SoulShift

SoulShift – Educational Q&A Platform

General Questions

Practice Questions

Q1. What is the time complexity of Dijkstra's algorithm when using a priority queue implemented with a binary heap?

A. O(V^2)
B. O(E log V)
C. O(V log V)
D. O(E + V)

Solution: The time complexity of Dijkstra's algorithm using a binary heap is O(E log V), where E is the number of edges and V is the number of vertices.

Q2. What will happen if Dijkstra's algorithm is run on a graph with negative weight edges?

A. It will still find the shortest path.
B. It may produce incorrect results.
C. It will terminate with an error.
D. It will only work for the first negative edge.

Solution: Dijkstra's algorithm may produce incorrect results if there are negative weight edges in the graph.