Q: SJF

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```
#include <stdio.h>
int main()
{
int
bt[20], p[20], wt[20], tat[20], i, j, n, total=0, pos, temp;
float avg_wt, avg_tat;
printf("Enter number of process:");
scanf("%d",&n);
printf("\n Enter Bust time:\n");
for(i=0; i<n; i++)
{
printf("p%d :", i+1);
scanf("%d", &bt[i]);
p[i]= i+1;
}
// sorting of burst times
for(i=0; i<n; i++)
{
pos =i;
for(j=i+1; j<n; j++)
{
if (bt[j]<bt[pos])
pos=j;
}
```

Joshi

```
        temp = bt[i];
        bt[i] = bt[pos];
        bt[pos] = temp;
        temp = p[i];
        p[i] = p[pos];
        p[pos] = temp;
    }
    wt[0] = 0;
    for (i=1; i<n; i++)
    {
        wt[i] = 0;
        for (j=0; j<i; j++)
            wt[i] += bt[j];
        total += wt[i];
    }
    avg_wt = (float) total / n;
    total = 0;
    printf("\n Process\t  Burst time\t waiting Time\t
        Turnaround Time");
    for (i=0; i<n; i++)
    {
        tat[i] = bt[i] + wt[i];
        total += tat[i];
        printf("\np %d\t\t %d\t\t %d\t\t\t %d",
            p[i], bt[i], wt[i], tat[i];
```

Result

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

Toshi

```
Enter number of process:4

Enter Burst Time:
p1:10
p2:2
p3:1
p4:4

Process      Burst Time            Waiting Time     Turnaround Time
p3                 1                    0                    1
p2                 2                    1                    3
p4                 4                    3                    7
p1                 10                   7                    17

Average Waiting Time=2.750000
Average Turnaround Time=7.000000


...Program finished with exit code 0
Press ENTER to exit console.
```