Week 5 lab
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1   UALabList class

```
public class UALabList {

        UANumber head;

        public void insert(UANumber s) {

                if (head == null) {

                        head = s;
                } else {

                        if (s.x <= head.x) {

                                UANumber i = head;

                                while(i.next != null && s.x <= i.next.x) {
                                        i = i.next;
                                }

                                if(i.next == null) {

                                        s.prev = i;
                                        i.next = s;
                                } else {

                                        s.prev = i;
                                        s.next = i.next;
                                        i.next.prev = s;
```

```
                                        i.next = s;
                        }

                } else {

                        s.next = head;
                        head = s;

                }
            }
    }

    public void print(UALabList x) {

            UANumber i = head;
            while (i != null) {

                    System.out.println(i.x);
                    i = i.next;

            }
    }

}
```

2   UANumber class

```
public class UANumber {

        int x;
        UANumber next;
        UANumber prev;

        public UANumber(int x) {
                this.x = x;
        }

}
```