

## Quiz 6 (Oct 25)

By taking this quiz, you agree to adhere to the honor code of the class.

---

Name:

netid:

---

Write your name and netid on **both** sides of the paper. Write your solution **first on this side**. If space is not enough, write to the other side. You can ask for extra paper if necessary.

---

Name:

netid:

---

Imagine I built a `public class wackyList extends DoublyLinkedList<Integer>` and I implement `wackyList.equals` so that two `wackyList`s are equal if all the entries on the even indices add up to the same number and all the entries in the odd indices are identical. For example, `[0, 1, 4, 7]` and `[2, 1, 2, 7]` are equal because the sums of the entries of the even indices is the same ( $0 + 4 = 0 + 2 + 2$ ) and the entries at the odd indices coincide ( $1 = 1, 7 = 7$ ). Implement a good `int hashCode()` for `wackyList`. For convenience, you may use `getAtIndex` and assume `wackyList` always has an even size. Hint: 521 is prime.

---

Reference solution

```
public class WackList<Integer>{
    public int hashCode() {
        // Assuming there are even number of elements.
        int evenSum = 0, hash=0, multiplier=1;
        for (int i=0; i<size(); i++) {
            if (i%2 == 0) {
                evenSum += getAtIndex(i);
            } else {
                hash += multiplier * getAtIndex(i);
                multiplier *= 512;
            }
        }
        return multiplier * evenSum + hash;
    }
}
```