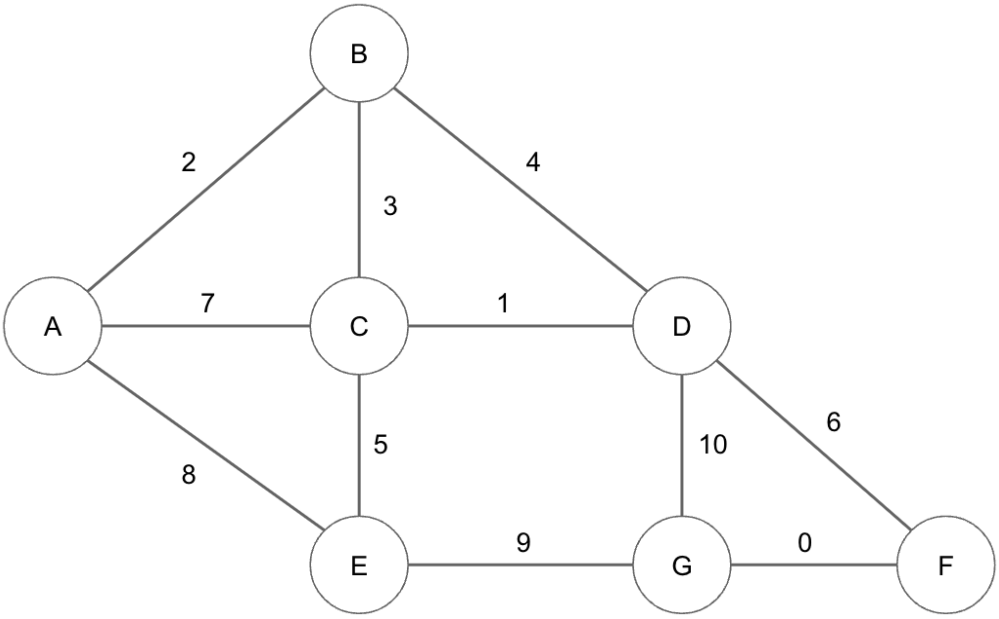
Section 09: MSTs and Project Sidewalk

1. Prim's (Minimum Spanning Tree)

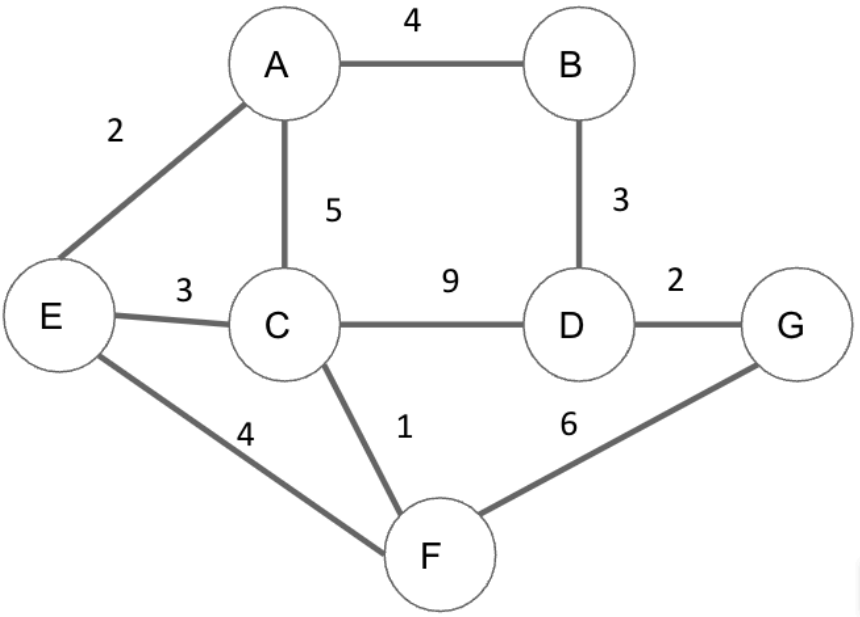
Calculate the Minimum Spanning Tree starting from A.



	dist	edge	processed
A	0	–	
B			
C			
D			
E			
F			
G			

2. Kruskal's (Minimum Spanning Tree)

Calculate the Minimum Spanning Tree. Indicate which components are connected in the table provided, and write down each step that occurs during the algorithm.



	Disjoint set components
A	
B	
C	
D	
E	
F	
G	

Steps:

3. Naive Approach: Potential drawbacks to consider…

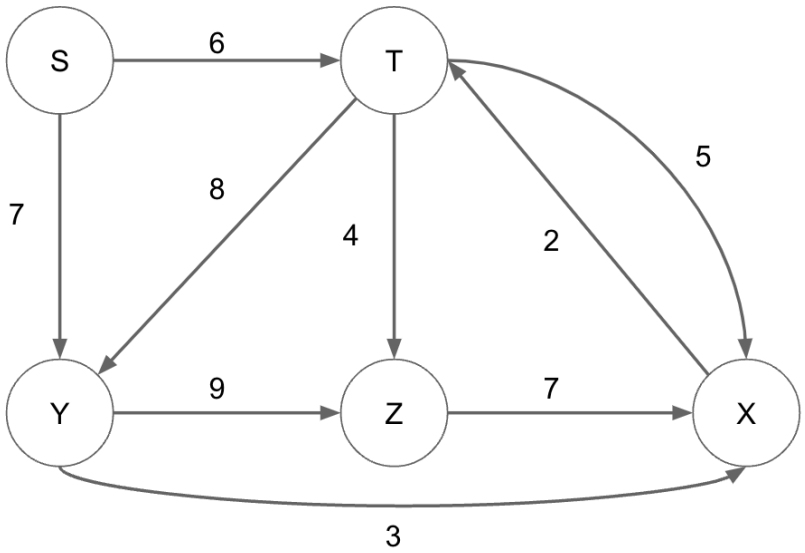
As we construct the graph, explicitly check if an edge has been deemed as "inaccessible"

- If yes, move on to other edges
    - Don't allow it to be part of our graph setup for Dijkstra's!
- If no, add it into the edge set

Draw out what this graph would look like without the inaccessible edges before we run Dijkstra's from S, given the set of inaccessible edges below.

Set of inaccessible edges:

- S –> T
- S –> Y



Are there any potential drawbacks to this algorithm to consider? How might this algorithm not work the way we expect it to?

4. Diverse Factors; Diverse Weights

In the previous examples, we were only concerned about physical access as being a barrier to accessibility. What other factors or aspects of paths may be of interest to users? What are other possible barriers to accessibility?

Here's one example, please come with others:

1. Safety of the path

2.

3.

4.