

Ex. No.: 6a)

Date: 26-02-25

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:

```
#include <stdio.h>
```

```
int main()
```

```
{
```

```
    int n;
```

```
    printf ("Enter the no of process");
```

```
    scanf ("%d", &n);
```

```
    int burst[n];
```

```
    printf ("Enter the burst time of process");
```

```
    for (int i = 0; i < n; i++)
```

```
        scanf ("%d", &burst[i]);
```

```
    printf ("Process    burst time    waiting time  
turn time \n");
```

```

int wt = 0, tat = burst[0]
float avg-wt = 0, avg-tat = 0;
for (int i = 0; i < n; i++)
{
    printf ("%d    %d    %d    %d\n", i,
            burst[i], wt, tat);
    avg-wt += wt;
    avg-tat += tat;
    wt = wt + burst[i];
    tat = burst[i+1] + wt;
}

avg-wt = avg-wt / n;
avg-tat = avg-tat / n;
printf ("Average waiting time is %..lf\n", avg-wt);
printf ("Average turn around time is %..lf",
        avg-tat);
}

```

Output:

Enter no of process : 3

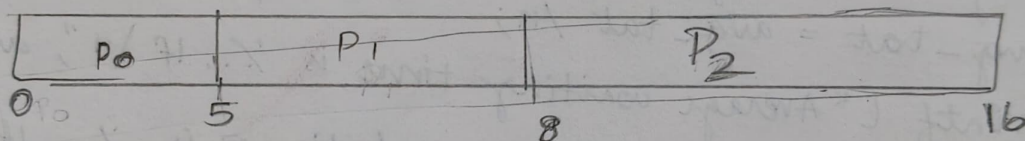
Enter the burst time of the process : 5 3 8

Process	Burst time	Waiting	Turn around time
0	5	0	5
1	3	5	8
2	8	8	16

Average waiting time is 4.3

Average turn around time is 9.7

Gantt chart:



Process	Arrival time	Burst time (ms)	Completion time (ms)	Waiting time TAT - BT (ms)	Turn around time CF - AT (ms)
P ₁	0	5	5	0	5
P ₂	0	3	8	5	8
P ₃	0	8	16	8	16

$$\text{Average waiting time} = \frac{0+5+8}{3} = 4.3$$

$$\text{Average Turn Around time} = \frac{5+8+16}{3} = 9.7$$

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:

The program for CPU scheduling, using first come first serve has been executed successfully and output has been verified.