

Compiling:

(upload all the input files, random-numbers.txt, and Scheduling.java onto cims server)

```
javac Scheduling.java
```

Running:

```
java Scheduling input-1
```

```
java Scheduling --verbose input-1 //double hyphens before verbose to  
run the detailed input for every scheduling algorithms
```

Here is one sample input and output:

```
java Scheduling input-1
```

The original input was: 1 0 1 5 1

The (sorted) input is: 1 0 1 5 1

The scheduling algorithm used was First Come First Serve

Process 0:

(A,B,C,I0) = (0,1,5,1)

Finishing time: 9

Turnaround time: 9

I/O time: 4

Waiting time: 0

Summary Data:

Finishing time: 9

CPU Utilization: 0.555556

I/O Utilization: 0.444444

Throughput: 11.111111 processes per hundred cycles

Average turnaround time: 9.000000

Average waiting time: 0.000000

The scheduling algorithm used was Round Robin

Process 0:

(A,B,C,I0) = (0,1,5,1)

Finishing time: 9

Turnaround time: 9

I/O time: 4

Waiting time: 0

Summary Data:

Finishing time: 9

CPU Utilization: 0.555556

I/O Utilization: 0.444444
Throughput: 11.111111 processes per hundred cycles
Average turnaround time: 9.000000
Average waiting time: 0.000000

The scheduling algorithm used was Uniprocesser

Process 0:
(A,B,C,I0) = (0,1,5,1)
Finishing time: 9
Turnaround time: 9
I/O time: 4
Waiting time: 0

Summary Data:
Finishing time: 9
CPU Utilization: 0.555556
I/O Utilization: 0.444444
Throughput: 11.111111 processes per hundred cycles
Average turnaround time: 9.000000
Average waiting time: 0.000000

The scheduling algorithm used was Shortest Job First

Process 0:
(A,B,C,I0) = (0,1,5,1)
Finishing time: 9
Turnaround time: 9
I/O time: 4
Waiting time: 0

Summary Data:
Finishing time: 9
CPU Utilization: 0.555556
I/O Utilization: 0.444444
Throughput: 11.111111 processes per hundred cycles
Average turnaround time: 9.000000
Average waiting time: 0.000000

java Scheduling --verbose input-1

The original input was: 1 0 1 5 1
The (sorted) input is: 1 0 1 5 1

The scheduling algorithm used was First Come First Serve

This detailed printout gives the state and remaining burst for each process

Before cycle	0:	unstarted	0.
Before cycle	1:	running	1.
Before cycle	2:	blocked	1.
Before cycle	3:	running	1.
Before cycle	4:	blocked	1.
Before cycle	5:	running	1.
Before cycle	6:	blocked	1.
Before cycle	7:	running	1.
Before cycle	8:	blocked	1.
Before cycle	9:	running	1.

The scheduling algorithm used was First Come First Serve

Process 0:

(A,B,C,I/O) = (0,1,5,1)
Finishing time: 9
Turnaround time: 9
I/O time: 4
Waiting time: 0

Summary Data:

Finishing time: 9
CPU Utilization: 0.555556
I/O Utilization: 0.444444
Throughput: 11.111111 processes per hundred cycles
Average turnaround time: 9.000000
Average waiting time: 0.000000

The scheduling algorithm used was Round Robin

This detailed printout gives the state and remaining burst for each process

Before cycle	0:	unstarted	0.
Before cycle	1:	running	1.
Before cycle	2:	blocked	1.
Before cycle	3:	running	1.
Before cycle	4:	blocked	1.
Before cycle	5:	running	1.
Before cycle	6:	blocked	1.
Before cycle	7:	running	1.
Before cycle	8:	blocked	1.
Before cycle	9:	running	1.

The scheduling algorithm used was Round Robin

Process 0:

(A,B,C,I0) = (0,1,5,1)
Finishing time: 9
Turnaround time: 9
I/O time: 4
Waiting time: 0

Summary Data:

Finishing time: 9
CPU Utilization: 0.555556
I/O Utilization: 0.444444
Throughput: 11.111111 processes per hundred cycles
Average turnaround time: 9.000000
Average waiting time: 0.000000

The scheduling algorithm used was Uniprocesser

This detailed printout gives the state and remaining burst for each process

Before cycle	0:	unstarted	0.
Before cycle	1:	running	1.
Before cycle	2:	blocked	1.
Before cycle	3:	running	1.
Before cycle	4:	blocked	1.
Before cycle	5:	running	1.
Before cycle	6:	blocked	1.
Before cycle	7:	running	1.
Before cycle	8:	blocked	1.
Before cycle	9:	running	1.

The scheduling algorithm used was Uniprocessor

Process 0:

(A,B,C,I0) = (0,1,5,1)
Finishing time: 9
Turnaround time: 9
I/O time: 4
Waiting time: 0

Summary Data:

Finishing time: 9
CPU Utilization: 0.555556
I/O Utilization: 0.444444
Throughput: 11.111111 processes per hundred cycles
Average turnaround time: 9.000000
Average waiting time: 0.000000

The scheduling algorithm used was Shortest Job First

This detailed printout gives the state and remaining burst for each process

Before cycle	0:	unstarted	0.
Before cycle	1:	running	1.
Before cycle	2:	blocked	1.
Before cycle	3:	running	1.
Before cycle	4:	blocked	1.
Before cycle	5:	running	1.
Before cycle	6:	blocked	1.
Before cycle	7:	running	1.
Before cycle	8:	blocked	1.
Before cycle	9:	running	1.

The scheduling algorithm used was Shortest Job First

Process 0:

(A,B,C,I0) = (0,1,5,1)

Finishing time: 9

Turnaround time: 9

I/O time: 4

Waiting time: 0

Summary Data:

Finishing time: 9

CPU Utilization: 0.555556

I/O Utilization: 0.444444

Throughput: 11.111111 processes per hundred cycles

Average turnaround time: 9.000000

Average waiting time: 0.000000