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   Time complexity: O(V + E)
   Space complexity: O(V^2)
   where V is the number of vertices in the input graph and
   E is the number of edges in the input graph
. . .
import queue
from sys import stdin, setrecursionlimit
setrecursionlimit(10**6)
class Graph:
   def init (self, nVertices):
       self.nVertices = nVertices
        self.adjMatrix = [[0 for i in range(nVertices)] for j in range(nVertices)]
   def addEdge(self, v1, v2):
       self.adjMatrix[v1][v2] = 1
       self.adjMatrix[v2][v1] = 1
   def removeEdge(self):
       if self.containsEdge(v1, v2) is False :
            return
       self.adjMatrix[v1][v2] = 0
       self.adjMatrix[v2][v1] = 0
   def containsEdge(self, v1, v2):
       if self.adjMatrix[v1][v2] > 0:
           return True
        else:
            return False
   def str (self):
       return str(self.adjMatrix)
   def getPathBFS(self, sv, ev, visited) :
       mapp = \{\}
       q = queue.Queue()
       if self.adjMatrix[sv][ev] == 1 and sv == ev :
            ans = []
            ans.append(sv)
            return ans
        q.put(sv)
       visited[sv] = True
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while q.empty() is False :
            front = q.get()
            for i in range(self.nVertices) :
                if self.adjMatrix[front][i] == 1 and visited[i] is False :
                    mapp[i] = front
                    q.put(i)
                    visited[i] = True
                    if i == ev :
                        ans = []
                        ans.append(ev)
                        value = mapp[ev]
                        while value != sv :
                            ans.append(value)
                            value = mapp[value]
                        ans.append(value)
                        return ans
        return []
    def getPathBFS(self, sv, ev) :
        # Return empty list in case sv or ev is invalid
        if (sv > (self.nVertices - 1)) or (ev > (self.nVertices - 1)) :
            return list()
        visited = [False for i in range(self.nVertices)]
        return self. getPathBFS(sv, ev, visited)
# Main
li = stdin.readline().strip().split()
V = int(li[0])
E = int(li[1])
g = Graph(V)
for i in range(E) :
    arr = stdin.readline().strip().split()
    fv = int(arr[0])
    sv = int(arr[1])
    g.addEdge(fv, sv)
li = stdin.readline().strip().split()
sv = int(li[0])
```