Experiment 8

Objective: To implement greedy algorithms for finding the Minimum Spanning Tree (MST) of a given graph.

Brief Theory: A Minimum Spanning Tree (MST) is a subset of edges in a weighted graph that connects all vertices without forming cycles and minimizes the total edge weight. Two main algorithms, Prim's and Kruskal's, solve MST problems. Prim's algorithm starts from a vertex, adding the shortest edges to neighboring vertices, while Kruskal's algorithm selects edges based solely on weight to form a cycle-free spanning tree.

Task: 1) Write a program to find the Minimum Spanning Tree using the Prim's algorithm.
Task: 2) Write a program to find the Minimum Spanning Tree using the Kruskal's algorithm.
Task: 3) Compare the execution time of **Task 1** and **Task 2**.

Apparatus and components required: Computer with C or C++ Compiler and Linux platform.

Experimental/numerical procedure: Coding, compilation, editing, run and debugging.