

Linked Lists

From messing around to production

Recap

- Started with cups and sticks
- Created basic Lists in Javascript
- Explored your first data structure
- Discussed the API for Lists

Real Lists have API

- Need a documented and useful API
 - Constructor: `var l = new List()`
 - add elements: `l.add("something")`
 - Examine head: `l.head()`
 - Pop an element: `l.pop()`
 - Get length: `var len = l.length()`
 - Get last element in the list: `var last = l.last()`

Real Lists are TESTED

- Testing is:
 - automated (travis CI)
 - tests all aspects of the API
 - your friend at all times
 - quick!!!
- Golden rule: Red → Green → Refactor

QUnit intro

```
QUnit.test("A new List is empty", function (assert) {  
    var l = new List()  
    assert.equal(l.empty(), true)  
    assert.equal(l.head(), null)  
});
```


Task instructions

- Clone ListApi repo on codeX GitHub
- Open the "List.js" and "List-test.js" files in an editor such as sublime
- Open "test-setup.html" in a browser window.
- Reload the page as you save your edits.
- READ THE CODE!!

"First, solve the problem. Then, write the code."

John Johnson

"The trouble with programmers is that you can never tell what a programmer is doing until it's too late."

Seymore Cray