

## DATA STRUCTURE AND PROGRAM DESIGN LAB-08

8. Write a program which accepts undirected graph and a starting node, determine the lengths of the shortest paths from the starting node to all other nodes in the graph. If a node is unreachable, its distance is -1. Nodes will be numbered consecutively from 1 to  $n$ , and edges will have varying distances or lengths. Find the sub tree using Dijkstra algorithm.

SAMPLE OUTPUT:

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS C:\Users\prach\OneDrive\Attachments\Desktop\DSPD LAB> gcc Practical-8.c
PS C:\Users\prach\OneDrive\Attachments\Desktop\DSPD LAB> ./a.exe
Enter number of vertices: 4
Enter number of edges: 5
Enter edges (u v weight):
2 6 9
7 2 6
11 85 811
78 58 96
1 5 8

Edges in Minimum Spanning Tree:
7 - 2  weight: 6
1 - 5  weight: 8

Total cost of Minimum Spanning Tree = 14
PS C:\Users\prach\OneDrive\Attachments\Desktop\DSPD LAB> 
```