Modified Dijkstra's

1

1. Given vertices `u` and `v`, initialize the value of `u` to `1` and all other vertices to `0`
2. Change the internal implementation of the priority queue to a max heap.
   - To ensure the final path traversed is the most reliable, the edges with the highest rates of success must be visited first
3. When relaxing the outgoing vertices (updating the table storing the best path to each vertex), multiply the value of the parent vertex by the value of the current edge and use the `max` function to make a decision to update any present value in the outgoing vertices
   - Since the rates of success of transmission are an independent event, they can be multiplied to get the overall success rate of a path

2

1. Given vertices `a` and `b`, initialize the value of all vertices to `inf`
2. Change the internal implementation of the priority queue to a max heap.
   - To ensure the final path traversed has the maximum bandwidth, the edges with the highest bandwidth must be visited first
3. When relaxing the outgoing vertices (updating the table storing the best path to each vertex), use the `min` function on the value of the parent vertex and the current edge
   - Since the overall path's bandwidth is the minimum along the whole path, the above approach ensures the final value stored for the path traversed is the minimum across it

#homework