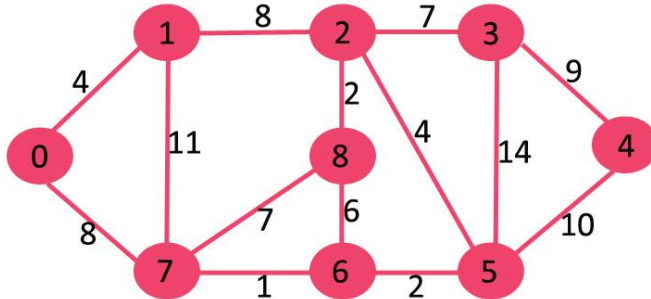


Name:

ID:

1. **[Written]** Simulate Dijkstra's Algorithm on the following graph: (source: 0)



DIJKSTRA(G, w, s)

```

1  INITIALIZE-SINGLE-SOURCE( $G, s$ )
2   $S = \emptyset$ 
3   $Q = G.V$ 
4  while  $Q \neq \emptyset$ 
5       $u = \text{EXTRACT-MIN}(Q)$ 
6       $S = S \cup \{u\}$ 
7      for each vertex  $v \in G.Adj[u]$ 
8          RELAX( $u, v, w$ )
    
```

2. **[Coding]** Implement the code for Set Intersection.
3. **[Written] [Coding]** Implement the code for Dijkstra's algorithm for the following graph: (source: 0)

