

Time Complexity :-

* Dijkstra's algo. takes $O(n^2)$ in both adj list and adj matrix.

→ Complexity (Adj Matrix)

① Outer loop runs n times : $O(n)$

→ In each iteration we visited one vertex
 $O(n)$ to scan minimum weight vertex.

→ Each time we visit a vertex v , we have to scan all of its neighbour to update weight.

• $O(n)$ scan of adj. matrix to find all neighbour

→ Overall $O(n^2)$