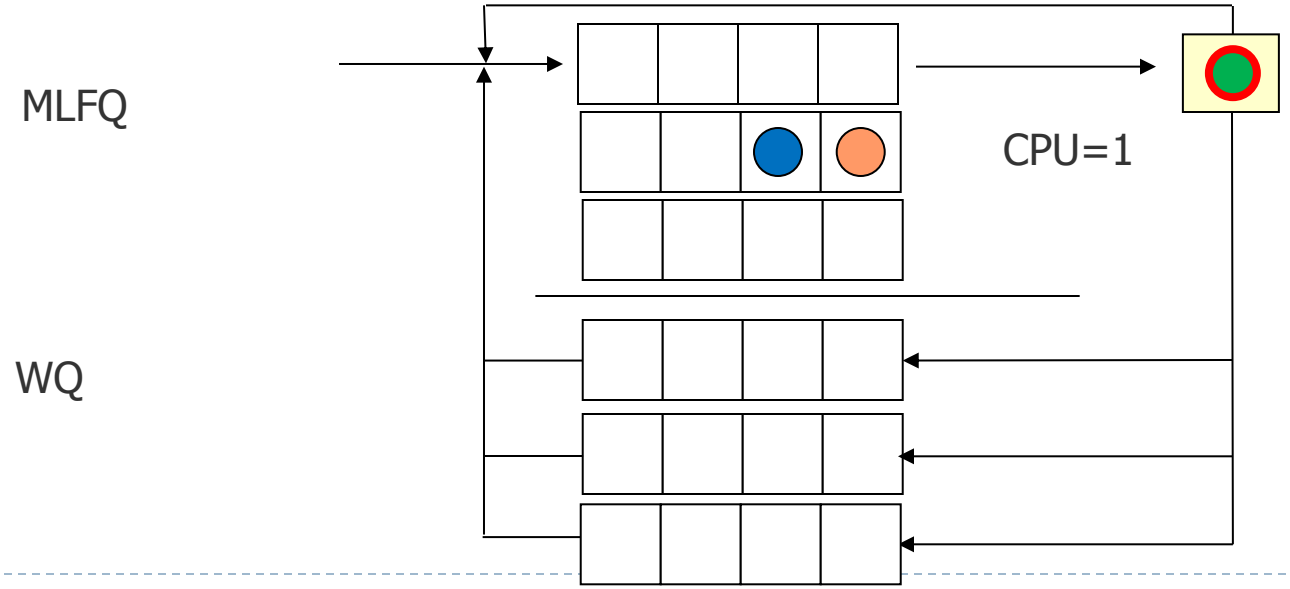
COMPUTE
COMPUTE
COMPUTE
→READ SCREEN 2
COMPUTE
COMPUTE
COMPUTE

Waiting

COMPUTE
READ SCREEN 2
★ WRITE NETWORK 3
COMPUTE
WRITE DISK 2

Ready

COMPUTE
COMPUTE
COMPUTE
→ COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE



I/O

Process Scheduling Simulator

Global Time 9

Running

COMPUTE
COMPUTE
COMPUTE
➔ READ SCREEN 2
COMPUTE
COMPUTE
COMPUTE

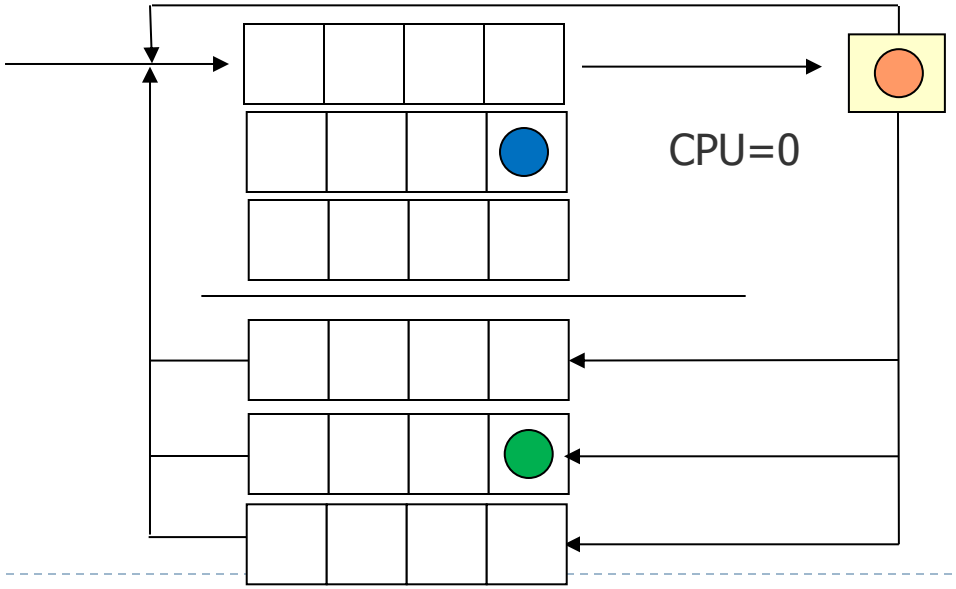
Waiting

COMPUTE
READ SCREEN 2
★ WRITE NETWORK 3
COMPUTE
WRITE DISK 2

Ready

COMPUTE
COMPUTE
COMPUTE
→ COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE

MLFQ



WQ

I/O=0

Process Scheduling Simulator

Global Time 10

Waiting

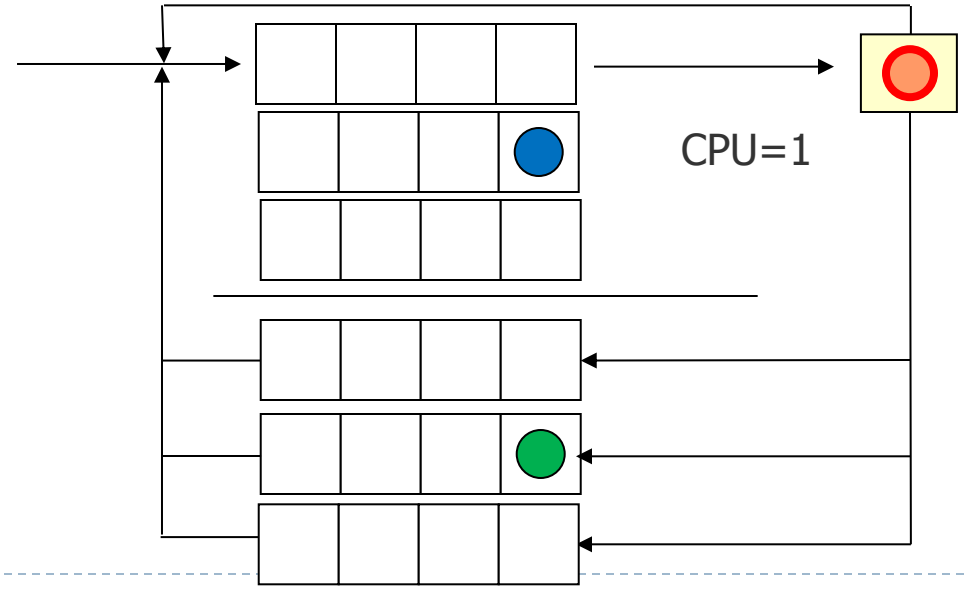
COMPUTE
COMPUTE
COMPUTE
★ READ SCREEN 2
COMPUTE
COMPUTE
COMPUTE

Waiting

COMPUTE
READ SCREEN 2
★ WRITE NETWORK 3
COMPUTE
WRITE DISK 2

Ready

COMPUTE
COMPUTE
COMPUTE
→ COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE

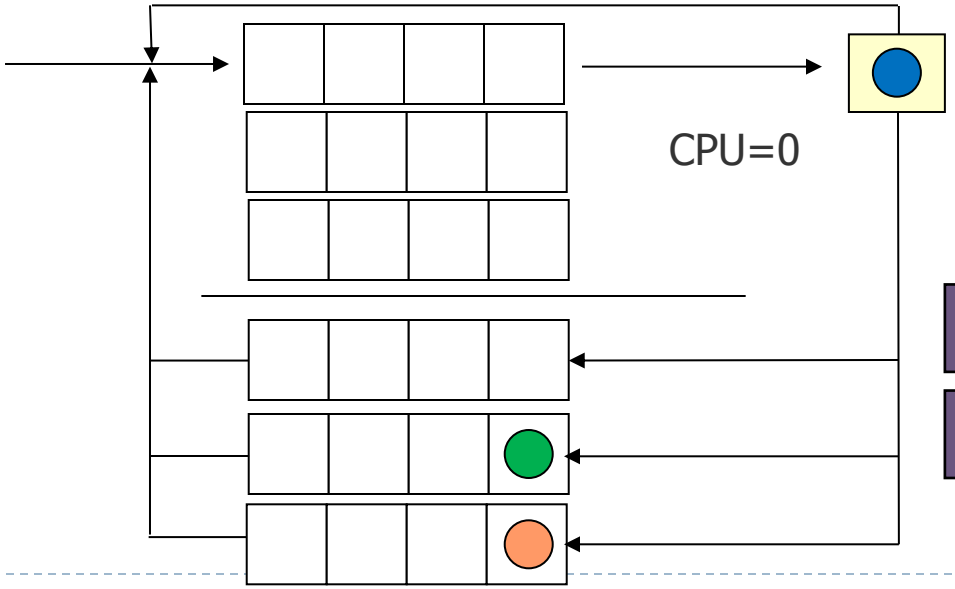


I/O=1

Process Scheduling Simulator

Global Time 10

Waiting	Waiting	Running
COMPUTE COMPUTE COMPUTE ★ READ SCREEN 2 COMPUTE COMPUTE COMPUTE	COMPUTE READ SCREEN 2 ★ WRITE NETWORK 3 COMPUTE WRITE DISK 2	COMPUTE COMPUTE COMPUTE ➔ COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE



Network I/O=1

Device I/O=0

Process Scheduling Simulator

Global Time 11

Waiting

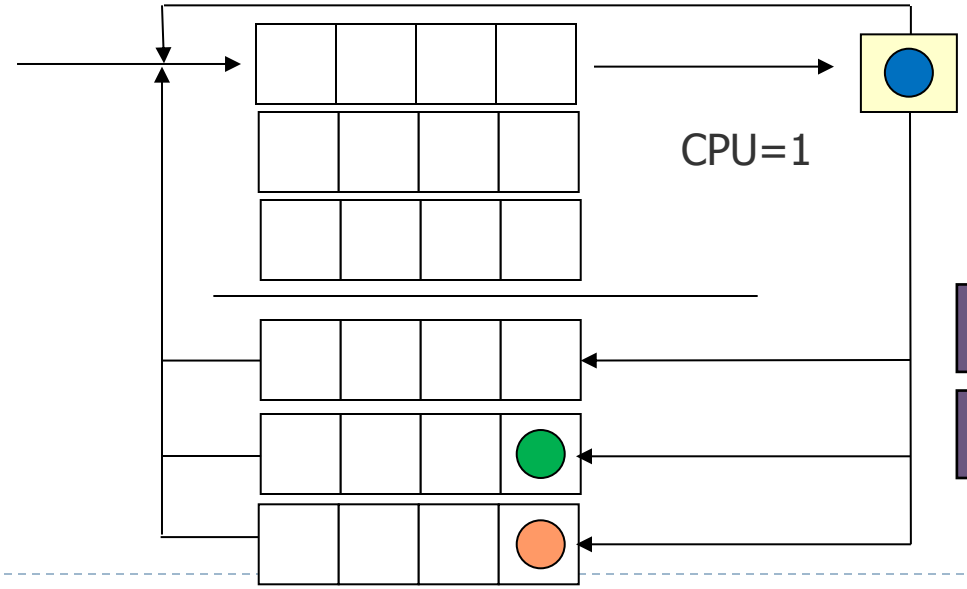
COMPUTE
COMPUTE
COMPUTE
★ READ SCREEN 2
COMPUTE
COMPUTE
COMPUTE

Waiting

COMPUTE
READ SCREEN 2
★ WRITE NETWORK 3
COMPUTE
WRITE DISK 2

Running

COMPUTE
COMPUTE
COMPUTE
COMPUTE
➔ COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE



Network I/O=2

Device I/O=1

Process Scheduling Simulator

Global Time 12

Waiting

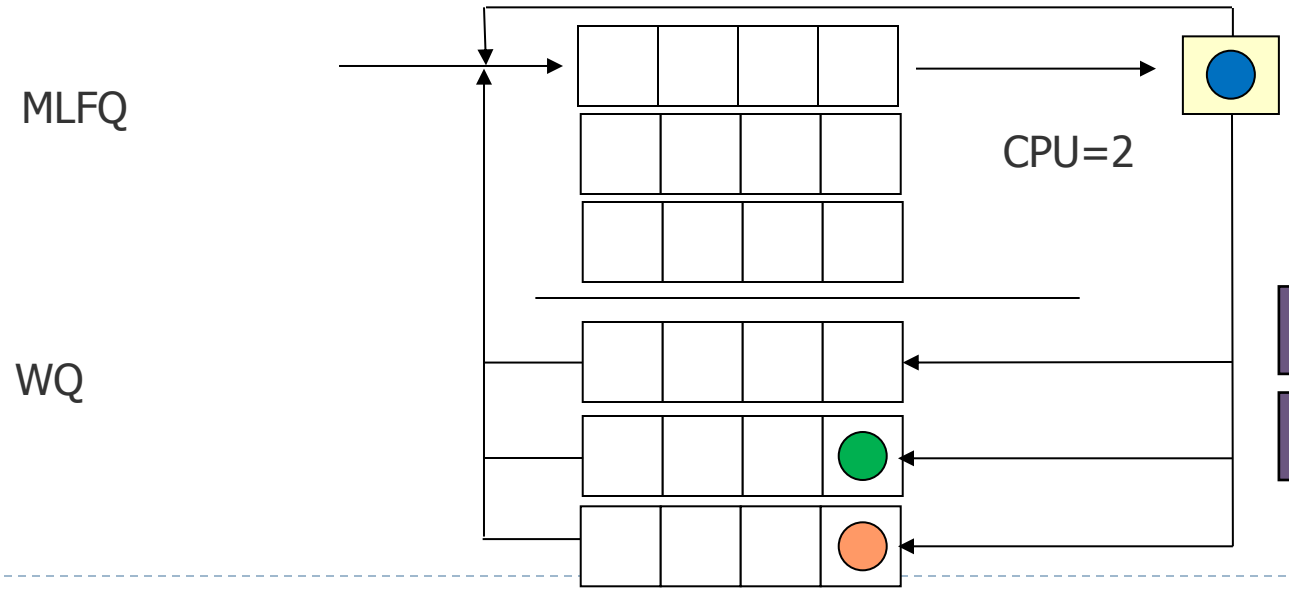
COMPUTE
COMPUTE
COMPUTE
★ READ SCREEN 2
COMPUTE
COMPUTE
COMPUTE

Waiting

COMPUTE
READ SCREEN 2
★ WRITE NETWORK 3
COMPUTE
WRITE DISK 2

Running

COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
➔ COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE



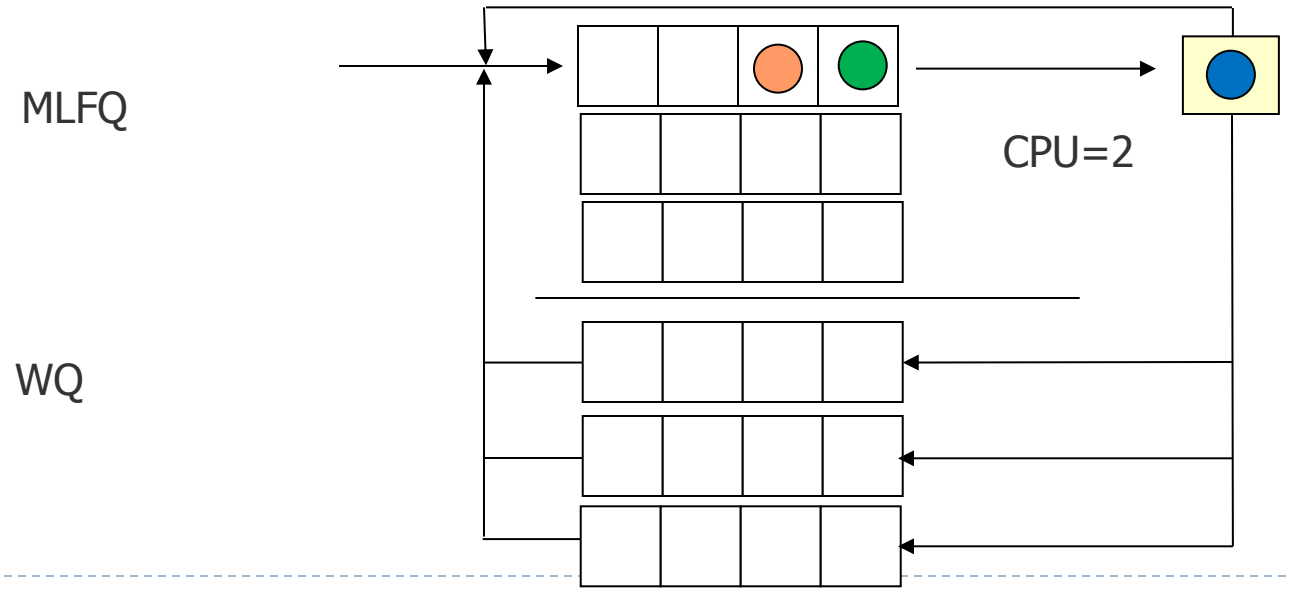
Network I/O=3

Device I/O=2

Process Scheduling Simulator

Global Time 12

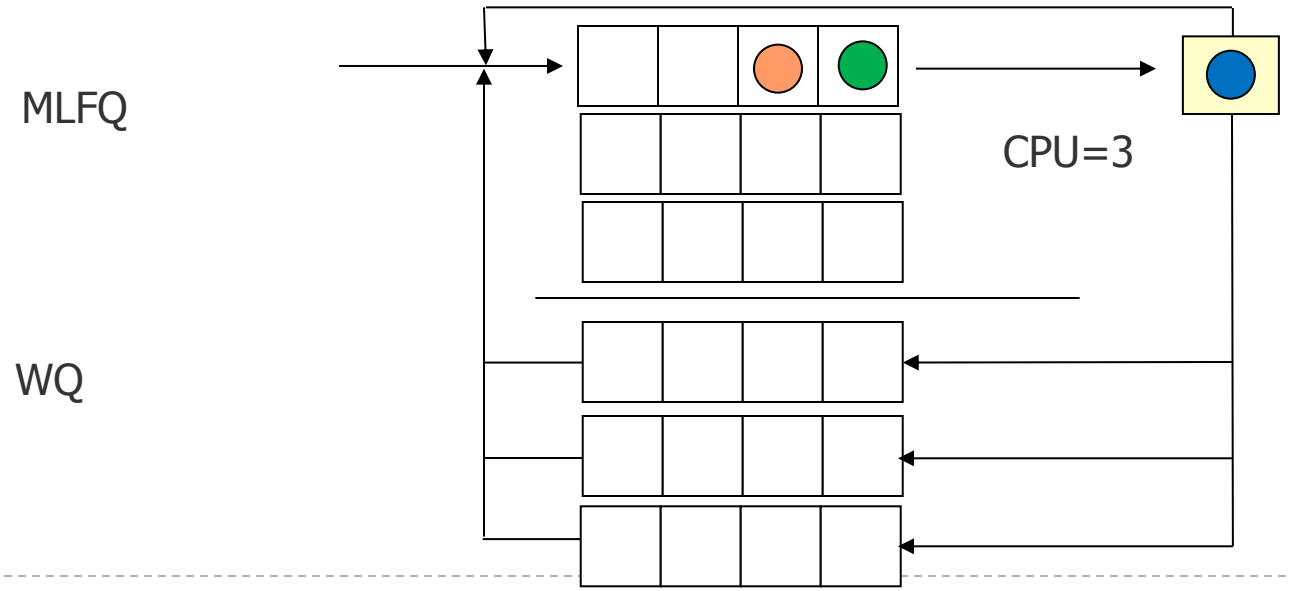
Ready	Ready	Running
COMPUTE COMPUTE COMPUTE READ SCREEN 2 → COMPUTE COMPUTE COMPUTE	COMPUTE READ SCREEN 2 WRITE NETWORK 3 → COMPUTE WRITE DISK 2	COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE ➔ COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE



Process Scheduling Simulator

Global Time 13

Ready	Ready	Running
COMPUTE COMPUTE COMPUTE READ SCREEN 2 → COMPUTE COMPUTE COMPUTE	COMPUTE READ SCREEN 2 WRITE NETWORK 3 → COMPUTE WRITE DISK 2	COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE ➔ COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE



Process Scheduling Simulator

Global Time 14

Ready

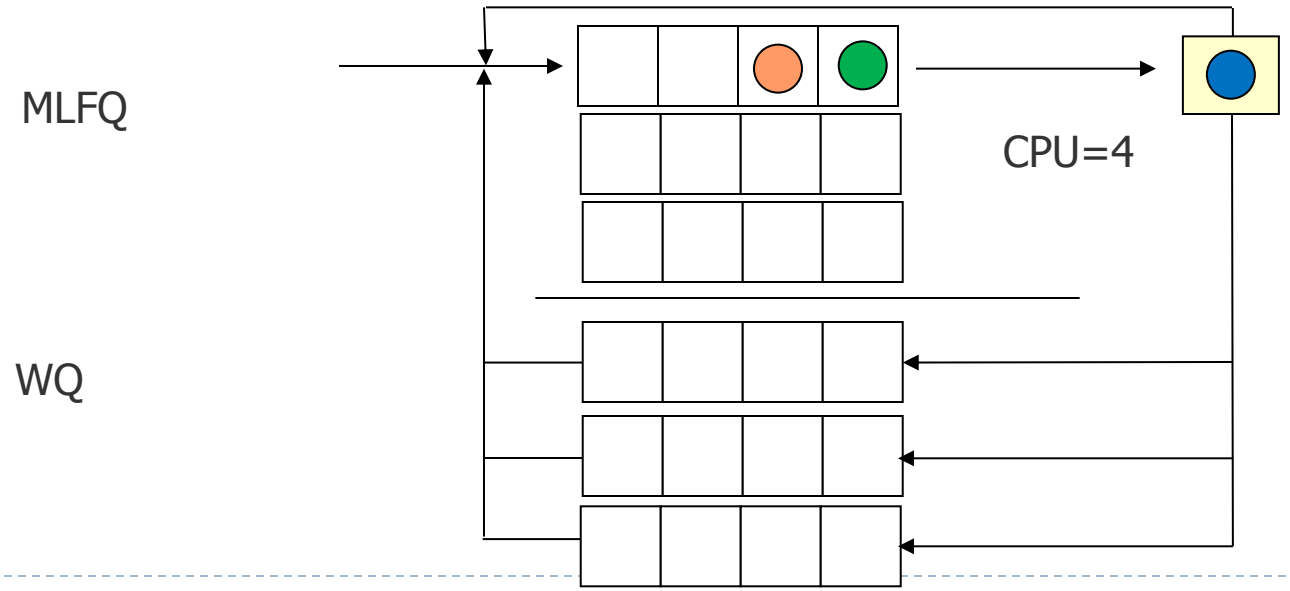
COMPUTE
COMPUTE
COMPUTE
READ SCREEN 2
→ COMPUTE
COMPUTE
COMPUTE

Ready

COMPUTE
READ SCREEN 2
WRITE NETWORK 3
→ COMPUTE
WRITE DISK 2

Running

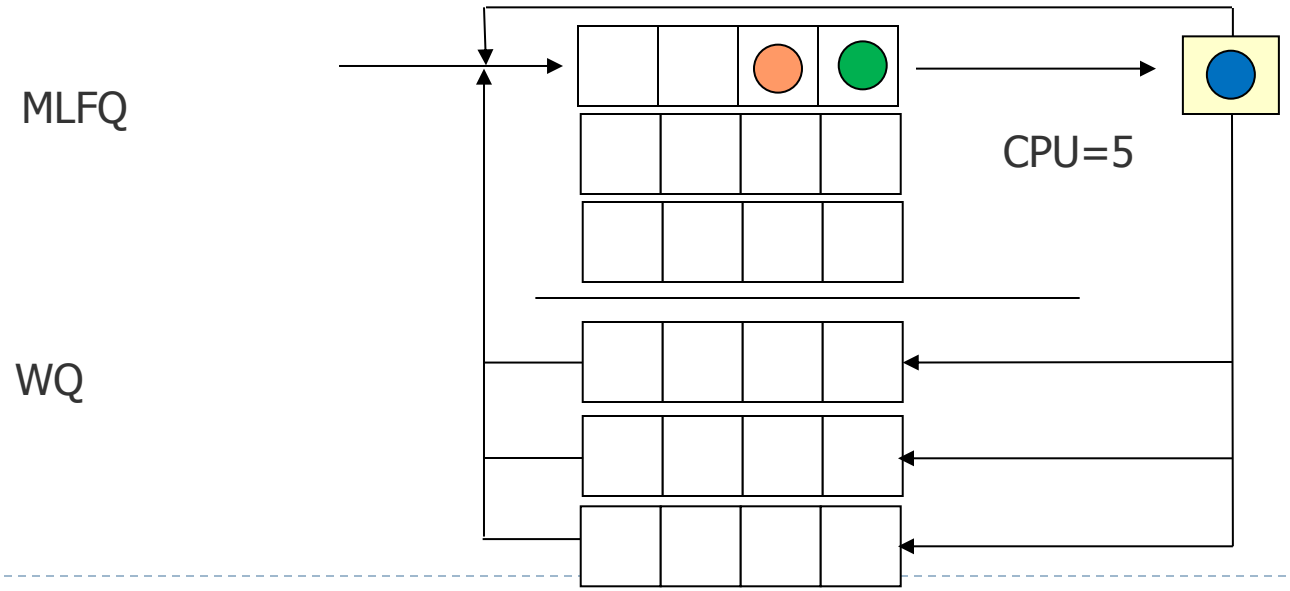
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
➔ COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE
COMPUTE



Process Scheduling Simulator

Global Time 15

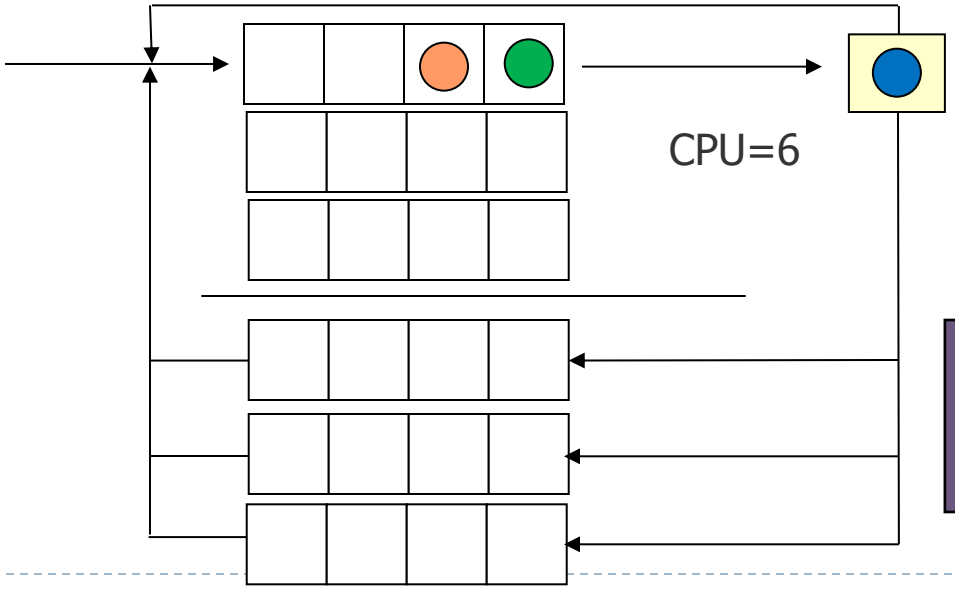
Ready	Ready	Running
COMPUTE COMPUTE COMPUTE READ SCREEN 2 → COMPUTE COMPUTE COMPUTE	COMPUTE READ SCREEN 2 WRITE NETWORK 3 → COMPUTE WRITE DISK 2	COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE ➔ COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE



Process Scheduling Simulator

Global Time 16

Ready	Ready	Running
COMPUTE COMPUTE COMPUTE → READ SCREEN 2 COMPUTE COMPUTE COMPUTE	COMPUTE READ SCREEN 2 WRITE NETWORK 3 ➔ COMPUTE WRITE DISK 2	COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE → COMPUTE COMPUTE COMPUTE COMPUTE

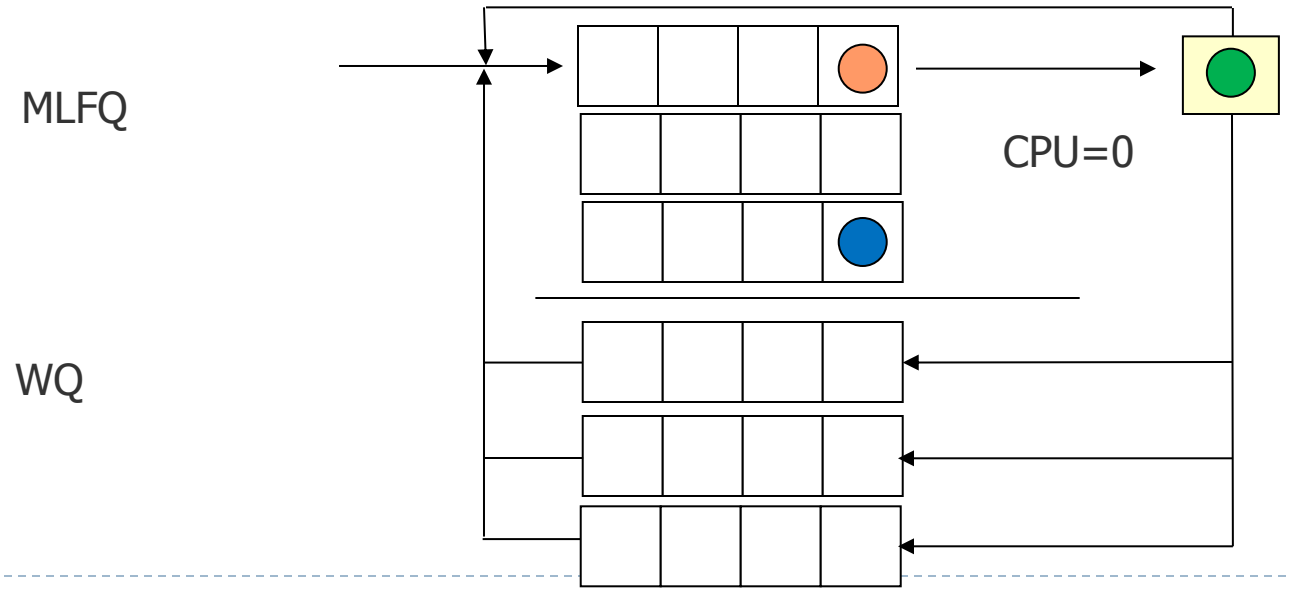


Timeout: CPU Cycle Completed

Process Scheduling Simulator

Global Time 16

Ready	Running	Ready
COMPUTE COMPUTE COMPUTE → READ SCREEN 2 COMPUTE COMPUTE COMPUTE	COMPUTE READ SCREEN 2 WRITE NETWORK 3 ➔ COMPUTE WRITE DISK 2	COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE COMPUTE → COMPUTE COMPUTE COMPUTE COMPUTE



Process Scheduling Simulator

And they run happily ever after till every process has executed all their instructions and terminate!