

Government Engineering College, Thrissur

CS331 – System Software Lab

Documentation –

Exp1 – CPU Scheduling Algorithm

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Submitted By

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TCR18CS053

GECT CSE S5

# EXPERIMENT 1

Simulate the following non-pre-emptive CPU scheduling algorithms to find turnaround time and waiting time.

a) FCFS b) SJF c) Round Robin (pre-emptive) d) Priority

# Compilation of Code

* The simulation is run with the help of C programming language.
* Details such as burst time, arrival time and priority of the process is stored in a text file named “TCR18CS053\_exp1\_input.txt”.
* Inside text file values are tab separated
  + Format of values inside text file
  + Arrival Time<Tab>Burst Time<Tab>Priority
* The code is provided in “TCR18CS053\_exp1\_pgm.c”
  + Code is tested on
    - Windows 10 Version 2004 (OS Build 19041.450)
      * gcc version 8.1.0 (x86\_64-posix-seh-rev0, Built by MinGW-W64 project)
    - Manjaro Linux 20.1 Mikah
      * gcc version 10.1.0 (GCC)
  + To compile the program, open a terminal and type
    - gcc TCR18CS053\_exp1\_pgm.c
  + To run the program, open a terminal and type
    - For windows
      * .\a.exe
    - For Linux shells (bash, zsh, etc.)
      * ./a.out
  + Time quantum for Round Robin is set as 3 can change it in line number 189 variable name “tc”
* “TCR18CS053\_exp1\_output.txt” is obtained using output redirection. The content of stdout and stderr is redirected to same file.
  + For windows
    - .\a.out | & tee TCR18CS053\_exp1\_output.txt
  + For Linux shells (bash, zsh, etc.)
    - ./a.out | & tee TCR18CS053\_exp1\_output.txt

# Note

* A process with 0 burst time in input may lead to un expected output
* tee command will not work with windows command prompt but will work in windows PowerShell

# Output Screenshot

