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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  int main() {
9      int number_of_process, total = 0;
10     struct priority_scheduling temp_process;
11     int ASCII_number = 65;
12     int position;
13     float average_waiting_time, average_turnaround_time;
14     printf("Enter the total number of Processes: ");
15     scanf("%d", &number_of_process);
16     struct priority_scheduling process[number_of_process];
17     printf("\nPlease Enter the Burst Time and Priority of each process:\n");
18     for (int i = 0; i < number_of_process; i++) {
19         process[i].process_name = (char) ASCII_number;
20         printf("\nEnter the details of process %c\n", process[i].process_name);
21         printf("Enter the burst time: ");
22         scanf("%d", &process[i].burst_time);
23         printf("Enter the priority: ");
24         scanf("%d", &process[i].priority);
25         ASCII_number++;
26     }
27     for (int i = 0; i < number_of_process; i++) {
28         position = i;
29         for (int j = i + 1; j < number_of_process; j++) {
30             if (process[j].priority > process[position].priority)
31                 position = j;

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32     temp_process = process[i];
33     process[i] = process[position];
34     process[position] = temp_process;
35 }
36 process[0].waiting_time = 0;
37 for (int i = 1; i < number_of_process; i++) {
38     process[i].waiting_time = 0;
39     for (int j = 0; j < i; j++) {
40         process[i].waiting_time += process[j].burst_time;
41     }
42     total += process[i].waiting_time;
43 }
44 average_waiting_time = (float) total / number_of_process;
45 total = 0;
46 printf("\n\nProcess\tBurst Time\tPriority\tWaiting Time\tTurnaround Time\n");
47 for (int i = 0; i < number_of_process; i++) {
48     process[i].turn_around_time = process[i].burst_time + process[i].waiting_time;
49     total += process[i].turn_around_time;
50     printf(" %c\t %d\t\t %d\t\t %d\t\t %d\n",
51         process[i].process_name,
52         process[i].burst_time,
53         process[i].priority,
54         process[i].waiting_time,
55         process[i].turn_around_time);
56 }
57 average_turnaround_time = (float) total / number_of_process;
58 printf("\nAverage Waiting Time : %.2f", average_waiting_time);
59 printf("\nAverage Turnaround Time: %.2f\n", average_turnaround_time);
60 return 0;
61 }

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Enter the total number of Processes: 4

Please Enter the Burst Time and Priority of each process:

Enter the details of process A

Enter the burst time: 3

Enter the priority: 2

Enter the details of process B

Enter the burst time: 7

Enter the priority: 5

Enter the details of process C

Enter the burst time: 6

Enter the priority: 3

Enter the details of process D

Enter the burst time: 9

Enter the priority: 4

Process	Burst Time	Priority	Waiting Time	Turnaround Time
B	7	5	0	7
D	9	4	7	16
C	6	3	16	22
A	3	2	22	25

Average Waiting Time : 11.25

Average Turnaround Time: 17.50