

# 5<sup>th</sup> Semester - UE18CS305 – Operating Systems Laboratory

Date: 25/09/2020

# **WEEK 5: Round Robin Scheduling**

### **OBJECTIVE:**

## **Understanding and Simulating Round Robin Scheduling Algorithm**

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 PROGRAM.
- STUDENTS ARE REQUIRED TO PROVIDE PROOF OF CONDUCTION (AS PER SUBMISSION BELOW).

#### **SUBMISSION:**

- 1. The source code files 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: 01/10/2020 11:59 PM** 

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# PROGRAM FOR EXECUTION AND SUBMISSION:

• Write a C program to implement Round Robin scheduling algorithm. Test your program with small and large quantum values wrt CPU burst time.

### **Expected Output:**

```
ubuntu@ubuntu-VirtualBox:~/os/Sample Programs$ ./a.out
Enter number of processes:5
Enter the name of process : P1
Enter the burst time:
Enter the name of process : P2
Enter the burst time:
Enter the name of process : P3
Enter the burst time:
Enter the name of process : P4
Enter the burst time:
Enter the name of process : P5
Enter the burst time:
Enter time quantum:
                        12
                burst time
                                 waiting time
                                                  turn around time
process name
Ρ1
                20
                                 39
                                                  59
P2
P3
P4
                5
                                 12
                                                  17
                17
                                 47
                                                  64
                10
                                 29
                                                  39
                13
                                                  65
average Waiting time is 35.799999
average turn around time is 48.799999
```

### **NOTES:**

Your program can take inputs (No of Processes, process name or number, burst time and the quantum time) in the manner shown above or in any other manner.

Output should be printed in the same format as shown in the screenshot by clearly showing the individual burst time, WT, TAT as well as Average WT & TAT values.

Submit 2 screenshots showing the program output for quantum = 12 and any smaller quantum number.