OPERATING SYSTEM - CS23431

EX 6(B)

SHORTEST JOB FIRST

NAME: MOUNAMITHRA   ROLL NO:230701197

PROGRAM:

```
#include <stdio.h>int main() { int n, totalwt = 0, totaltat = 0; printf("Enter number of processes: \n");
scanf("%d", &n); int p[n], at[n], bt[n], ct[n], tat[n], wt[n]; printf("Enter process numbers: \n"); for (int i
scanf("%d", &p[i]); } printf("Enter arrival times: \n"); for (int i = 0; i < n; i++) {
= 0; i < n; i++) {
scanf("%d", &at[i]); } printf("Enter burst times: \n"); for (int i = 0; i < n; i++) {          scanf("%d",
&bt[i]); } int temp; for (int i = 0; i < n - 1; i++) {           for (int j = i + 1; j < n; j++) {          if ((bt[j] <
bt[i]) || (bt[j] == bt[i] && at[j] < at[i])) {          temp = at[i];          at[i] = at[j];          at[j] = temp;
temp = bt[i];          bt[i] = bt[j];          bt[j] = temp;          temp = p[i];          p[i] = p[j];
p[j] = temp;          }        } } ct[0] = at[0] + bt[0];          for (int i = 1; i < n; i++) {      if (at[i] > ct[i - 1]) {
ct[i] = at[i] + bt[i];          } else {          ct[i] = ct[i - 1] + bt[i];          }      }    for (int i = 0; i < n; i++) {      tat[i]
= ct[i] - at[i];          totaltat += tat[i];          wt[i] = tat[i] - bt[i];          totalwt += wt[i];    }
printf("P\tAT\tBT\tCT\tTAT\tWT\n"); for (int i = 0; i < n; i++) {
printf("%d\t%d\t%d\t%d\t%d\t%d\n", p[i], at[i], bt[i], ct[i], tat[i], wt[i]); } printf("Average waiting time:
%.1f\n", (float)(totalwt) / n); printf("Average turnaround time: %.1f\n", (float)(totaltat) / n); return 0;}
```

OUTPUT:

```
Enter number of processes:
5
Enter process numbers:
1
2
3
4
5
Enter arrival times:
0
1
2
3
4
Enter burst times:
4
3
1
2
6
P       AT      BT      CT      TAT     WT
3       2       1       3       1       0
4       3       2       5       2       0
2       1       3       8       7       4
1       0       4       12      12      8
5       4       6       18      14      8
Average waiting time: 4.0
Average turnaround time: 7.2
```