

## **CS 307: Systems Practicum**

### **Assignment 1: Synchronization and Threading**

**To be done in class groups; due: before the beginning of the class on 25th Jan 2024**

Q1. Implement the dining philosopher's problem for 5 philosophers using threads and locks. Assume two types of philosophers – greedy philosophers and generous philosophers. [2]

Q2. Now, run this program 10 times by making each philosopher sleep for 6 seconds and plot the number of times each philosopher was able to eat. X-axis - philosophers from 1 to 5. Y axis - the number of times each philosopher could eat across 10 runs of 6 seconds each. What do you observe from the figure? [3]