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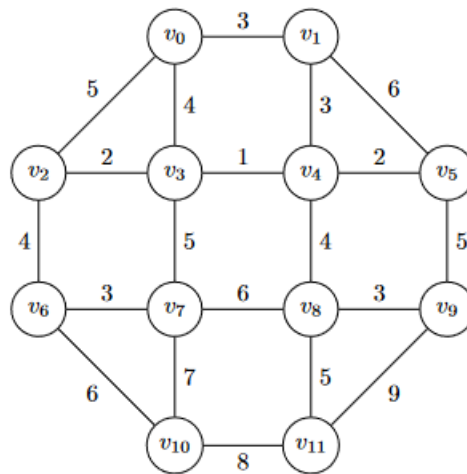
1 Dijksta's 1

Suppose Dijkstra's SSSP algorithm is run on the below graph

a) Show the contents of D

$$D = [0, 3, 5, 4, 5, 7, 9, 9, 9, 12, 15, 14]$$

b) show the contents of P

$$P = [0, 0, 0, 0, 3, 4, 2, 3, 4, 5, 6, 8]$$

2 Dijksta's 2

Suppose Dijkstra's SSSP algorithm return the following D and P for sime input graph G.
$D = [0, 30, 32, 2, 8, 10, 5, 7, 18]$
$P = [0, 0, 1, 0, 7, 0, 3, 6, 5]$

a) How many vertices are in G?

There are 9 vertices

b) What is the shortest bath from v_0 to v_4

$$\{v_0, v_3, v_6, v_7, v_4\}$$

c) What is the weight of the shortest path from v_0 to v_2

The weight of the shortest path from vertex 0 to vertex 2 is 32