



UITs
UNIVERSITY OF INFORMATION
TECHNOLOGY AND SCIENCES

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BATCH :- 43
DEPARTMENT :- CSE
COURSE TITLE :- OPERATING SYSTEM
COURSE TEACHER :- CSE-321
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Lab Report No :- 01

Experiment Name :- c/c++ Programming to implement FCFS
and as well as use that programming language to draw grand.

Theory

First come first serve (FCFS) scheduling algorithm simply schedules the jobs according to their arrival time. The job which comes first in the ready queue will get the CPU first. The lesser the arrival time of the job, the sooner will the job get the CPU. FCFS scheduling may cause the problem of starvation if the burst time of the first process is the longest among all the jobs.

Source Code

```
#include<stdio.h>

int main()
{
    int n,bt[25],wt[30],tat[30],avwt=0,avtat=0,i,j;

    printf("Enter total number of processes(maximum 30):");
    scanf("%d",&n);

    printf("\nEnter Process Burst Time\n");
    for(i=0;i<n;i++)
    {
        printf("P[%d]:",i+1);
        scanf("%d",&bt[i]);
    }
```

```
wt[0]=0; //waiting time for first process is 0
```

```
//calculating waiting time
```

```
for(i=1;i<n;i++)
```

```
{
```

```
    wt[i]=0;
```

```
    for(j=0;j<i;j++)
```

```
        wt[i]+=bt[j];
```

```
}
```

```
printf("\nProcess\t\tBurst Time\tWaiting Time\tTurnaround Time");
```

```
//calculating turnaround time
```

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

```
{
```

```
    tat[i]=bt[i]+wt[i];
```

```
    avwt+=wt[i];
```

```
    avtat+=tat[i];
```

```
    printf("\nP[%d]\t\t%d\t\t%d\t\t%d",i+1,bt[i],wt[i],tat[i]);
```

```
}
```

```

    avwt/=i;

    avtat/=i;

    printf("\n\nAverage Waiting Time:%d",avwt);

    printf("\n\nAverage Turnaround Time:%d",avtat);


    return 0;

}

```

The screenshot shows a C++ IDE with the following code and its execution output:

```

19  Enter Process Burst Time
20  P[1]:2
21  P[2]:5
22  P[3]:4
23  P[4]:6
24
25  Process      Burst Time      Waiting Time      Turnaround Time
26  P[1]         2              0                2
27  P[2]         5              2                7
28  P[3]         4              7                11
29  P[4]         6              11               17
30
31  Average Waiting Time:5
32  Average Turnaround Time:9
33  Process returned 0 (0x0)   execution time : 74.894 s
34  Press any key to continue.
35
36

```

