OS LAB

SCHEDULING ALGORITHMS

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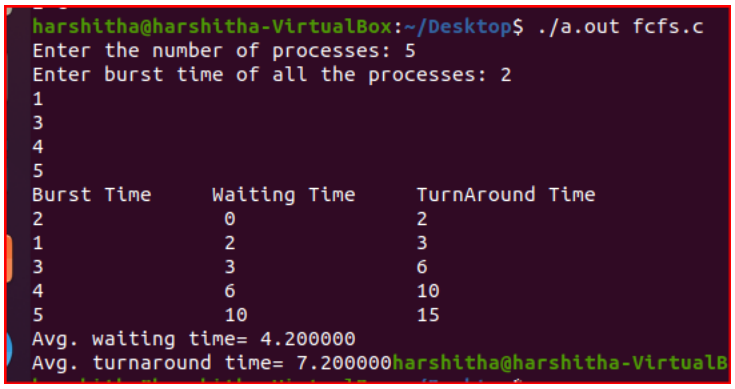
FCFS

```
#include <stdio.h>
int main()
{

   int bt[15];
   int n;
   printf("Enter the number of processes: ");
   scanf("%d",&n);



   printf("Enter burst time of all the processes: ");
   for(int i=0;i<n;i++)
   {
      scanf("%d",&bt[i]);
   }
```

```
int i, wt[n];
wt[0]=0;
for(i=1; i<n; i++)
{
   wt[i]= bt[i-1]+ wt[i-1];
}
printf("Burst Time     Waiting Time     TurnAround Time\n");
float twt=0.0;
float tat= 0.0;
for(i=0; i<n; i++)
{

   printf("%d\t\t", bt[i]);
   printf("%d\t\t", wt[i]);
   printf("%d\t\t", bt[i]+wt[i]);
   printf("\n");

   //for calculating total waiting time
   twt += wt[i];

   //for calculating total turnaround time
   tat += (wt[i]+bt[i]);
```

```
    }
    float att,awt;
//for calculating average waiting time
    awt = twt/n;

    //for calculating average turnaround time
    att = tat/n;
    printf("Avg. waiting time= %f\n",awt);
    printf("Avg. turnaround time= %f",att);
}
```



Sjf

```
#include <stdio.h>
int main()
{
    int A[100][4]; // Matrix for storing Process Id, Burst
                   // Time, Average Waiting Time & Average
```

```
            // Turn Around Time.
int i, j, n, total = 0, index, temp;
float avg_wt, avg_tat;
printf("Enter number of process: ");
scanf("%d", &n);
printf("Enter Burst Time:\n");
// User Input Burst Time and alloting Process Id.
for (i = 0; i < n; i++) {
   printf("P%d: ", i + 1);
   scanf("%d", &A[i][1]);
   A[i][0] = i + 1;
}
// Sorting process according to their Burst Time.
for (i = 0; i < n; i++) {
   index = i;
   for (j = i + 1; j < n; j++)
      if (A[j][1] < A[index][1])
         index = j;
   temp = A[i][1];
   A[i][1] = A[index][1];
   A[index][1] = temp;
```

```
        temp = A[i][0];
        A[i][0] = A[index][0];
        A[index][0] = temp;
    }
    A[0][2] = 0;
    // Calculation of Waiting Times
    for (i = 1; i < n; i++) {
        A[i][2] = 0;
        for (j = 0; j < i; j++)
            A[i][2] += A[j][1];
        total += A[i][2];
    }
    avg_wt = (float)total / n;
    total = 0;
printf("P     BT     WT     TAT\n");
    // Calculation of Turn Around Time and printing the
    // data.
    for (i = 0; i < n; i++) {
        A[i][3] = A[i][1] + A[i][2];
        total += A[i][3];
        printf("P%d     %d     %d      %d\n", A[i][0],
               A[i][1], A[i][2], A[i][3]);
```

```
    }
    avg_tat = (float)total / n;
    printf("Average Waiting Time= %f", avg_wt);
    printf("\nAverage Turnaround Time= %f", avg_tat);
}
```