Laboratory work number 5

Subject: Greedy Algorithms

Overview:

A greedy algorithm is an approach for solving a problem by selecting the best option available at the moment. It doesn't worry whether the current best result will bring the overall optimal result. The algorithm never reverses the earlier decision even if the choice is wrong. It works in a top-down approach. This algorithm may not produce the best result for all the problems. It's because it always goes for the local best choice to produce the global best result.

**BASIC TASK**:

1 Study the greedy algorithm design technique.

2 To implement in a programming language algorithms Prim and Kruskal.

3 Empirical analyses of the Kruskal and Prim

4 Increase the number of nodes in graph and analyze how this influences the algorithms. Make a graphical presentation of the data obtained

5 To make a report.

Links where you can find theory about the alghoritms and greedy method:

* <https://www.geeksforgeeks.org/greedy-algorithms/>
* <https://www.tutorialspoint.com/data_structures_algorithms/greedy_algorithms.htm>
* <https://www.scaler.com/topics/prims-and-kruskal-algorithm/>