

EXP : 8

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#include<stdio.h>
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int main()
{
    int i, limit, total = 0, x, counter = 0, time_quantum;
    int wait_time = 0, turnaround_time = 0, arrival_time[10], burst_time[10],
temp[10];
    float average_wait_time, average_turnaround_time;
    printf("nEnter Total Number of Processes:t");
    scanf("%d", &limit);
    x = limit;
    for(i = 0; i < limit; i++)
    {
        printf("nEnter Details of Process[%d]n", i + 1);

        printf("Arrival Time:t");

        scanf("%d", &arrival_time[i]);

        printf("Burst Time:t");

        scanf("%d", &burst_time[i]);

        temp[i] = burst_time[i];
    }

    printf("nEnter Time Quantum:t");
    scanf("%d", &time_quantum);
    printf("nProcess IDttBurst Timet Turnaround Timet Waiting Timen");
    for(total = 0, i = 0; x != 0;)
    {
        if(temp[i] <= time_quantum && temp[i] > 0)
        {
            total = total + temp[i];
            temp[i] = 0;
            counter = 1;
        }
        else if(temp[i] > 0)
        {
            temp[i] = temp[i] - time_quantum;
            total = total + time_quantum;
        }
        if(temp[i] == 0 && counter == 1)
        {
            x--;
            printf("nProcess[%d]tt%dt %dt %d", i + 1, burst_time[i],
total - arrival_time[i], total - arrival_time[i] - burst_time[i]);
            wait_time = wait_time + total - arrival_time[i] - burst_time[i];
            turnaround_time = turnaround_time + total - arrival_time[i];
            counter = 0;
        }
    }
}
```

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    }
    if(i == limit - 1)
    {
        i = 0;
    }
    else if(arrival_time[i + 1] <= total)
    {
        i++;
    }
    else
    {
        i = 0;
    }
}

average_wait_time = wait_time * 1.0 / limit;
average_turnaround_time = turnaround_time * 1.0 / limit;
printf("\nAverage Waiting Time:%f", average_wait_time);
printf("\nAvg Turnaround Time:%fn", average_turnaround_time);
return 0;
}

```

```

Enter Total Number of Processes:      3

Enter Details of Process[1]
Arrival Time:  2
Burst Time:    4

Enter Details of Process[2]
Arrival Time:  3
Burst Time:    2

Enter Details of Process[3]
Arrival Time:  4
Burst Time:    3

Enter Time Quantum:      3

Process ID      Burst Time      Turnaround Time      Waiting Time
Process[2]      2              2                    0
Process[3]      3              4                    1
Process[1]      4              7                    3

Average Waiting Time:  1.333333
Avg Turnaround Time:  4.333333

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Process exited after 7.209 seconds with return value 0
Press any key to continue . . .

```