

## **WEEK 4: SJF and Priority Scheduling**

**Date: 18/09/2020**

### **OBJECTIVE:**

**Understanding and Simulating Shortest Job First Scheduling and Priority Scheduling Algorithms**

- CPU SCHEDULING CONCEPTS ARE ALREADY COVERED IN THEORY
- STUDENTS ARE ADVISED TO REFER TO THE TEXT BOOK AND THE LECTURE MATERIAL SHARED IN THE CLASS TO IMPLEMENT THE GIVEN PROGRAMS.
- STUDENTS ARE REQUIRED TO PROVIDE PROOF OF CONDUCTION (AS PER SUBMISSION BELOW) FOR BOTH THE PROGRAMS.

### **SUBMISSION:**

1. The source code files for both the programs should be uploaded to EDMODO separately in WORD or ZIP FORMAT.
2. All the screenshots clearly showing the directory name as YOURSRN\_NAME\_WEEK4 and the program output should be uploaded to EDMODO in a SEPARATE FILE (Word or PDF format only, Do NOT zip this file).

Students should keep these TWO deliverables (i.e. 1 & 2 above) separate and NOT zip all the files together in order to facilitate quick, timely and effective evaluation.

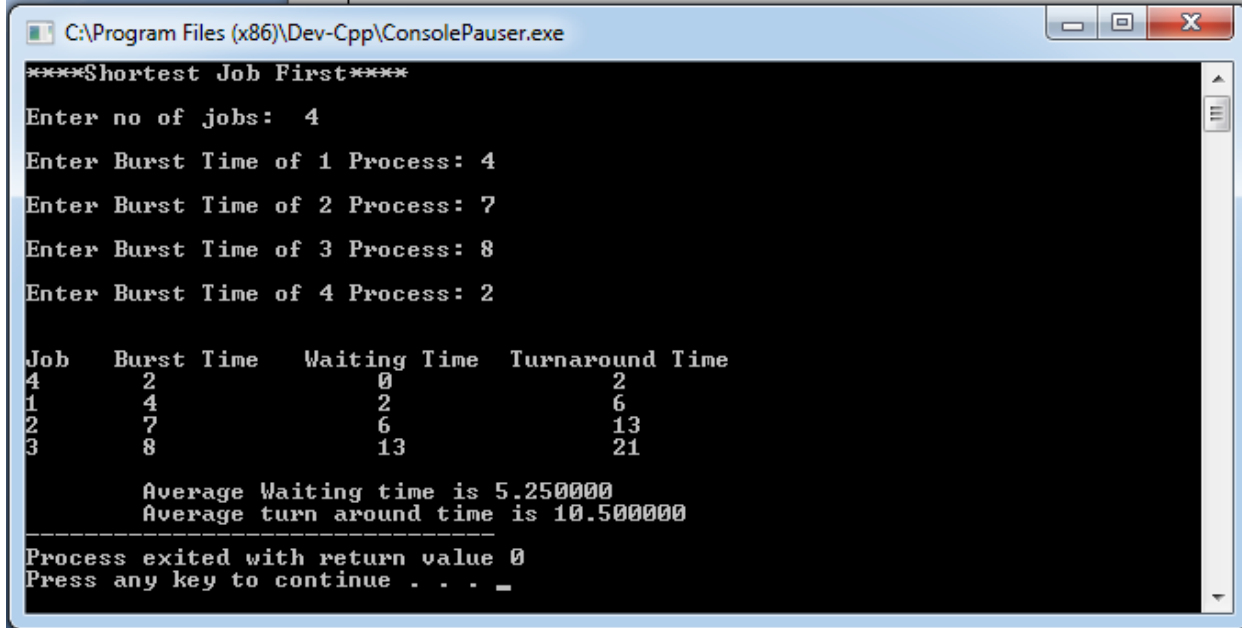
Contact your respective Lab faculty for any questions or clarifications needed.

**DUE DATE FOR SUBMISSION: 24/09/2020 11:59 PM**

## PROGRAMS FOR EXECUTION AND SUBMISSION:

1. Write a C program to implement Shortest-Job-First scheduling algorithm.

### Expected Output:



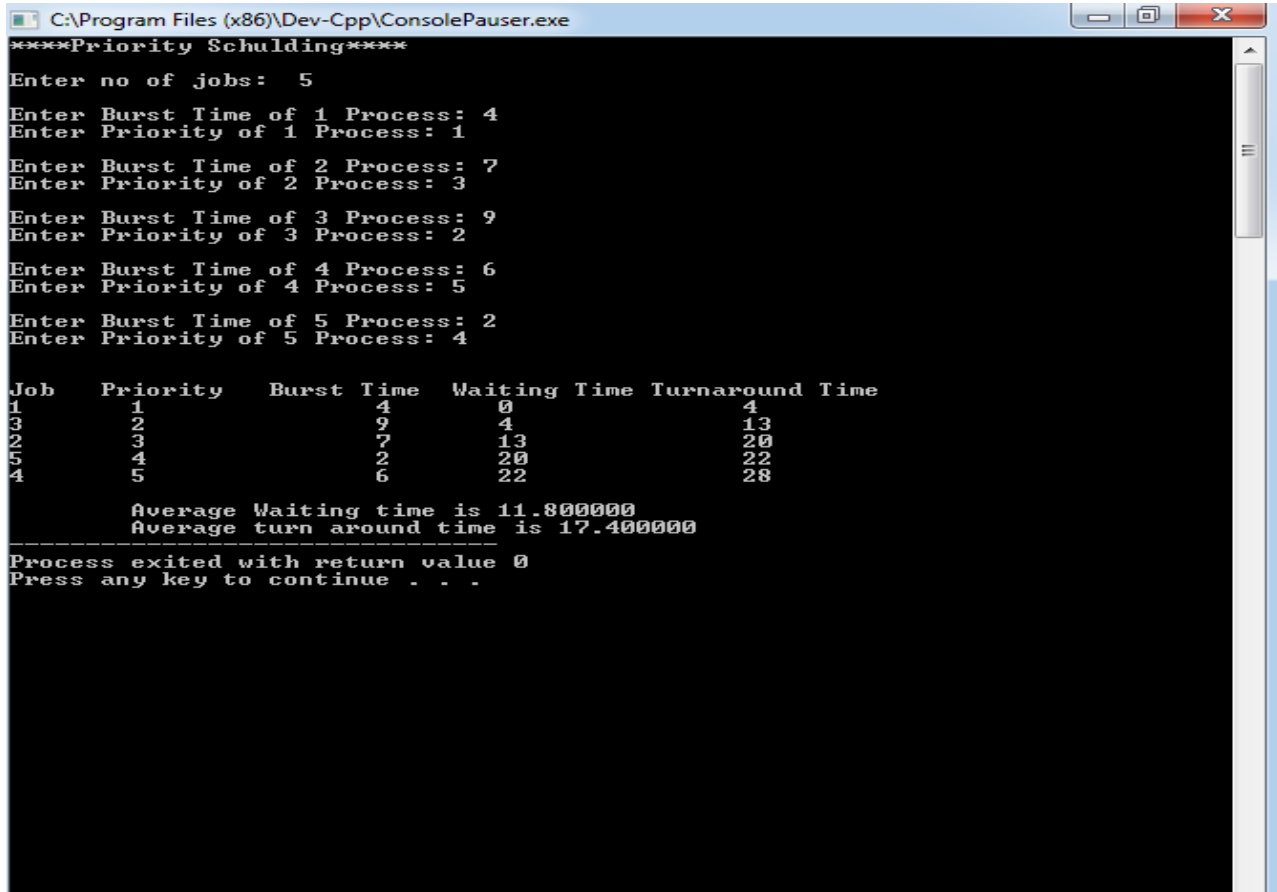
```
C:\Program Files (x86)\Dev-Cpp\ConsolePauser.exe
****Shortest Job First****
Enter no of jobs: 4
Enter Burst Time of 1 Process: 4
Enter Burst Time of 2 Process: 7
Enter Burst Time of 3 Process: 8
Enter Burst Time of 4 Process: 2

Job  Burst Time  Waiting Time  Turnaround Time
4      2           0           2
1      4           2           6
2      7           6          13
3      8          13          21

      Average Waiting time is 5.250000
      Average turn around time is 10.500000
-----
Process exited with return value 0
Press any key to continue . . . _
```

2. Write a C program to implement Priority Scheduling algorithm.

Expected Output:



```
****Priority Scheduling****
Enter no of jobs: 5
Enter Burst Time of 1 Process: 4
Enter Priority of 1 Process: 1
Enter Burst Time of 2 Process: 7
Enter Priority of 2 Process: 3
Enter Burst Time of 3 Process: 9
Enter Priority of 3 Process: 2
Enter Burst Time of 4 Process: 6
Enter Priority of 4 Process: 5
Enter Burst Time of 5 Process: 2
Enter Priority of 5 Process: 4

Job   Priority   Burst Time   Waiting Time   Turnaround Time
1     1         4           0             4
3     2         9           4            13
2     3         7          13            20
5     4         2          20            22
4     5         6          22            28

Average Waiting time is 11.800000
Average turn around time is 17.400000
-----
Process exited with return value 0
Press any key to continue . . .
```

## NOTE:

Your programs can take input in the manner shown in the screenshots or in any other manner. Output should be printed in the same format as shown in the screenshots clearly showing Average Waiting time and Turnaround time values.