

1. What does the question mean?

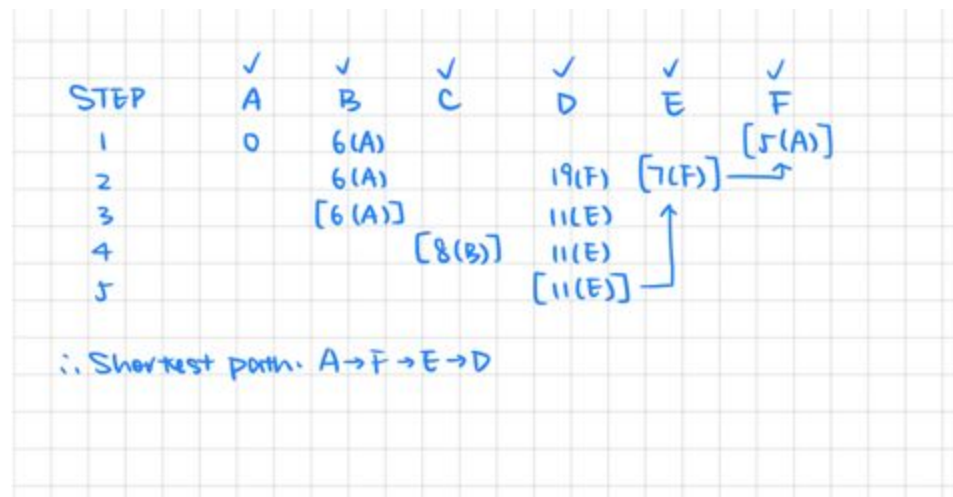
The question asks the student to simulate the condition of a fictional town, to see how the taxi project will actually work with existing algorithm (Dijkstra's algorithm).

2. Why this question?

The question will help the examiner to assess students' on whether the student understand key terms/concepts that's vital to understand the case study (Dijkstra's algorithm)

3. What is the answer to the question?

- a. Mark all vertices as unvisited. Set initial vertex as current.
- b. For the current vertex, consider all its unvisited neighbors and calculate the distance to each one of them. If this distance to a neighboring vertex is less than the previously recorded distance then overwrite this distance.
- c. After considering all neighbors of the current vertex, mark it as visited. A visited vertex will not be checked ever again; its distance recorded now is final and minimal.
- d. Set the unvisited vertex with the smallest distance (from the initial vertex) as the next "current vertex" and continue from step 2.



- e. When all the vertices have been visited, STOP.

4. what is a question for this year's case study that uses the same why (rationale or connection)?

Given the condition that two places called Contenti and Extremadura in Bangbai are experiencing traffic jam, while Monga is experiencing a blaze. Please explain, in this situation, how the CAD system will keep the information up to date by utilizing stateful connection, and how the accidents will be prioritized.