C:\Users\aswin\Documents\PRIORITYOS.C - Embarcadero Dev-C++ 6.3

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TDM-GCC 9.2.0 64-bit Release

(globals)

Project C

PRIORITYOS.C

```c
#include<stdio.h>
struct priority_scheduling {
  char process_name;
  int burst_time;
  int waiting_time;
  int turn_around_time;
  int priority;
};
int main() {
  int number_of_process;
  int total = 0;
  struct priority_scheduling temp_process;
  int ASCII_number = 65;
  int position;
  float average_waiting_time;
  float average_turnaround_time;
  printf("Enter the total number of Processes: ");
  scanf("%d", & number_of_process);
  struct priority_scheduling process[number_of_process];
  printf("\nPlease Enter the  Burst Time and Priority of each process:\n");
  for (int i = 0; i < number_of_process; i++) {
    process[i].process_name = (char) ASCII_number;
    printf("\nEnter the details of the process %c \n", process[i].process_name);
    printf("Enter the burst time: ");
    scanf("%d", & process[i].burst_time);
    printf("Enter the priority: ");
    scanf("%d", & process[i].priority);
    ASCII_number++;
  }
  for (int i = 0; i < number_of_process; i++) {
    position = i;
```

```
    for (int j = i + 1; j < number_of_process; j++) {
      if (process[j].priority > process[position].priority)
        position = j;
    }
    temp_process = process[i];
    process[i] = process[position];
    process[position] = temp_process;
  }
  process[0].waiting_time = 0;
  for (int i = 1; i < number_of_process; i++) {
    process[i].waiting_time = 0;
    for (int j = 0; j < i; j++) {
      process[i].waiting_time += process[j].burst_time;
    }
    total += process[i].waiting_time;
  }
  average_waiting_time = (float) total / (float) number_of_process;
  total = 0;
  printf("\n\nProcess_name \t Burst Time \t Waiting Time \t  Turnaround Time\n");
  printf("-----------------------------------------------------------\n");
  for (int i = 0; i < number_of_process; i++) {
    process[i].turn_around_time = process[i].burst_time + process[i].waiting_time;
    total += process[i].turn_around_time;
    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);
    printf("\n-----------------------------------------------------------\n");
  }
  average_turnaround_time = (float) total / (float) number_of_process;
  printf("\n\n Average Waiting Time : %f", average_waiting_time);
  printf("\n Average Turnaround Time: %f\n", average_turnaround_time);
  return 0;
}
```

Compiler | Resources | Compile Log | Debug | Find Results | Console

Line: 1 Col: 1 Sel: 0 Lines: 62 Length: 2435 Insert Done parsing in 0.031 seconds

Select C:\Users\aswin\Documents\PRIORITYOS.exe

```
Enter the total number of Processes: 4

Please Enter the  Burst Time and Priority of each process:

Enter the details of the process A
Enter the burst time: 31
Enter the priority: 4

Enter the details of the process B
Enter the burst time: 11
Enter the priority: 2

Enter the details of the process C
Enter the burst time: 5
Enter the priority: 1

Enter the details of the process D
Enter the burst time: 15
Enter the priority: 3


Process_name     Burst Time      Waiting Time     Turnaround Time
-----------------------------------------------------------
         A              31             0               31
-----------------------------------------------------------
         D              15             31              46
-----------------------------------------------------------
         B              11             46              57
-----------------------------------------------------------
         C              5              57              62
-----------------------------------------------------------


 Average Waiting Time : 33.500000
 Average Turnaround Time: 49.000000

--------------------------------
Process exited after 37.59 seconds with return value 0
Press any key to continue . . .
```