

Program :-

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#include<stdio.h>
struct fcfs{
    int Process_id,Arrival_time,Burst_time,Complete_time,TurnAround_time,Waiting_time;
}a[50],temp;
void main(){
    int n,i,j;
    float ATT,AWT,ttt,twt;
    int ct[100],wt[100],tt[100];
    printf("\nEnter the number of process: ");
    scanf("%d",&n);
    printf("\nENTER THE PROCESS ID\n");
    for(i=0;i<n;i++){
        printf("Enter the process id of process %d: ",i+1);
        scanf("%d",&a[i].Process_id);
    }
    printf("\nENTER THE ARRIVAL TIME\n");
    for(i=0;i<n;i++){
        printf("Enter the arrival time of process %d: ",i+1);
        scanf("%d",&a[i].Arrival_time);
    }
    printf("\nENTER THE BURST TIME\n");
    for(i=0;i<n;i++){
        printf("Enter the burst time of process %d: ",i+1);
        scanf("%d",&a[i].Burst_time);
    }
    for(i=0;i<n;i++){
        for(j=0;j<n-1;j++){
            if(a[j].Arrival_time>a[j+1].Arrival_time)
            {
                temp = a[j];
                a[j] = a[j+1];
                a[j+1]= temp;
            }
        }
    }
    a[0].Waiting_time=0;
    a[0].Complete_time=a[0].Burst_time;
    for(i=1;i<n;i++){
        if(a[i].Arrival_time>a[i-1].Complete_time)
        {
            a[i].Complete_time=a[i].Arrival_time+a[i].Burst_time;
        }
        else
        {
            a[i].Complete_time=a[i-1].Complete_time+a[i].Burst_time;
        }
    }
    for(i=0;i<n;i++){
```

```

    {
        a[i].TurnAround_time=a[i].Complete_time-a[i].Arrival_time;
    }
    for(i=1;i<n;i++)
    {
        a[i].Waiting_time=a[i].TurnAround_time-a[i].Burst_time;
    }
    for(i=0;i<n;i++)
    {
        twt=twt+a[i].Waiting_time;
        ttt=ttt+a[i].TurnAround_time;
    }
    AWT=twt/n;
    ATT=ttt/n;
    printf("\n\nProcess ID      Arrival Time      Burst Time      Waiting Time
Completion Time    TurnAround Time\n");
    for(i=0; i<n; i++)
    {
        printf("P%d\t\t", a[i].Process_id);
        printf("%d\t\t", a[i].Arrival_time);
        printf("%d\t\t", a[i].Burst_time);
        printf("%d\t\t", a[i].Waiting_time);
        printf("%d\t\t", a[i].Complete_time);
        printf("%d\t\t", a[i].TurnAround_time);
        printf("\n");
    }
    printf("\nAvg. waiting time= %f\t",AWT);
    printf("\nAvg. turnaround time= %f\t",ATT);
}

```

Output :-

```

Enter the number of process: 3
ENTER THE PROCESS ID
Enter the process id of process 1: 1
Enter the process id of process 2: 2
Enter the process id of process 3: 3
ENTER THE ARRIVAL TIME
Enter the arrival time of process 1: 4
Enter the arrival time of process 2: 2
Enter the arrival time of process 3: 5
ENTER THE BURST TIME
Enter the burst time of process 1: 2
Enter the burst time of process 2: 4
Enter the burst time of process 3: 6

```

Process ID	Arrival Time	Burst Time	Waiting Time	Completion Time	TurnAround Time
P2	2	4	0	4	2
P1	4	2	0	6	2
P3	5	6	1	12	7

```

Avg. waiting time= 0.333333
Avg. turnaround time= 3.666667

```