Coding project: Interval Graphs

Group #1

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Members:

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5. Balupalli, Raghav Reddy
6. Bitra, Ashok Chakravarthy

Programs:

1. Create an interval graph with an umbrella-free ordering (**Al Thoubi, Asaad Y**.)
   Input: Interactively input number of intervals "n" and start and finish points of each interval
   Output: a txt file giving an adjacency list of the interval graph and its umbrella-free ordering.

n, m
1: 4,6,7
2: 3,4,8,9
…
AFO: 4,2,7, …

2. Draw an interval graph (AL-Baghdadi, Ahmed H.)
   Input: a txt file giving an adjacency list of the graph and its umbrella-free ordering.
   Output: draw the interval graph and an interval model for it.

3. Find a maximum clique of an interval graph (**Alzaidi, Esraa R**.)
   Input: a txt file giving an adjacency list of the graph and its umbrella-free ordering.
   Output: the vertex set of a maximum clique.

4. Find a maximum independent set of an interval graph (**Amirineni, Krishna Karthik**.)
   Input: a txt file giving an adjacency list of the graph and its umbrella-free ordering.
   Output: the vertex set of a maximum independent set.

5. Find a minimum clique cover of an interval graph (**Balupalli, Raghav Reddy**)
   Input: a txt file giving an adjacency list of the graph and its umbrella-free ordering.
   Output: the vertex sets of cliques forming a minimum clique cover.

6. Find a minimum coloring of an interval graph (**Bitra, Ashok Chakravarthy**)
   Input: a txt file giving an adjacency list of the graph and its umbrella-free ordering.
   Output: for each vertex give its color in a minimum coloring found.