

Lab Performance 1: FCFS

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FCFS Algorithm implemented by C Programming:

```
#include<stdio.h>

int main()
{
    int n;
    int pt[]={1,2,3};
    printf(" Input Total Process: ");
    scanf("%d", &n);
    int bt[n];
    printf(" Enter The Burst time for process: \n");
    for (int i=0; i<n; i++)
    {
        printf(" P%d : ", i+1);
        scanf("%d", &bt[i]);
    }

    printf("\n Burst time :\n");
    for(int i=0; i<n; i++)
    {
        printf("\t%d\n",bt[i]);
    }
    avg(n,pt,bt);
}

int avg(int n, int pt[],int bt[])
```

```

{
    int wt[n];
    int tt[n];
    int total=0;

    waiting(wt,bt, n);
    turnaround(wt,bt,n);

    for(int i=0; i<n; i++)
    {
        total =wt[i]+ total;
    }
    double avgwt=total/(double)n;
    printf(" Average Waiting Time: %.3lf\n",avgwt);
}

void waiting(int wt[],int bt[], int n)
{
    wt[0]=0;
    printf(" Waiting Time :\n");
    for(int i=1; i<n; i++)
    {
        wt[i]=bt[i-1]+ wt[i-1];
    }
    for(int i=0; i<n; i++)
    {
        printf("\t%d\n",wt[i]);
    }
}

```

```
}  
  
void turnaround(int wt[],int bt[],int n)  
{  
    int tt[3];  
    int total =0;  
  
    printf(" Turn Around Time:\n");  
    for(int i=0; i<n; i++)  
    {  
        tt[i]=wt[i]+bt[i];  
        printf("\t%d\n",tt[i]);  
    }  
    for(int i=0; i<n; i++)  
    {  
        total=tt[i]+total;  
    }  
    double avgtt = total/(double)n;  
    printf(" The Average Turn around Time: %.3lf\n",avgtt);  
}
```

Screenshot of IDE (code):

```
FCFS.c - Code::Blocks 20.03
File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help
<global> | main0: int
1 #include<stdio.h>
2 int main()
3 {
4     int n;
5     int pt[] = {1,2,3};
6     printf(" Input Total Process: ");
7     scanf("%d", &n);
8     int bt[n];
9     printf(" Enter The Burst time for process: \n");
10    for (int i=0; i<n; i++)
11    {
12        printf(" P%d : ", i+1);
13        scanf("%d", &bt[i]);
14    }
15
16    printf("\n Burst time :\n");
17    for(int i=0; i<n; i++)
18    {
19        printf("\t%d\n",bt[i]);
20    }
21    avg(n,pt,bt);
22 }
23 int avg(int n, int pt[],int bt[])
24 {
25     int wt[n];
26     int tt[n];
```

```
FCFS.c - Code::Blocks 20.03
File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help
<global> | main0: int
22 }
23 int avg(int n, int pt[],int bt[])
24 {
25     int wt[n];
26     int tt[n];
27     int total=0;
28
29     waiting(wt,bt, n);
30     turnaround(wt,bt,n);
31
32     for(int i=0; i<n; i++)
33     {
34         total =wt[i]+ total;
35     }
36     double avgwt=total/(double)n;
37     printf(" Average Waiting Time: %.3lf\n",avgwt);
38 }
39 void waiting(int wt[],int bt[], int n)
40 {
41     wt[0]=0;
42     printf(" Waiting Time :\n");
43     for(int i=1; i<n; i++)
44     {
45         wt[i]=bt[i-1]+ wt[i-1];
46     }
47     for(int i=0; i<n; i++)
```

```
FCFS.c - Code::Blocks 20.03
File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help
<global>
main0: int
34         total =wt[i]+ total;
35     }
36     double avgwt=total/(double)n;
37     printf(" Average Waiting Time: %.3lf\n",avgwt);
38 }
39 void waiting(int wt[],int bt[], int n)
40 {
41     wt[0]=0;
42     printf(" Waiting Time :\n");
43     for(int i=1; i<n; i++)
44     {
45         wt[i]=bt[i-1]+ wt[i-1];
46     }
47     for(int i=0; i<n; i++)
48     {
49         printf("\t%d\n",wt[i]);
50     }
51 }
52 void turnaround(int wt[],int bt[],int n)
53 {
54     int tt[3];
55     int total =0;
56
57     printf(" Turn Around Time:\n");
58     for(int i=0; i<n; i++)
59     {
```

```
FCFS.c - Code::Blocks 20.03
File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help
<global>
main0: int
45         wt[i]=bt[i-1]+ wt[i-1];
46     }
47     for(int i=0; i<n; i++)
48     {
49         printf("\t%d\n",wt[i]);
50     }
51 }
52 void turnaround(int wt[],int bt[],int n)
53 {
54     int tt[3];
55     int total =0;
56
57     printf(" Turn Around Time:\n");
58     for(int i=0; i<n; i++)
59     {
60         tt[i]=wt[i]+bt[i];
61         printf("\t%d\n",tt[i]);
62     }
63     for(int i=0; i<n; i++)
64     {
65         total=tt[i]+total;
66     }
67     double avgtt = total/(double)n;
68     printf(" The Average Turn around Time: %.3lf\n",avgtt);
69 }
70 }
```

Output:

```
"D:\Applications\Code Store\FCS.exe"
Input Total Process: 3
Enter The Burst time for process:
P1 : 24
P2 : 3
P3 : 3

Burst time :
    24
    3
    3
Waiting Time :
    0
    24
    27
Turn Around Time:
    24
    27
    30
The Average Turn around Time: 27.000
Average Waiting Time: 17.000

Process returned 0 (0x0)   execution time : 8.331 s
Press any key to continue.
```