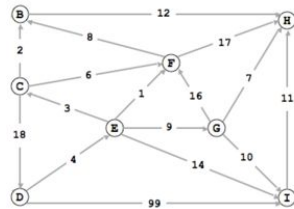


Assignment 9

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- Let vertex **C** be the source. Run Dijkstra's shortest path algorithm on the graph below.



- C, B, F, H, D, E, G, I
 - B: 2

C: 0

D: 18

E: 22

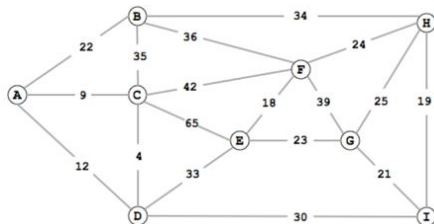
F: 6

G: 31

H: 14

I: 36

$d[v] = 129$
- Given an undirected weighted graph, list the edges in the MST in the order in which they are discovered by Prim's algorithm, starting the search at vertex A. Since all edge weights are distinct, identify each edge by its weight.



A	C	D	B	I	H	G	E	F
1	9	4	22	30	19	21	23	18

- The way that you would find the shortest path from s to any vertex on the graph would be to Dijkstra's algorithm due to the fact that if you use the suboptimal property from the shortest path problem. In addition, a subpath would also be the shortest path due to the property