1. Title: Implementing graph colouring algorithms
2. Coordinator: Rahul Muthu
4. Students:
   - Mohit Kumar Mittal(200601110)
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5. Prerequisites:
   - Graph Theory
   - Algorithms
   - Basic Programming
6. Project details
   - Implement acyclic edge colouring by a Vizing like algorithm and Kempe Chains, with $\Delta + 2$ colours
   - Implement a factorisation algorithm to factor a graph into its prime factors
   - Implement an algorithm to check whether an input graph is a line graph, and to obtain the original graph in case it is.
   - Implement an algorithm to find a $\Delta(G)$-regular supergraph of a given graph $G$.
   - Implement an algorithm to generate instances of graphs of various well known graph families.
   - Test the implemented acyclic colouring algorithm on all these graphs
   - Factor instances of various graphs and test the acyclic edge colouring algorithm on prime factors (if possible with only $\Delta + 1$ colours).