List Implementation

```
int main() {
    List list;
    Element e1;
    Element e2;

    list = new List();
    e1 = new Element().setValue(10);
    e2 = new Element().setValue(100);

    list.add(e1);
    list.add(e2);
    printInt(
            boolToInt(list.findElem(e2))
    );
    return 0;
}

// global function
int boolToInt(boolean b) {
    int res;
    if (b)
        res = 1;
    else
        res = 0;
    return res;
}
```

```
class List {
    Element head;
    List tail;
    int size;

    Element add(Element elem) {
        if (size == 0) {
            head = elem;
            tail = new List();
        }
        else {
            tail.add(elem);
        }
        size = size + 1;
        return elem;
    }

    boolean findElem(Element elem) {
        boolean result;

        if (size == 0)
            result = false;
        else {
            if (head == elem)
                result = true;
            else
                result = tail.findElem(elem);
        }

        return result;
```

```
    }
}


class Element {
    int value;

    Element setValue(int n) {
        value = n;
        return this;
    }
}
```