Problem

Problem: Finding and displaying all cliques with different density for a given bipartite graph with variable density.

Display the cliques of the graph separately or by highlighting with various colors in the given graph.

Input:

1) No of vertices in the Top partition and no of vertices in the bottom partition. Here we are assuming that the vertices in both the partition are same.

2) Density of a bi-graph.

3) Density of "clique" to be found

Output:

- Dynamically generate bi-graph based on the given density.
- Display the bipartite graph with each vertices numbered in a sequential order. i.e. (1...N). The top and bottom both partition will have number from 1...N.
- Calculate Max cliques in a graph and display total no of cliques found and then highlight those vertices in the displayed graph.
- Find only those cliques which have same number of vertices in each partition.
- Program should also be able print the IDs (assigned NOs) of vertices involved in a particular clique.
- Also show progress bar while the program is running.
- Plot a graph Time (Y-axis) vs. Density (X-axis). (Time should not be more than 5 min.)
- Do all of the above for "cliques" with user specified density. The graph will be plotted for "cliques" with 50% density.

Also find the cliques having unequal number of vertices in each partition.