Day 54

Code-

class Solution {

public:

double maxProbability(int n, vector<vector<int>>& edges, vector<double>& succProb, int start, int end) {

vector<vector<pair<double, int>>> adjList(n);

for(int i=0; i<edges.size(); i++) {

int a=edges[i][0], b=edges[i][1];

double p=succProb[i];

adjList[a].push\_back({p, b});

adjList[b].push\_back({p, a});

}

priority\_queue<pair<double, int>> unvisited;

vector<double> max\_prob(n, 0);

unvisited.push({1, start});

max\_prob[start]=1;

while(unvisited.empty()==false) {

double curr\_prob = unvisited.top().first;

int curr\_index = unvisited.top().second;

unvisited.pop();

if(curr\_index==end)

return curr\_prob;

for(int i=0; i<adjList[curr\_index].size(); i++) {

double adj\_prob = adjList[curr\_index][i].first;

int adj\_index = adjList[curr\_index][i].second;

if(curr\_prob\*adj\_prob > max\_prob[adj\_index]) {

unvisited.push({curr\_prob\*adj\_prob, adj\_index});

max\_prob[adj\_index]=curr\_prob\*adj\_prob;

}

}

}

return 0;

}

};

Time complexity – O(e\*(logv)

Space complexity-O(1)

