

## Dept. of CSE, IITDM Kancheepuram

COM301P – Operating Systems

August 12, 2021

### Lab Assignment – 2

(1) In this lab, you will implement CPU scheduling algorithms FCFS and SJF.

First Come First Serve

#### Input:

- 1 Number of Processes
- 2 Process ID
- 3 Arrival Time of All the Processes
  - a. All arriving at time 0
  - b. All arrive at different time
- 4 Burst Time of All the Processes

#### Output:

PID	Arrival Time	Burst Time	Completion Time	Waiting Time	Turn Around Time
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Find the following performance parameters.

- a) Average Waiting Time
- b) Average Turnaround Time

(2) Implement Shortest Job First Scheduling algorithm

#### Input:

- 1 Number of Processes
- 2 Process ID
- 3 Arrival Time of All the Processes
  - a. All arriving at time 0
  - b. All arrive at different time
- 4 Burst Time of All the Processes

#### Output:

PID	Arrival Time	Burst Time	Completion Time	Waiting Time	Turn Around Time
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Find the following performance parameters.

- a) Average Waiting Time
- b) Average Turnaround Time

(3) Use the time and who commands in sequence (in one line) such that the output of time will display on the screen and the output of who will be redirected to a file called myfile. Use the more command to check the contents of myfile.

(4) Explore process management commands like ps, top, glances, kill, pkill, pgrep etc. (Explore Few More also)

### Submission Instructions:

- Submit your assignment file in the Google classroom.
  - After writing the code for the scheduling algorithm, write your own example and solve it in a plain paper (Own Handwriting). Also, draw the gantt chart. Write your Name and Roll No in each page. Later verify with the output of the program with the one you solved in plain paper.
  - Attach the screen short of the output after the execution of the program.
  - Practice the Linux commands provided above. Also, write the use of each command in a plain paper (Own Handwriting). Write your Name and Roll No in each page.
  - Save all the above things of all the programs in to one file and save as RollNo\_Lab#.pdf (Example: EC20B1001\_Lab2.pdf) and upload.
  - Make sure the program description(handwritten), program, output screenshot for all questions are included in a **single pdf** as mentioned above.
  - Save all the C program files as per the format RollNo\_Lab#\_QuestionNo.c (Example: EC20B1001\_Lab1\_Q2.c) and upload.
  - Any form of plagiarism/copying from peer or internet sources will lead penalty.
- NOTE: DO NOT ZIP THE FILES.**