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Q) # write a program to implement First come First Serve scheduling: and Calculate Average turn around time and average waiting time

```
#include<stdio.h>
int main(){
    int n;
    printf(" Enter the number of processes ");
    scanf("%d",&n);
    int arr_time[n];
    int burst_time[n];
    int comp_time[n];
    int TAT[n];
    int WT[n];

// initialising arrival time and burst time;

for(int i=0; i<n; i++){
    printf("arrival of P%d:", (i+1));
    scanf("%d", &arr_time[i]);
    printf("burst time of P%d:",(i+1));
    scanf("%d", &burst_time[i]);
}
    // sorting the processes
# for(int i=0; i<n; i++){
    for(int j= i+1; j<n; j++){
        if(arr_time[j] < arr_time[i]){
            //swaping processes
            int temp= arr_time[j];
            arr_time[j]= arr_time[i];
            arr_time[i]= temp;
            // swaping burst times
            int tmp= burst_time[j];
            burst_time[j]= burst_time[i];
            burst_time[i]= tmp;
```

```
    }
  }
}

// calculating complete time
compl_time[0] = burst_time[0] + arr_time[0];
for(int i=1; i<n; i++){
    if(arr_time[i] <= compl_time[i-1]){
        compl_time[i] = compl_time[i-1] + burst_time[i];
    }
    else{
        compl_time[i] = arr_time[i] + burst_time[i];
    }
}

// calculating TAT
for(int i=0; i<n; i++){
    TAT[i] = compl_time[i] - arr_time[i];
}
// calculating WT
for(int i=0; i<n; i++){
    WT[i] = TAT[i] - burst_time[i];
}

// calculating avg TAT & WT
double sum_tat = 0;
double sum_wt = 0;
for(int i=0; i<n; i++){
    sum_tat += TAT[i];
    sum_wt += WT[i];
}
double avg_tat = sum_tat / n;
double avg_wt = sum_wt / n;
```

```
    printf("\n avg tat = %.2f", avg_tat);
    printf("\n avg wt = %.2f", avg_wt);

    return 0;
}
```

Output

```
Enter number of process: 4
arrival of P1: 0
burst time of P1: 2
arrival of P2: 1
burst time of P2: 2
arrival of P3: 5
burst time of P3: 3
arrival of P4: 6
burst time of P4: 4

avg tat = 3.5
avg wt = 0.75
```

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