CMPT 202
Quiz 2

March 6, 2019

Name:

1. What is the printout for the following code? *This code compiles.*

```java
import java.util.Stack;
public class q1 {
        public static void main(String[] args) {
                Stack<String> s = new Stack<String>();
                s.push("a");
                s.push("b");
                System.out.println(s.pop());
        }
}
```

2. What is the printout for the following code? *This code compiles.*

```java
import java.util.*;
public class q2 {
        public static void main(String[] args) {
                Queue<Integer> q = new LinkedList<Integer>();
                q.add(5);
                q.add(4);
                q.add(3);
                System.out.println(q.remove());
                System.out.println(q.remove());
                System.out.println(q.remove());

        }
}
```

3. Assume `elements` is a `List<String>`. implement the add and remove methods of a Queue<T>. Remember that the remove method will check if the list is empty.

```
public void add(T element) {




}
public T remove(T element) {




}
```

4. Given the nodes A → B → D, and assuming that each node has a `next` variable and are respectively called, A, B, and D. Write pseudocode that will add the node C to the list in the position: A → B → C → D

```
Node a = new Node();
Node b = new Node();
Node c = new Node();
Node d = new Node();
a.next = b;
b.next = d;
```

5. Assume you are using the array `a = [2,3,4,null,null]` to store the elements of a queue. Assume that the front of the queue is *always* at index 0. Draw the array after adding 10.

   Write code that would add 10 to the array. Remember that the array's name is `a`.

6. Will this code compile? Why or why not?

   ```
   Object a = new String("a");
   System.out.println(a.charAt(0));
   ```

7. Will this code compile? If so, why? If not, use generics to fix it.

   ```
   LinkedList a = new LinkedList();
   a.add(1);
   Integer b = a.get(0);
   ```