

## CS221 Data Structures and Design

### Assignment 4

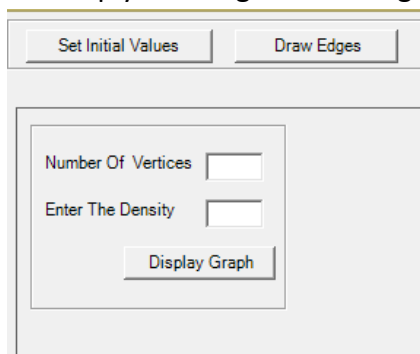
Submission deadline: 16<sup>th</sup> December 2023 11:59 p.m.

In this assignment you have to create an application for graph processing which should have following features:

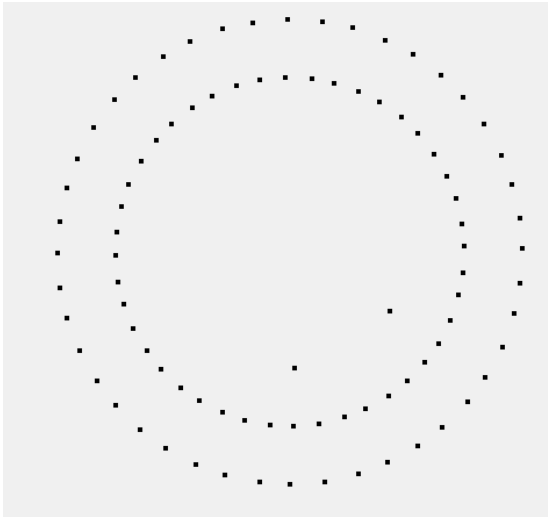
1. Take as input number of nodes in the graph
2. Take as input the density of the graph
3. Store the graph in an adjacency matrix.
4. Add following features/function to your application
  - a. Give a node show its degree
  - b. Find the node with maximum degree
  - c. Find the node with minimum degree
  - d. Display the raw adjacency matrix
  - e. Give a node find all its neighbours

#### **Extra Credit (Worth 50% of the assignment's total score):**

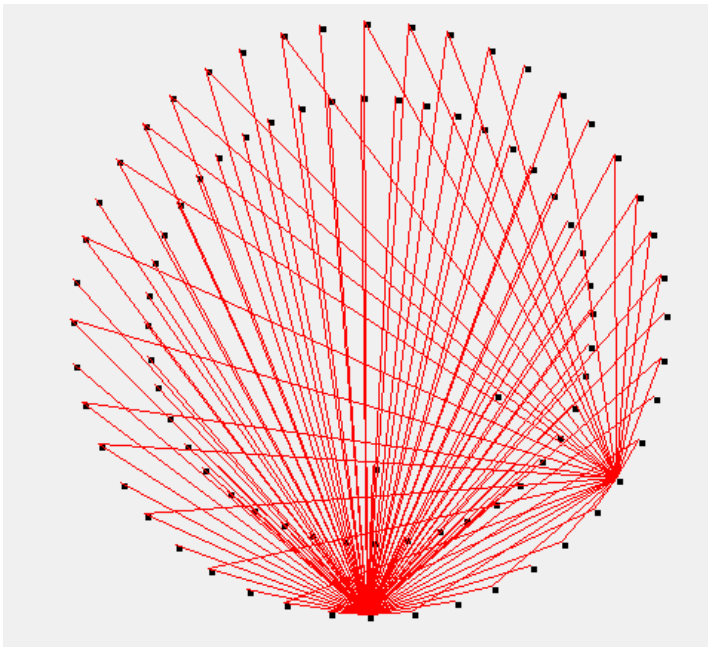
Develop your assignment using GUI



Visually draw the graph with just nodes, put nodes on the screen in a circular way. Sample given as follows



Visually draw the graph with nodes and edges, Sample given as follows



Enjoy !