

The Shortest Path Algorithm. (Algorithm Moore)

(How to find the shortest path from vertex s to vertex t)

1-Label Vertex s with 0.

2- set $i=0$

3-Find all unlabeled vertices adjacent to a vertex labeled i .

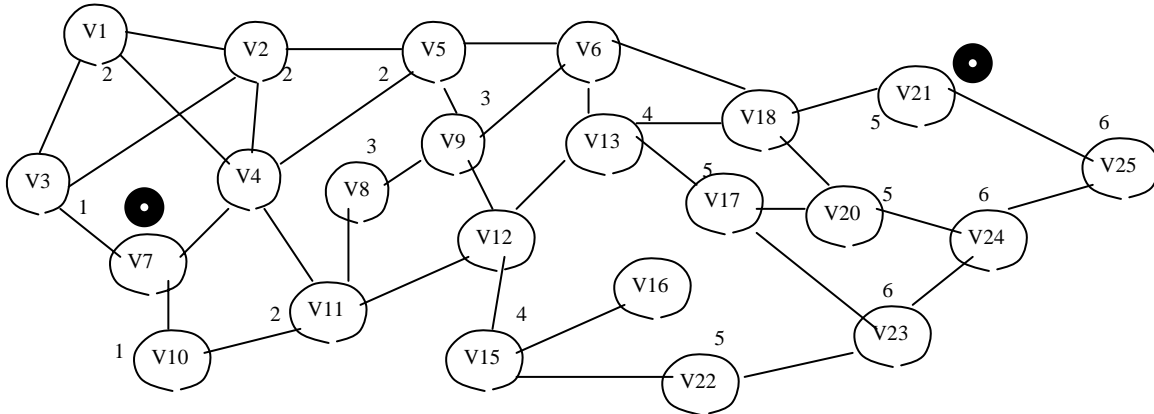
4- Label the vertices just found with $i+1$

5- If vertex t is labeled then **backtracking** gives the shortest path.

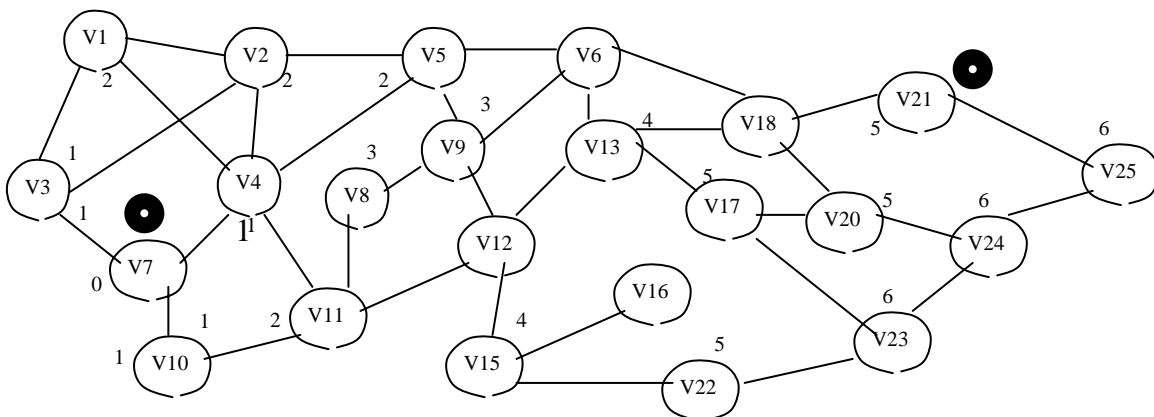
Example:

Find the shortest path from v_7 to v_{21} in the following graph using Moore's Algorithm

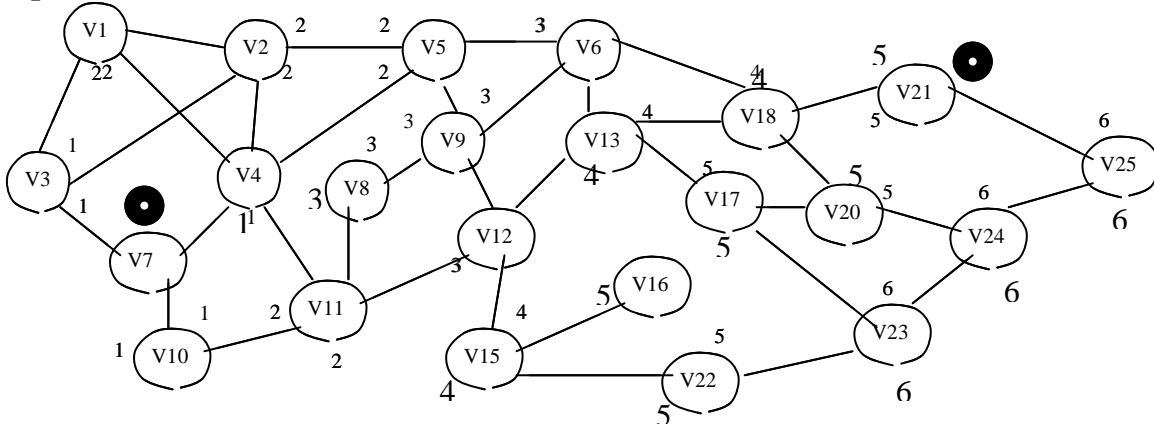
All edges are equal. (here $s=v_7$ and $t=v_{21}$)



Step 1.



Step



Shortest Path: V21-V18-V6-V5-V4-V7