

OS Lab Week 2

CODE:-

```
#include<stdio.h>
int main()
{
    int burst_time[20],p[20],waiting_time[20],tat[20],i,j,n,total=0,pos,temp;
    float avg_waiting_time,avg_tat;
    printf("please enter number of process: ");
    scanf("%d",&n);
    printf("\n enter the Burst Time:\n");
    for(i=0;i<n;i++)
    {
        printf("p%d:",i+1);
        scanf("%d",&burst_time[i]);
        p[i]=i+1;
    }

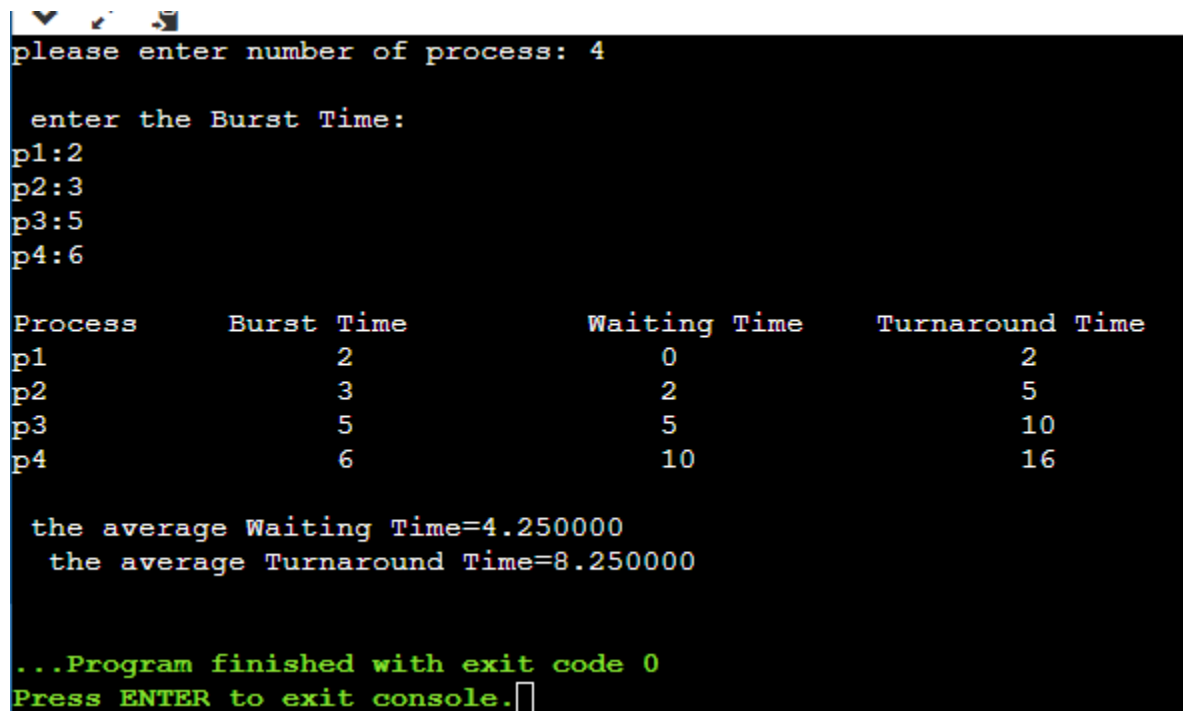
    for(i=0;i<n;i++)
    {
        pos=i;
        for(j=i+1;j<n;j++)
        {
            if(burst_time[j]<burst_time[pos])
                pos=j;
        }
        temp=burst_time[i];
        burst_time[i]=burst_time[pos];
        burst_time[pos]=temp;
        temp=p[i];
        p[i]=p[pos];
        p[pos]=temp;
    }
    waiting_time[0]=0;
    for(i=1;i<n;i++)
    {
        waiting_time[i]=0;
        for(j=0;j<i;j++)
            waiting_time[i]+=burst_time[j];
        total+=waiting_time[i];
    }
```

```

}
avg_waiting_time=(float)total/n;
total=0;
printf("\nProcess\t Burst Time \tWaiting Time\tTurnaround Time");
for(i=0;i<n;i++)
{
    tat[i]=burst_time[i]+waiting_time[i];
    total+=tat[i];
    printf("\np%d\t\t %d\t\t %d\t\t%d",p[i],burst_time[i],waiting_time[i],tat[i]);
}
avg_tat=(float)total/n;
printf("\n\n the average Waiting Time=%f",avg_waiting_time);
printf("\n the average Turnaround Time=%f\n",avg_tat);
}

```

OUTPUT:-



The screenshot shows the execution of a C program for process scheduling. It prompts the user to enter the number of processes (4) and then the burst times for each process (p1:2, p2:3, p3:5, p4:6). The output displays a table with columns for Process, Burst Time, Waiting Time, and Turnaround Time. The average waiting time is calculated as 4.250000 and the average turnaround time as 8.250000. The program ends with a message indicating it finished with exit code 0 and a prompt to press ENTER to exit the console.

```

please enter number of process: 4

enter the Burst Time:
p1:2
p2:3
p3:5
p4:6

Process      Burst Time      Waiting Time      Turnaround Time
p1           2              0                2
p2           3              2                5
p3           5              5               10
p4           6              10              16

the average Waiting Time=4.250000
the average Turnaround Time=8.250000

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

```