

Exercise 6: Stack data structure with linked list

a. Pseudo-code:

```
Node:
    data
    nextNode

Queue:
    top

function initStack:
    top = NULL

function enqueue(data):
    newNode = new Node()
    newNode.data = data
    newNode.nextNode = NULL

    top.nextNode = newNode
    top = newNode

function dequeue():
    if (head is not NULL):
        top = top.nextNode()

function front():
    if(top is NULL):
        return "empty"
    return top.data

function empty()
    return top is NULL
```

b. Complexity: $O(1)$ each operator