# Operating Systems (11335)

**Spring 2021**

## Term Project

### General Requirements

* The project accounts for 10 points of the total course grade.
* The project can be done in groups of 2-3 students.
* Grades may vary among the group.
* Every team member should contribute to all aspects of the project and should be ready to present and answer anything about any part of the project.
* Submit the following onto e-learning:
* A fully working application zipped into the project’s assignment
* Source code to be placed in the project’s Turnitin-assignment
* There will be a group discussion with the instructor. Around half of the project’s grade will depend on this.
* Any violation to PSUT ethics code will have a severe impact.

**Scheduling Algorithms:**

Write a program in any programming language to implement the following scheduling algorithms:

1. **Non-preemptive Round Robin scheduling** algorithm with variable quantum (q). The user should enter the quantum (q), a number of processes, their arrival times and their burst times in seconds.
2. **Non-Preemptive Priority scheduling**. The user should enter a number of processes, their priority, arrival times and burst times in seconds.

The 2 options above should be displayed as menu options in a console or GUI. Data entry can be through console or graphical interfaces. Your program should find, select and display the order in which the processes are executed (it will be nice if you can draw the Gantt chart) and the start and end of each execution cycle (you can add the length of the execution cycle).

At the end, for each option do the following calculations and display them:

1. the average waiting time
2. the average response time
3. the average turnaround time
4. the throughput in seconds