Ex. No.: 6a)
Date: 22/2/25

FIRST COME FIRST SERVE

Aim:

To implement First-come First- serve (FCFS) scheduling technique

Algorithm:

1. Get the number of processes from the user.
2. Read the process name and burst time.
3. Calculate the total process time.
4. Calculate the total waiting time and total turnaround time for each process 5. Display the process name & burst time for each process. 6. Display the total waiting time, average waiting time, turnaround time

Program Code:

```
import array
num = int(input("Enter no process: "))
p = array.array('i', range(num))
bt = array.array('i', map(int, input("Enter the burst time of process: ").split()))

n = len(p)
at = array.array('i', [0]*n)
wt = array.array('i', [0]*n)
tat = array.array('i', [0]*n)
at = array.array('i', [0]*n)
for i in range(n):
    ct[i] = ct[i-1] + bt[i]
```

```
for i in range(n):
        tat[i] = ct[i] - at[i]
for i in range(n):
        wt[i] = tat[i] - bt[i]

avg_wt = sum(wt)/n
avg_tat = sum(tat)/n
Print("process \t Burst time \t arrival time \t
completion time \t waiting \t Turnaround time")

for i in range(n):
        print(f"{p[i]} \t {bt[i]} \t {at[i]}
\t \t {ct[i]} \t {wt[i]} \t {tat[i]}")

Print(f"\n Average waiting time : {avg_wt:}")
print(f"Average turnaround time = {avg_tat:}")
```

Output :

Enter no of process : 3

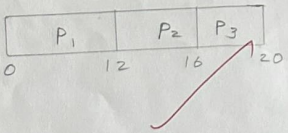
Enter burst time of process : 12 4 4

Process	Burst time (ms)	Arrival time (ms)	Completion time (ms)	Waiting time (ms)	Turnaround time (ms)
0	12	0	12	0	12
1	4	0	16	12	16
2	4	0	20	16	20

Average waiting time = 9.3 ms

Average turnaround time = 16 ms

The gantt chart for the schedule is



Sample Output:

Enter the number of process:

3

Enter the burst time of the processes:

24 3 3

Process	Burst Time	Waiting Time	Turn Around Time
0	24	0	24
1	3	24	27
2	3	27	30

Average waiting time is: 17.0

Average Turn around Time is: 19.0

Result:

Thus the program for first serve algorithm has been studied successfully