

# Testing Clientside JavaScript

## Mocha

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# Overview

- Introduction to Mocha
- Setting up Mocha
- Assertion Libraries
- Writing & Running Tests
- Asynchronous Tests
- Integrating with CI

# Introduction to Mocha

- Open Source Framework
- Started in Node
- Supports both client-side and server-side testing
- Supports both BDD and TDD style tests
- Supports both command line and browser
- Supports any JavaScript assertion library
- Supports asynchronous testing

# Installing Mocha

- Get Source Code
  - <https://github.com/visionmedia/mocha>

```
> npm install -g mocha
```

# Setting up Mocha for the Browser

```
<head>
  <meta charset="utf-8">
  <title>Mocha Tests</title>
  <link rel="stylesheet" href="mocha.css" />
</head>
<body>
  <div id="mocha"></div>
  <script src="mocha.js"></script>
  <script>mocha.setup('bdd')</script>
  <script src="tests.js"></script>
  <script>
    mocha.run();
  </script>
</body>
```

# Setting up Mocha for the Browser

```
> mocha init <path>
```

# Setting up Mocha for the Command Line

```
root
  test
    <test files>
  other
```

# Mocha Setup

- Can run in browser and on command line
- Clientside tests – run in browser, not in node.



# Assertion Libraries

- Choose your assertion syntax
- Use with any testing framework

# Popular Assertion Libraries

- YUI Port
- expect.js
- should.js
- jshould.js
- assert.js
- chai.js

# Chai js

- Three different assertion syntaxes
- Assert
- Expect
- Should

```
var assert = chai.assert;
```

```
var expect = chai.expect;
```

```
var should = chai.should();
```

# Chai js Expect Syntax

```
expect(myVar).to.equal(3);  
expect(myVar).to.be.a('string');
```

# Writing & Running Mocha Tests

- TDD and BDD style tests
- Filtering
- View source code
- Exclusive Tests
- Skipping tests
- Pending Tests
- Global leaks
- Slow tests

# Asynchronous Tests with Mocha

```
it('should be something', function() {  
  ...  
})
```

```
it('should be something', function(done) {  
  ...  
  done();  
})
```

# Timeouts

- Default to 2 seconds
- Configurable both globally and by test

# Integrating With CI

- **Basics: Use PhantomJS and capture output**
  - <http://code.google.com/p/phantomjs/downloads/list>
- **Use Teamcity reporter**
- **run-mocha.js**



# Summary

- Mocha is versatile
- Supports BDD and TDD style tests
- Requires an assertion library
- Fully featured browser interface
- Easy asynchronous testing