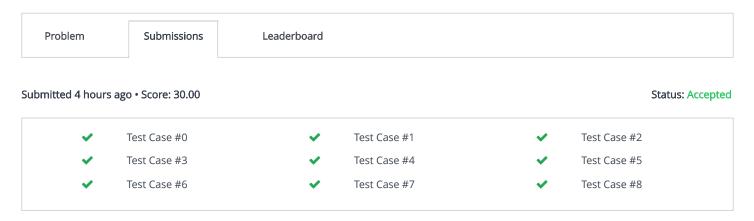
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H5_3)BFS_first



Submitted Code

```
Language: Python 3
                                                                                               Open in editor
1 def getNum(letter):
       return ord(letter) - ord("A")
3
4 def getLetter(num):
5
       return chr(num + ord("A"))
6
7
  def AdjacencyMatrix(V, edges):
8
       graph = [[False]*V for _ in range(V) ]
9
10
       for edge in edges:
11
           X,Y = (edge)
12
           i, j = getNum(X),getNum(Y)
13
14
           graph[i][j] = True
15
           graph[j][i] = True
16
       return graph
17
18 def BFS_First(graph, start, objectives):
19
       stack = [getNum(start)]
20
       size = len(graph)
21
       visited = [False]*size
22
23
       while stack:
24
           node = stack.pop(0)
25
26
           for end in objectives:
27
               if getLetter(node) == end:
28
                   print(end)
29
                   return
30
           if not visited[node]:
31
32
               visited[node] = True
               for i in range(size):
33
```

```
34
                   if graph[node][i] == True and not visited[i]:
35
                       stack.append(i)
36
37 numbers = input()
38 numbers = tuple(map(int, numbers.split()))
39 V, E, 0 = numbers
40 letters = input()
41 letters = list(map(str, letters.split()))
42 start = letters[0]
43 objectives = [letter for letter in letters[1:]]
44 edges = []
45 for i in range(E):
46
       edge = input()
47
       edge = tuple(map(str, edge.split()))
48
       edges.append(edge)
49
50 graph = AdjacencyMatrix(V, edges)
51
52 BFS_First(graph, start, objectives)
```

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