

CS 254 Design and Analysis of Algorithms Lab
Spring Semester, 2023-24, IIT Indore

Assignment 8

1. Given an undirected weighted graph, a maximum spanning tree is a spanning tree having maximum weight. Devise algorithm to generate maximum spanning tree using union-find.
2. Given a graph with n nodes and m edges where each edge has a color (either black or green) and a cost associated with it. Find the minimum spanning tree of the graph such that every path in the tree is made up of alternating colored edges.
3. Find the second best MST of a given graph, which is a spanning tree with the second minimum weight sum of all edges, out of all spanning trees of graph G .