

```

1 # user function Template for python3
2 class Solution:
3     def graphColoring(self, v, edges, m):
4         adj = [[] for _ in range(v)]
5         for u, w in edges:
6             adj[u].append(w)
7             adj[w].append(u)
8         color = [0] * v
9
10        def isSafe(node, c):
11            for nei in adj[node]:
12                if color[nei] == c:
13                    return False
14            return True
15
16        def solve(node):
17            if node == v:
18                return True
19            for c in range(1, m + 1):
20                if isSafe(node, c):
21                    color[node] = c
22                    if solve(node + 1):
23                        return True
24                    color[node] = 0
25            return False
26
27        return solve(0)

```

class Solution:

```

def graphColoring(self, v, edges, m):
    adj = [[] for _ in range(v)]
    for u, w in edges:
        adj[u].append(w)
        adj[w].append(u)
    color = [0] * v

    def isSafe(node, c):
        for nei in adj[node]:
            if color[nei] == c:
                return False
        return True

    def solve(node):
        if node == v:
            return True
        for c in range(1, m + 1):
            if isSafe(node, c):
                color[node] = c
                if solve(node + 1):
                    return True
                color[node] = 0
        return False

    return solve(0)

```