Military Institute of Science and Technology
Computer Science and Engineering
CSE-204, Week 12 - Implementation of DFS

DFS pseudocode:

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DFS-iterative (G, s):                  //Where G is graph and s is source vertex

    let S be stack
    S.push( s )                        //Inserting s in stack

    while ( S is not empty):

        //Pop a vertex from stack to visit next
          v  =  S.pop( )
          mark s as visited.

        //Push all the neighbours of v in stack that are not visited
          for all neighbours w of v in Graph G:
          if w is not visited :
                S.push( w )
```

Task:

1. Implement DFS function for a single vertex.
2. Create a function that will automatically call DFS function for all vertices.
3. Find the number of groups and their members for a given graph.
4. Create a function that will take two vertices as input and find the number of their mutual friends and also show who they are.