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## Dijkstra's Example

For the following graph, what is the **length** of the shortest path from **D** to all other vertices?

```

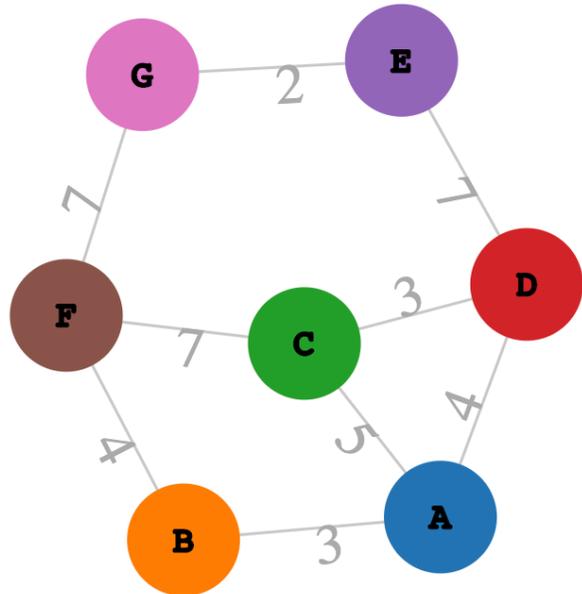
FUNCTION Dijkstra(G, start_vertex)
  found = {}
  lengths = {v: INFINITY FOR v IN G.vertices}

  found.add(start_vertex)
  lengths[start_vertex] = 0

  WHILE found.length != G.vertices.length
    FOR v IN found
      FOR vOther, weight IN G.edges[v]
        IF vOther NOT IN found
          vOther_length = lengths[v] + weight
          IF vOther_length < min_length
            min_length = vOther_length
            vMin = vOther
      found.add(vMin)
      lengths[vMin] = min_length

  RETURN lengths

```



A	B	C	D	E	F	G
			0			

You must show your work below to receive full credit. Specifically, show your candidate edges for each iteration of Dijkstra's Shortest Path Algorithm. `min_length` is set to infinity at the top of every while-loop iteration.