

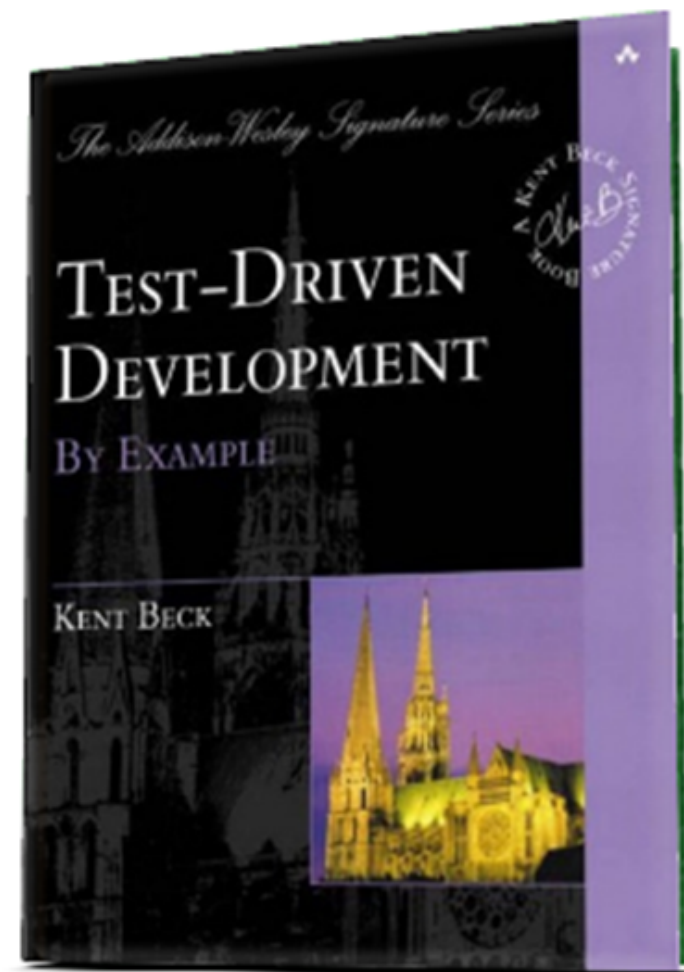
# Test-Driven Tuesday

The basics of growing JavaScript applications



# The purpose of TDD

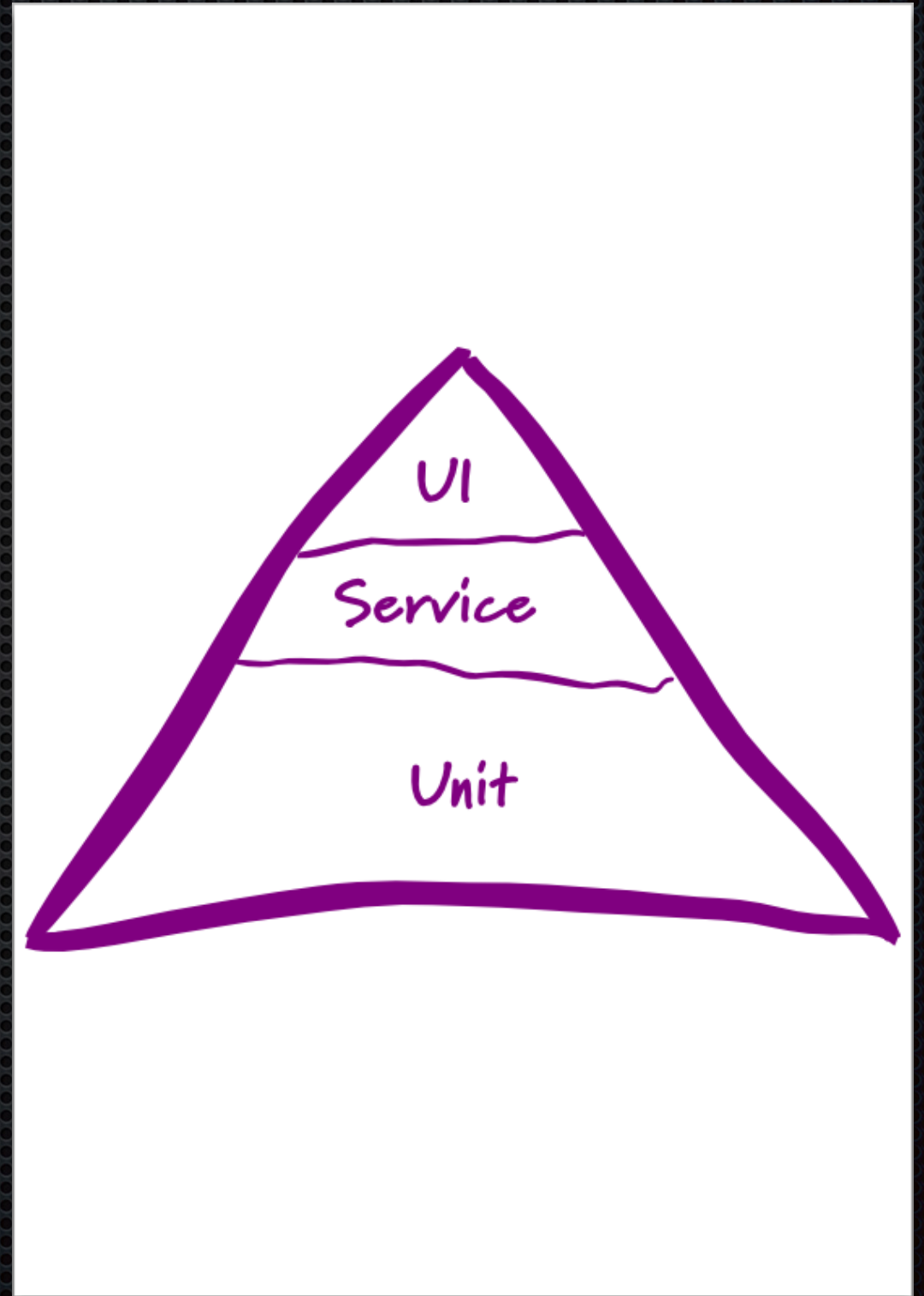
“Clean code that works”  
*Kent Beck*





# Unit Tests

the bigger picture





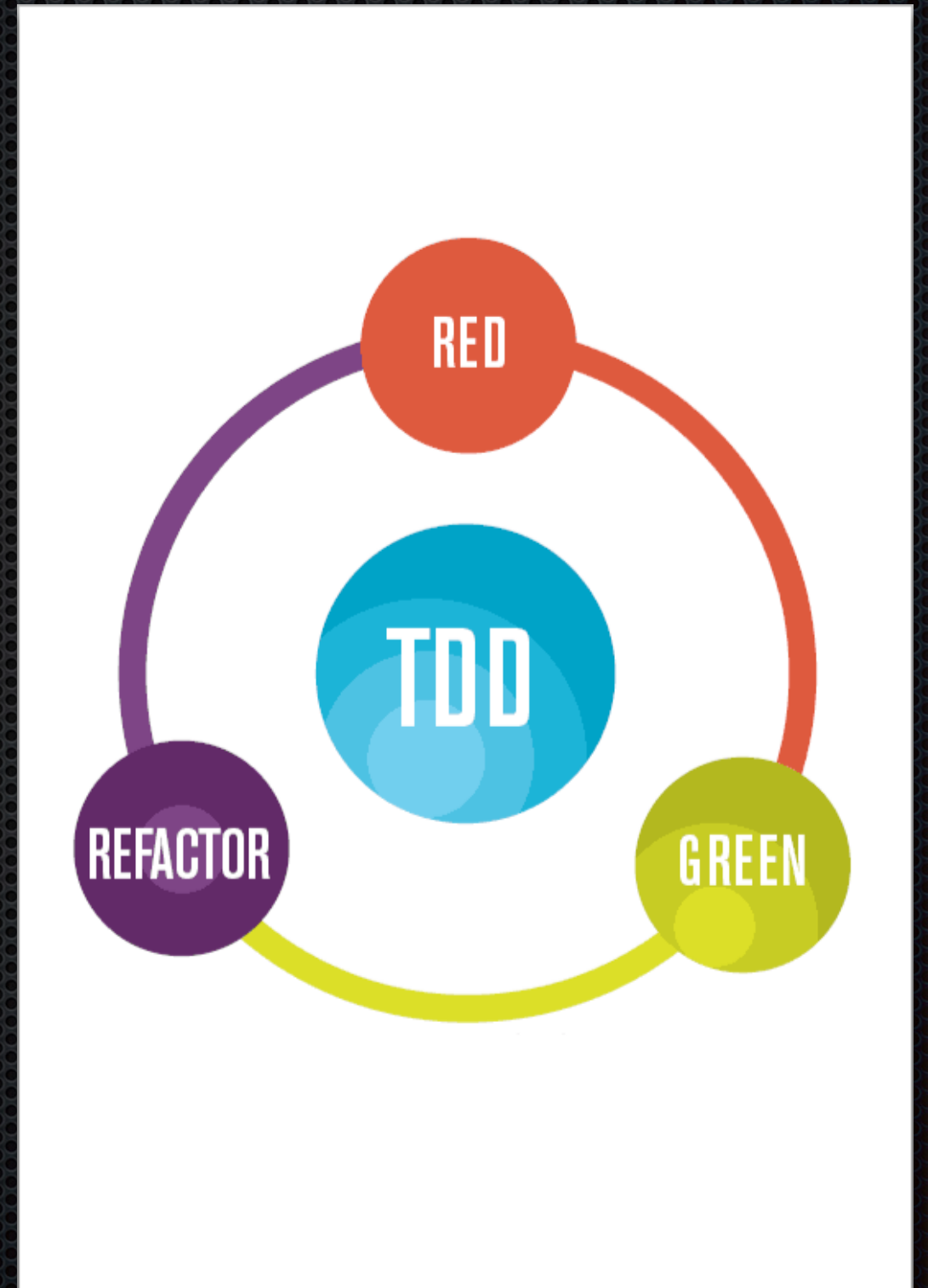
# Benefits of TDD

- ✦ Better designed APIs
- ✦ Better internal structure
- ✦ Executable documentation
- ✦ Regression testing
- ✦ Untestable code highlighted



# TDD Mantra

Red  
Green  
Refactor



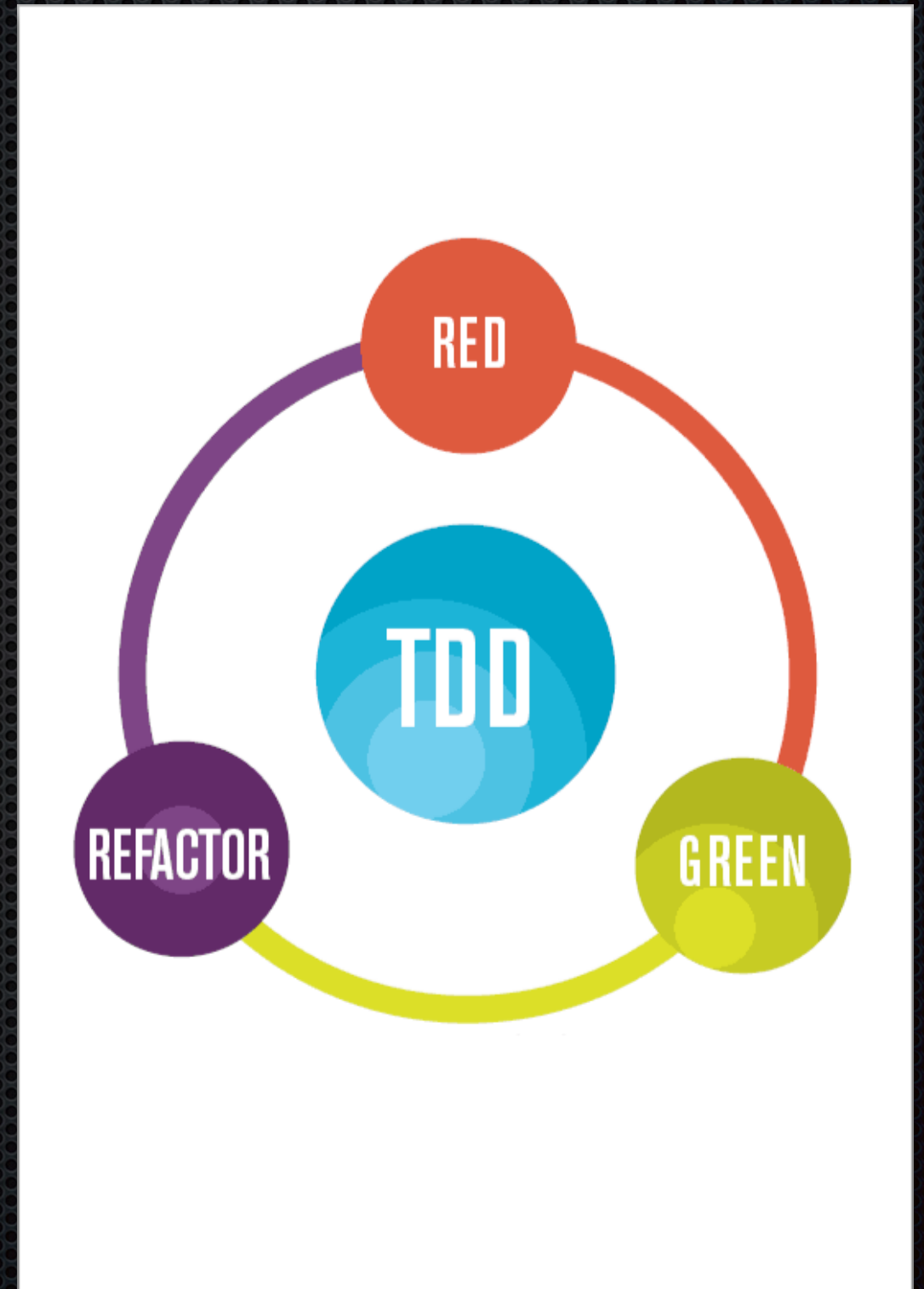


# TDD Mantra

Red - write a failing test

Green - make it pass

Refactor - improve design





# Tools of the trade





# Grunt

<http://gruntjs.com/>

- ✦ JavaScript task runner
- ✦ think: Rake, Ant or Make of the JavaScript world
- ✦ executes mocha, jshint and many, many others
- ✦ plays nicely with Jenkins





# Mocha

<http://visionmedia.github.io/mocha/>

- ✦ flexible testing framework
- ✦ use any assertion library:  
assert, should, expect
- ✦ use any test doubles lib.
- ✦ sync/async
- ✦ plays nicely with Jenkins



image source: <http://www.buybarbaracoffee.com/>



# Prepare-Expect-Act-Assert

The structure of a unit test



# Prepare-Expect-Act-Assert

```
1 'use strict';
2
3 describe('Postcode', function() {
4
5     it('is instantiated with a string representing a post code', function() {
6         // prepare
7
8         // expect
9
10        // act
11
12        // assert
13
14    });
15 });
```



# Prepare-Expect-Act-Assert

```
1 'use strict';
2
3 describe('Postcode', function() {
4
5     it('is instantiated with a string representing a post code', function() {
6         // prepare - set up the stubs, load data fixtures
7
8         // expect - define expectations of your mocks
9
10        // act - perform an action
11
12        // assert - verify the results
13
14    });
15 });
```



# Prepare-Expect-Act-Assert

```
1 'use strict';
2
3 var expect = require('chai').expect,
4
5     Postcode = require('../src/postcode');
6
7 describe('Postcode', function() {
8
9     it('is instantiated with a string representing a post code', function() {
10         // prepare
11
12         // expect
13
14         // act
15         var postcode = new Postcode('E14 5EP');
16
17         // assert
18         expect(postcode).to.be.an('object');
19     });
20 });
```





# Coding Dojo

<https://github.com/jan-molak/test-driven-tuesday>