H5_2) DirectPath

Problem Submissions Leaderboard

Submitted 3 minutes ago • Score: 60.00 Status: Accepted

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Submitted Code

Language: Python 3 Open in editor

```python
def getNum(letter):
    return ord(letter) - ord("A")

def getLetter(num):
    return chr(num + ord("A"))

def AdjacencyMatrix(V, edges):
    graph = [[False]*V for _ in range(V) ]

    for edge in edges:
        X,Y = (edge)
        i, j = getNum(X),getNum(Y)

        graph[i][j] = True
        graph[j][i] = True
    return graph


def DFS_DirectPath(graph, start, end):
    size = len(graph)
    visited = [False]*size
    stack = [getNum(start)]
    path = []

    while stack:
        current = stack.pop()

        if getLetter(current) == end:
            path.append(getLetter(current))
            word = ""
            for letter in path:
                word = word + letter
            print(word)
```

```
            return

        if visited[current]:
            if getLetter(current)==path[-1]:
                path.pop()
            continue
        else:
            visited[current] = True
            path.append(getLetter(current))

        new = False
        stack.append(current)
        for i in range(size):
            if graph[current][i] == True  and not visited[i]:
                new = True
                stack.append(i)

        if not new:
            path.pop()
    return


numbers = input()
numbers = tuple(map(int, numbers.split()))
V, E = numbers
letters = input()
letters = tuple(map(str, letters.split()))
start, end = letters
edges = []
for i in range(E):
    edge = input()
    edge = tuple(map(str,edge.split()))
    edges.append(edge)

graph = AdjacencyMatrix(V, edges)

DFS_DirectPath(graph, start, end)

```