CSC 212 Homework # 3 Solution to Selected Problems
Stacks & Recursion

Problem 1

Problem 2

1.
```
public static<T> void removeLast(Stack<T> st) {
        if (st.empty())
                return;
        Stack<T> s = new Stack<T>();
        while(!st.empty())
                s.push(st.pop());
        s.pop();
        while(!s.empty())
                st.push(s.pop());
}
```

2.

Problem 3

Problem 4

1.
2.
```
public void reverse() {
        recReverse(0, size - 1);
}
private void recReverse(int i, int j) {
        if (i >= j)
                return;
        T tmp = data[i];
        data[i] = data[j];
        data[j] = tmp;
        recReverse(i + 1, j - 1);
}
```

Problem 5

1.

```
public <T> void insertAtBottom(Stack<T> st, T e) {
        if (st.empty())
                st.push(e);
        else {
                T tmp = st.pop();
                insertAtBottom(st, e);
                st.push(tmp);
        }
}
```

2.

```
public <T> void reverse(Queue<T> q) {
        if (q.length() == 0)
                return;
        T tmp = q.serve();
        reverse(q);
        q.enqueue(tmp);
}
```

3.

4.