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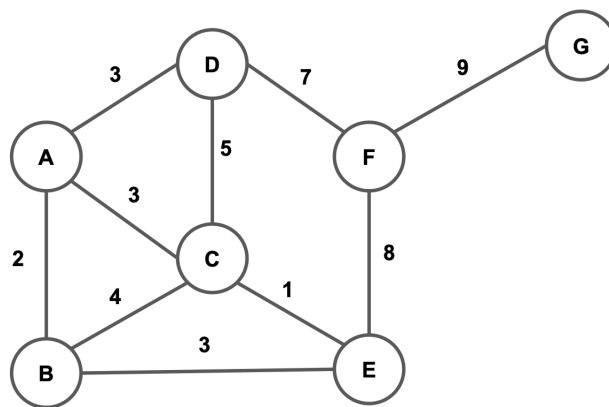
Location: Santiago, Chile.

Prim Algorithm

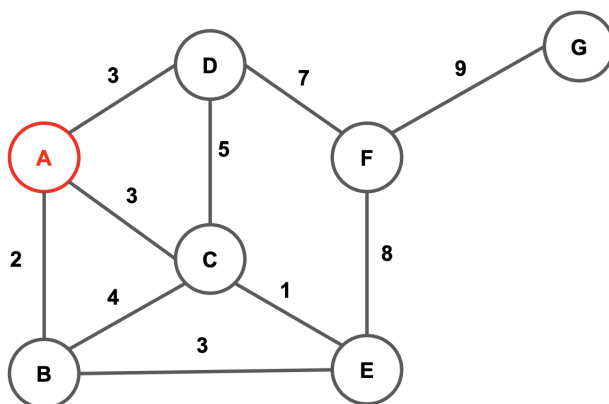
Minimum Spanning Tree (MST)

A minimum spanning tree (MST) is a subset of the edges of a connected, undirected graph that connects all the vertices with the most negligible possible total weight of the edges.

Step 0: We have a graph with the corresponding values to the edges.

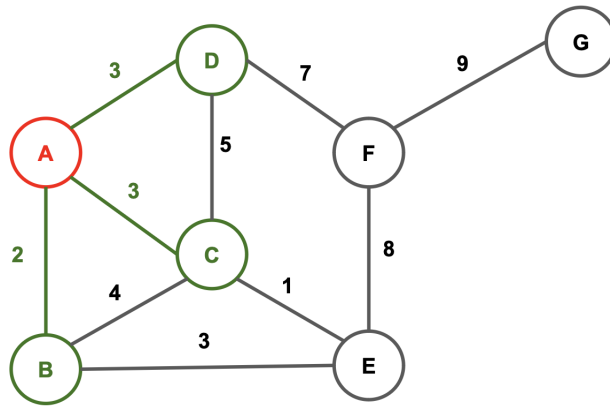


Step 1: Pick a node.



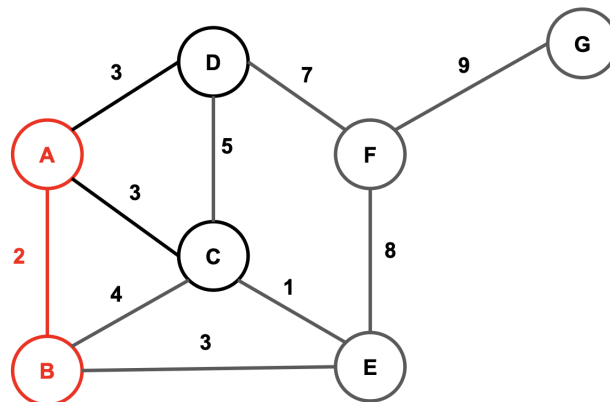
Visited Nodes: $\{A\}$

Step 2: Expand the graph by one edge.



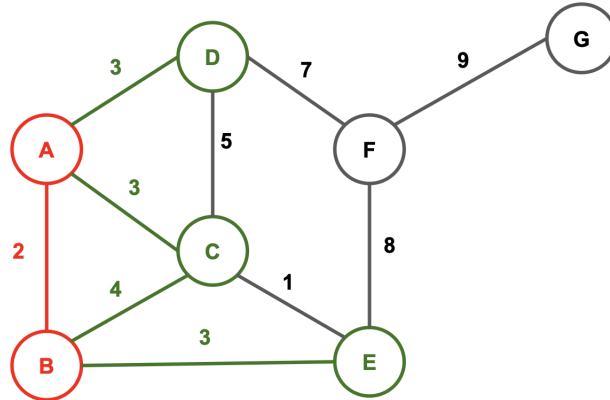
Visited Nodes: $\{A\}$

Step 3: Choose the edge with the minimum value which don't create a cycle and wasn't visited before.



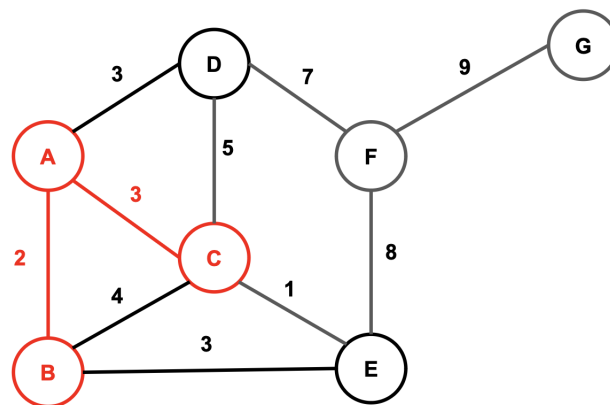
Visited Nodes: $\{A, B\}$

Step 4: Expand the graph by one edge.



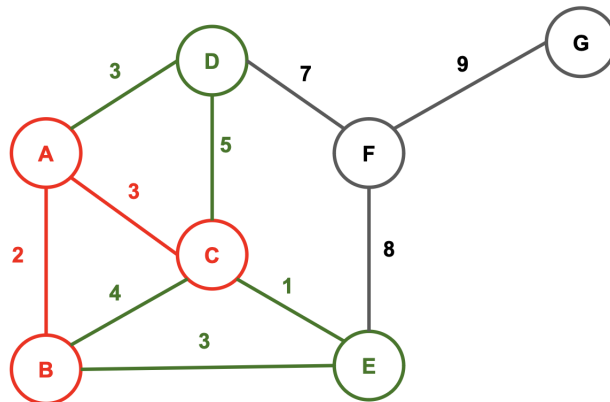
Visited Nodes: $\{A, B\}$

Step 5: Choose the edge with the minimum value which don't create a cycle and wasn't visited before.



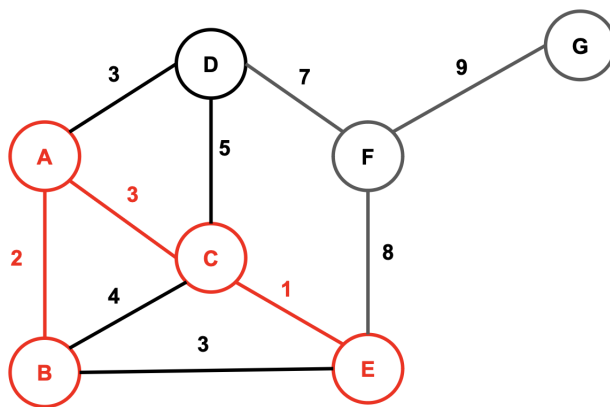
Visited Nodes: $\{A, B, C\}$

Step 6: Expand the graph by one edge.



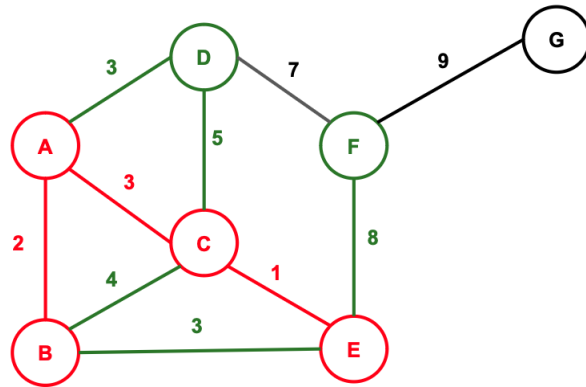
Visited Nodes: {A, B, C}

Step 7: Choose the edge with the minimum value which don't create a cycle and wasn't visited before.



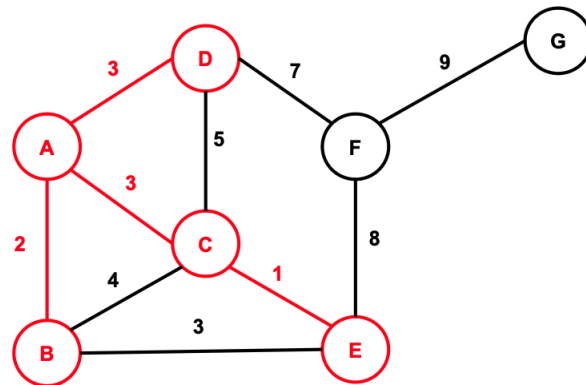
Visited Nodes: {A, B, C, E}

Step 8: Expand the graph by one edge.



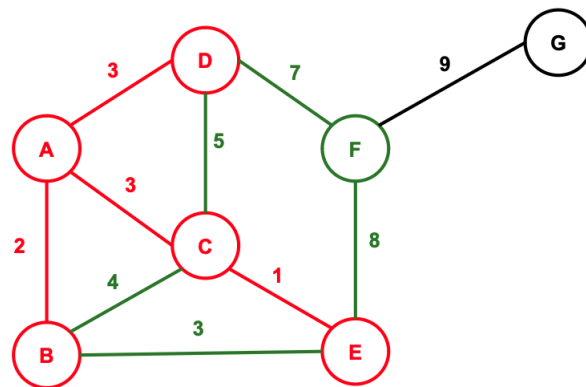
Visited Nodes: $\{A, B, C, E\}$

Step 9: Choose the edge with the minimum value which don't create a cycle and wasn't visited before.



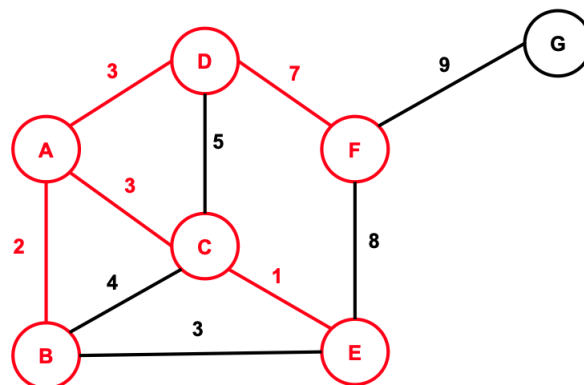
Visited Nodes: $\{A, B, C, E, D\}$

Step 10: Expand the graph by one edge.



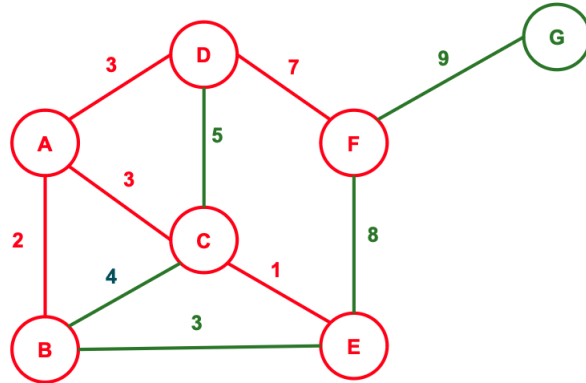
Visited Nodes: $\{A, B, C, E, D\}$

Step 11: Choose the edge with the minimum value which don't create a cycle and wasn't visited before.



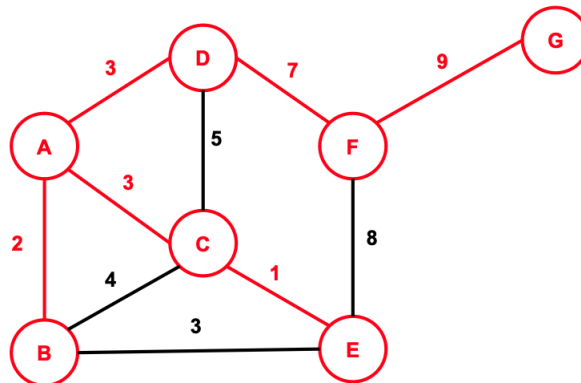
Visited Nodes: $\{A, B, C, E, D, F\}$

Step 12: Expand the graph by one edge.



Visited Nodes: $\{A, B, C, E, D, F\}$

Step 13: Choose the edge with the minimum value which don't create a cycle and wasn't visited before.



Visited Nodes: $\{A, B, C, E, D, F, G\}$

Step 14: We finally have the minimum spanning tree.

