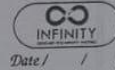


25/10/23

Lab 1



FCFS

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

```
int waitingtime (int proc[], int n, int burst_time[],
int wait_time[])
```

```
{
    wait_time[0] = 0;
    for (int i = 1; i < n; i++)
        wait_time[i] = burst_time[i-1] + wait_time[i-1];
}
```

```
int turn_around_time (int proc[], int n, int burst_time[],
int wait_time[], int tat[]){
```

```
for (int i = 0; i < n; i++)
    tat[i] = burst_time[i] + wait_time[i];
}
```

```
int avg_time (int proc[], int n, int burst_time[])
```

```
int wait_time[n], tat[n], total_wt = 0, total_tat = 0;
```

```
{
    waitingtime(proc, n, burst_time, wait_time);
    turn_around_time(proc, n, burst_time, wait_time, tat);
    printf("Process\tBurstTime\tWaitingTime\tTurnaround\nTime\n");
```

```
for (int i = 0; i < n; i++){
    total_wt = total_wt + wait_time[i];
    total_tat = total_tat + tat[i];
    printf("%d\t\t%d\t\t%d\t\t%d\n", i+1, burst_time[i],
    wait_time[i], tat[i]);
}
```

```
printf("Average waitingtime = %.f\n", (float)total_wt / (float)n);
```

```
printf("Average TAT = %.f\n", (float)total_tat / (float)n);
```

```
int main()
```

```
{
    int proc[10], n, burst_time[10];
    printf("\n Enter the number of process: ");
```

```
scanf ("%d", &n);
for (int i=0; i<n; i++)
{
    proc[i] = i+1;
    printf ("Enter Burst time for process %d : ", i+1);
    scanf ("%d", &burst_time[i]);
}
avgtime (proc, n, burst_time);
return 0;
}
```

Output :

Enter the number of process : 3

Enter BurstTime for process 1 : 4

Enter BurstTime for process 2 : 3

Enter BurstTime for process 3 : 12

Process	BurstTime	waiting Time	Turnaround Time
1	4	0	4
2	3	4	7
3	12	7	19

Average waiting time = 3.66667

Average turn around time = 10.00

2)

STF

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

```
int main()
```

```
{
    int bt[20], wt[20], tat[20], p[20], i, j, m, total = 0,
    pos, temp;
    float avg-wt, avg-tat;
```

```
    printf("Enter the number of processes: ");
    scanf("%d", &m);
```

```
    printf("Enter burst time for each process: ");
```

```
    for (i = 0; i < m; i++)
    {
        printf("p[%d]: ", i+1);
        scanf("%d", &bt[i]);
        p[i] = i+1;
    }
```

```
    for (i = 0; i < m-1; i++)
    {
        pos = i;
        for (j = i+1; j < m; j++)
        {
            if (bt[i] < bt[pos])
                pos = j;
        }
```

```
        temp = bt[i];
        bt[i] = bt[pos];
        bt[pos] = temp;
```

```
        temp = p[i];
        p[i] = p[pos];
        p[pos] = temp;
```

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```

for(i=0; i<n; i++)
{
    wt[i] = 0;
    for(j=0; j<ai; j++)
        wt[i] += bt[j];
    total += wt[i];
}
avg-wt = (float) total/n;
total = 0;

printf("In Process | Burst Time | Waiting Time | Turnaround Time |");
for(i=0; i<n; i++)
{
    tat[i] = bt[i] + wt[i];
    total += tat[i];
    printf("P[%d] | %d | %d | %d |", p[i], bt[i], wt[i], tat[i]);
}
avg-tat = (float) total/n;

printf("In Average waiting Time: %.f", avg-wt);
printf("In Average Turnaround time: %.f", avg-tat);

return 0;
}

```

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Output:

Enter number of processes
 Enter burst time: p[1]: 4, p[2]: 3, p[3]: 12
 Process Time Burst Time waiting Time Turnaround Time

1	3	0	3
2	4	3	7
3	12	7	19

Average waiting time = 3.33
 Average turnaround time = 9.666

FCFS

```
Enter the number of process: 3
Enter the Burst time for Process 1: 4
Enter the Burst time for Process 2: 3
Enter the Burst time for Process 3: 12
Process Burst Time  Waiting Time  Turnaround Time
1         4         0         4
2         3         4         7
3        12         7        19
Average waiting time = 3.666667
Average turn around time = 10.000000
|
```

SJF

```
Enter number of processes: 3
4Enter burst time for each process:
P[1]: 4
P[2]: 3
P[3]: 12
Process Burst Time  Waiting Time  Turnaround Time
P[2]      3         0         3
P[1]      4         3         7
P[3]     12         7        19

Average Waiting Time = 3.333333
Average Turnaround Time = 9.666667
```