Pseudocode for Prim’s algorithm

1.Remove all self-loops and parallel edges (keep the minimum weight/cost)

2.While adding a new edge to the MST, select edge with minimum weight out of the edges from already visited vertices.

3.Stop at n-1 edges (n is the total number of vertices)

Pseudocode for Kruskal’s Algorithm:

1.Remove all the self-loops and parallel edges (keep the minimum weight/cost)

2.Sort the weight/cost of the edges in increasing order.

3.While adding a new edge in the MST, select edge with minimum weight out of the remaining edges.

4.Stop at n-1 edges (n is the total number of vertices)

Pseudocode of BFS

Function BFS(G,S) //Here G is the graph, and S is the source node

Let Q be a queue

Q.push(S) //inserting S in the stack until all its neighbors are markd

Mark S as visited

While(Q is not empty)

//remove that vertex from the queue, whose neighbors will be explored now

V = Q.dequeue();

//now explore all the adjacent vertex of V (that are not visited)

For all the neighbors w of v in graph G

If w is not visited

Q.enqueue(w);

Mark w as visited;

PSUEDOCODE FOR DFS

Function DFS(G,s) //here G is the graph, and s is the source node

Let S be a stack;

S.push(s); // inserting s to the stack

Mark s as visited

While(S is not empty)

//remove a vertex so that next vertex can be visited

V = S.top();

S.pop();

//now push all the neighbors of V in stack that are not visited

For all the neighbors w of V in Graph G

If w is not visited

S.push(w);

Mark w as visited;

TOPOLOGICAL SORT PSUEDOCODE

L —> An empty list that will contain the sorted elements

S —> A set of all vertices with no incoming edges (i.e., having indegree 0)

while S is non-empty do

remove a vertex n from S

add n to tail of L

for each vertex m with an edge e from n to m do

remove edge e from the graph

if m has no other incoming edges, then insert m into S

insert m into S

if graph has edges then

return report “graph has at least one cycle”

else

return L “a topologically sorted order”

A white sheet with black text

Description automatically generated