Prob3.

Dijkstra calculate the shortest path for two vertexes, but we want to find the max-probability path for two vertexes. Where x is the start vertex, and y is the end vertex. G is the graph, r is probability set.
Pseudo-code:

```
Relax(u,v,r)
    If v.p <u.p*r(u,v):
        v.p = u.p*r(u,v)
        v.π = u

Initialize_single_source(G,x):
    For each vertex v ∈G.V:
        v.p = 0
        v. π = Null
    s.p =1

Reliability (G, r, x, y)
1.  Initialize_single_source(G,x)
2.  S = Φ
3.  Q = G.V
4.  While Q  != Φ do:
5.      U = Extract-Max(Q) // v time
6.      S = S U{u}
7.      for each vertex v ∈ G.Adj[u] do: // v time
8.          Relax(u,v,r)
9.      end for
10. end while
11. answer = list<vertex>
12. answer.push_front(y)
13. while y != x:
14.     answer.push_front(y. π)
15.     y = y. π
16. end while
17. answer.push_front(x)
18. return answer
```