CSE 250 Recitation

Mar 27 - Oct 31: Stacks, Queues, and Graph Traversals

Stacks vs Queues

What does the following code do when MysterySequence is a Stack? Queue?

What are the relevant operations for each?

What are their runtimes for different backing data structures?

```
val seq = new MysterySequence()
seq.addSomething("A")
seq.addSomething("B")
seq.addSomething("C")
seq.addSomething("D")
print(seq.removeSomething())
print(seq.removeSomething())
print(seq.removeSomething())
seq.addSomething("E")
print(seq.removeSomething())
seq.addSomething("F")
print(seq.removeSomething())
seq.addSomething("G")
seq.addSomething("H")
print(seq.removeSomething())
print(seq.removeSomething())
print(seq.removeSomething())
```

Graph Traversal
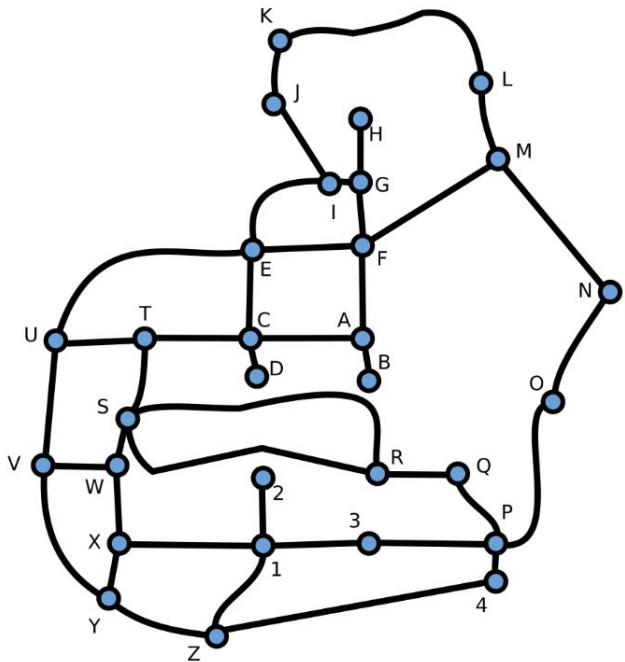
1. Insert an arbitrary starting node into the [DATASTRUCTURE]
2. While the [DATASTRUCTURE] is not empty:
   a. Remove a node from the [DATASTRUCTURE]
   b. Mark the node as visited
   c. Insert all of the node's unvisited neighbors into the [DATASTRUCTURE]

1. [DATASTRUCTURE] ← Stack
2. [DATASTRUCTURE] ← Queue