CS 340 Spring 2022
Programming Quiz 1

Due 11:59 PM Wednesday February 2
Implement the SortedIntList class shown on the following slides. See the discussion in class for more details about the structure of the list.

The class implements a list of ints that are maintained in both ascending and descending order. For each int in the list there must only be one node.

You can add private methods and instance variables as needed.

Include your name in a comment at the top of the file.
Programming Quiz 1

```java
import java.io.*;
import java.util.*;

class SortedIntList {
    //Implements a list of ints
    //the ints can be accessed in ascending or descending order
    //there is only 1 node for each int

    private class Node {
        private int data;
        private Node next[]; //next[0] is the next reference for ascending order
        //next[1] is the next reference for descending order

        private Node(int d, Node aN, Node dN) {
            data = d;
            next = new Node[2];
            next[0] = aN;
            next[1] = dN;
        }
    }
}
```
private Node heads[]; //heads[0] is the head of the ascending order list
    //heads[1] is the head of the descending order list

class SortedIntList {
    heads = new Node[2];

    public void insert(int d) {
        //insert d into the list maintaining the ascending and descending orders
    }

    public void remove(int d) {
        //remove all occurrences of d from the list maintaining the ascending and descending orders
    }
}
public void ascPrint() {
    //print a comma delimited list of the ints in ascending order
}

public void descPrint() {
    //print a comma delimited list of the ints in descending order
}
Programmed Quiz 1 Submission

• Upload one zip file called pq1.zip to Canvas. The zip file must contain only one file called SortedIntList.java. Do not upload your whole Eclipse project!

• You have to write code to test your program but I will write my own test driver. Do not upload your test driver code.