1)

```
VLetters = ['A', 'B', 'C', 'D', 'E', 'F', 'G', 'H']
V = [0] * 8
E = [
   [0, 4, 1],  # 'A' - 'E'
   [0, 7, 1],  # 'A' - 'H'
   [1, 0, 1],  # 'B' - 'A'
   [2, 5, 1],  # 'C' - 'F'
   [2, 6, 1],  # 'C' - 'G'
   [3, 0, 1],  # 'D' - 'A'
   [3, 4, 1],  # 'D' - 'E'
   [4, 2, 1],  # 'E' - 'C'
   [5, 3, 1],  # 'F' - 'D'
   [5, 4, 1],  # 'F' - 'E'
   [6, 1, 1],  # 'G' - 'B'
   [6, 4, 1],  # 'G' - 'E'
   [7, 3, 1]   # 'H' - 'D'
]
```

2)

- dregan17@Danny-Mac Week 4 % /opt/homebrew/bin/python3 "/Users/dregan17/Desktop/MC Code/6013 Algorithms and Discrete Structures/Week 4/inClassExercise.py"

```
Vertex A visited and received the stamp 0
DFS called for vertex A
Current array: [0, 'B', 'C', 'D', 'E', 'F', 'G', 'H']
Vertex E visited and received the stamp 1
DFS called for vertex E
Current array: [0, 'B', 'C', 'D', 1, 'F', 'G', 'H']
Vertex C visited and received the stamp 2
DFS called for vertex C
Current array: [0, 'B', 2, 'D', 1, 'F', 'G', 'H']
Vertex F visited and received the stamp 3
DFS called for vertex F
Current array: [0, 'B', 2, 'D', 1, 3, 'G', 'H']
Vertex D visited and received the stamp 4
DFS called for vertex D
Current array: [0, 'B', 2, 4, 1, 3, 'G', 'H']
Vertex G visited and received the stamp 5
DFS called for vertex G
Current array: [0, 'B', 2, 4, 1, 3, 5, 'H']
Vertex B visited and received the stamp 6
DFS called for vertex B
Current array: [0, 6, 2, 4, 1, 3, 5, 'H']
Vertex H visited and received the stamp 7
DFS called for vertex H
Current array: [0, 6, 2, 4, 1, 3, 5, 7]
```