


Programiz
C Online Compiler

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Interactive C Course

main.c

Run

Output

Clear

```
1 #include<stdio.h>
2 struct priority_scheduling {
3     char process_name;
4     int burst_time;
5     int waiting_time;
6     int turn_around_time;
7     int priority;
8 };
9 int main() {
10     int number_of_process;
11     int total = 0;
12     struct priority_scheduling temp_process;
13     int ASCII_number = 65;
14     int position;
15     float average_waiting_time;
16     float average_turnaround_time;
17     scanf("%d", & number_of_process);
18     struct priority_scheduling process[number_of_process];
19     printf("\nPlease Enter the Burst Time and Priority of each process:\n");
20     for (int i = 0; i < number_of_process; i++) {
21         process[i].process_name = (char) ASCII_number;
22         printf("\nEnter the details of the process %c \n", process[i]
                .process_name);
23         printf("Enter the burst time: ");
24         scanf("%d", & process[i].burst_time);
25         printf("Enter the priority: ");
26         scanf("%d", & process[i].priority);
27         ASCII_number++;
```

```
/tmp/qU5mvMUyaC.o
3
Please Enter the Burst Time and Priority of each process:

Enter the details of the process A
Enter the burst time: 30
Enter the priority: 2
Enter the details of the process B
Enter the burst time: 5
Enter the priority: 1
Enter the details of the process C
Enter the burst time: 12
Enter the priority: 3
```

Process_name	Burst Time	Waiting Time	Turnaround Time
C	12	0	12
A	30	12	42
B	5	42	47

```
Average Waiting Time : 18.000000
Average Turnaround Time: 33.666668
```

```
main.c
26 scanf("%d", & process[i].priority);
27 ASCII_number++;
28 }
29 for (int i = 0; i < number_of_process; i++) {
30     position = i;
31     for (int j = i + 1; j < number_of_process; j++) {
32         if (process[j].priority > process[position].priority)
33             position = j;
34     }
35     temp_process = process[i];
36     process[i] = process[position];
37     process[position] = temp_process;
38 }
39 process[0].waiting_time = 0;
40 for (int i = 1; i < number_of_process; i++) {
41     process[i].waiting_time = 0;
42     for (int j = 0; j < i; j++) {
43         process[i].waiting_time += process[j].burst_time;
44     }
45     total += process[i].waiting_time;
46 }
47 average_waiting_time = (float) total / (float) number_of_process;
48 total = 0;
49 printf("\n\nProcess_name \t Burst Time \t Waiting Time \t Turnaround
    Time\n");
50 printf("-----\n");
51 for (int i = 0; i < number_of_process; i++) {
52     process[i].turn_around_time = process[i].burst_time + process[i].
```

Output

Clear

/tmp/qU5mvMUyaC.o

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Please Enter the Burst Time and Priority of each process:

Enter the details of the process A

Enter the burst time: 30

Enter the priority: 2

Enter the details of the process B

Enter the burst time: 5

Enter the priority: 1

Enter the details of the process C

Enter the burst time: 12

Enter the priority: 3

Process_name	Burst Time	Waiting Time	Turnaround Time
--------------	------------	--------------	-----------------

C	12	0	12
---	----	---	----

A	30	12	42
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B	5	42	47
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Average Waiting Time : 18.000000

Average Turnaround Time: 33.666668

Online C Compiler

Priority Scheduling Program in C - Scaler Topics

Programiz

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Interactive C Course

main.c

Run

```
40- for (int i = 1; i < number_of_process; i++) {
41-     process[i].waiting_time = 0;
42-     for (int j = 0; j < i; j++) {
43-         process[i].waiting_time += process[j].burst_time;
44-     }
45-     total += process[i].waiting_time;
46- }
47- average_waiting_time = (float) total / (float) number_of_process;
48- total = 0;
49- printf("\n\nProcess_name \t Burst Time \t Waiting Time \t Turnaround
    Time\n");
50- printf("-----\n");
51- for (int i = 0; i < number_of_process; i++) {
52-     process[i].turn_around_time = process[i].burst_time + process[i]
        .waiting_time;
53-     total += process[i].turn_around_time;
54-     printf("\t %c \t\t %d \t\t %d \t\t %d", process[i].process_name,
        process[i].burst_time, process[i].waiting_time, process[i]
        .turn_around_time);
55-     printf("\n-----\n");
56- }
57- average_turnaround_time = (float) total / (float) number_of_process;
58- printf("\n\n Average Waiting Time : %f", average_waiting_time);
59- printf("\n Average Turnaround Time: %f\n", average_turnaround_time);
60- return 0;
61- }
62- }
```

Output

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Please Enter the Burst Time and Priority of each process:

Enter the details of the process A

Enter the burst time: 30

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Enter the details of the process C

Enter the burst time: 12

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