PROGRAM -5

```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");
```

```c
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;
       }
```

```c
   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;
  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;
    }
```

OUTPUT

```
Enter the total number of Processes: 3

Please Enter the Burst Time and Priority of each process:

Enter   the     details         of      the     process         A
Enter the burst time: 10
Enter the priority: 2

Enter   the     details         of      the     process         B
Enter the burst time: 12
Enter the priority: 3

Enter   the     details         of      the     process         C
Enter the burst time: 56
Enter the priority: 1


Process_name     Burst Time      Waiting Time           Turnaround Time

        B               12              0               12

        A               10              12              22

        C               56              22              78



Average Waiting Time : 11.333333
Average Turnaround Time: 0.000000
```