Algorithms, Dijkstra’s Example - Wednesday, September 30, 2020

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

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