G H raisoni COLLEGE | Engineering and Management Pune

An Empowered Autonomous Institute, Affiliated to SPPU, Pune

Department of CSE (AI&ML)

Subject - DAA (UCAML301)

TAE - II Poster Presentation

KRUSKAL'S ALGORITHM

"Kruskal's Algorithm, devised by Joseph Kruskal, is a brilliant algorithm in graph theory used to find the Minimum Spanning Tree (MST) of a connected, undirected graph. The Minimum Spanning Tree is the smallest tree that spans all the vertices in the graph, without any cycles and with the minimum possible total edge weight.Kruskal's Algorithm, devised by Joseph Kruskal, is a brilliant algorithm in graph theory used to find the Minimum Spanning Tree (MST) of a connected, undirected graph. The Minimum Spanning Tree is the smallest tree that spans all the vertices

Example of Kruskal Algorithm

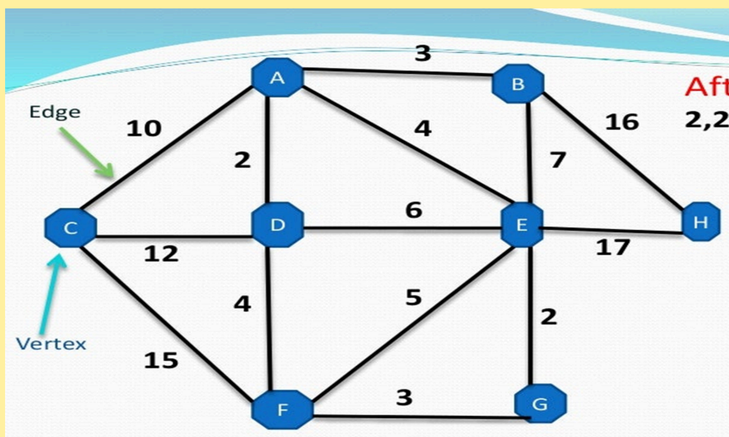


Fig: Kruskal's Algorithm....

fig: Final Graph

Here weights are: 10,12,15,2,4,3,4,6,5,3,7,2,16,17

APPLICATIONS:

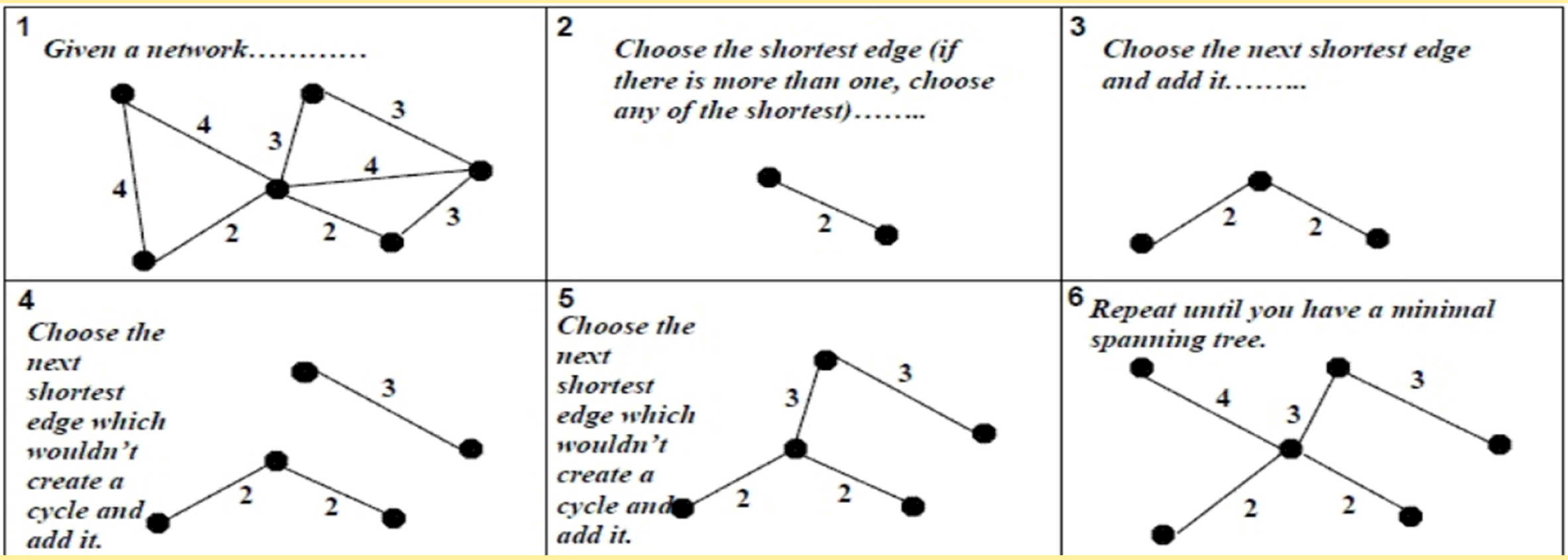
1)Network Design: Efficiently connects cities, routers, or any network nodes.

2)Circuit Design: Minimizes wiring cost in electronic circuits.

3)Cluster Analysis: Identifies clusters of similar data points.

4)Robotics: Plans efficient paths for robots in various environments.

✦ Diagram Demonstrating the step-by-step process of Kruskal's Algorithm:



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