JAVASCRIPT UNIT TESTING

A short introduction to Javascript Unit Tests

A NEWCRAFT tech meetup

SOME FRAMEWORKS

JavaScript Unit Testing framework

BDD testing framework

BDD testing framework

AND MORE...

Vows

cucumber™

QUNIT

DATE FORMATTER

```javascript
var dateFormatter = {
    format: function (from, now) {
        var formattedTextDate;

        // ...

        if (day_diff >= 31) {
            formattedTextDate = "A long time ago";
        } else if (day_diff === 0 && diff < 60) {
            formattedTextDate = "just now";
        }

        // ...

        return formattedTextDate;
    }
};
```

FULL CODE

TESTS

```javascript
QUnit.test("Format dates", function(assert) {
    assert.equal(
        dateFormatter.format('2017/01/27 23:59:20', '2017/01/28 00:00:00'),
        'just now'
    );
});
```

FULL CODE

INSTALL

Two packages available in NPM

qunit
grunt-contrib-qunit

```
$ npm install qunit --save-dev
$ npm install grunt-contrib-qunit --save-dev
```

CONFIGURATION

Gruntfile.js

```javascript
module.exports = function(grunt) {
  grunt.initConfig({
    // ...

    qunit: {
      files: ['test/**/*.html']
    }
  });

  grunt.loadNpmTasks('grunt-contrib-qunit');

  // ...

  grunt.registerTask('test', ['qunit']);
};
```

BROWSER

RUN THE TESTS IN A BROWSER

TRAVIS CI

```
395  > javascript-unit-testing@1.0.0 test /home/travis/build/antfroger/slides-javascript-unit-testing
396  > grunt test
397
398  Running "qunit:files" (qunit) task
399  Testing test/test-dates.html .OK
400  >> 1 tests completed with 0 failed, 0 skipped, and 0 todo.
401  >> 12 assertions (in 44ms), passed: 12, failed: 0
402
403  Done.
404
405
406  The command "npm test" exited with 0.
407
408  Done. Your build exited with 0.
```

RUN THE TESTS WITH TRAVIS CI

JASMINE

UNIT CONVERTER

```javascript
function Convert(number, fromUnit) {
    // ...

    return {
        to : function (toUnit) {
            if (betweenUnit) {
                // return ...
            }

            throw new Error("unrecognized from-unit");
        }
    };
}
```

FULL CODE

INSTALL

Two packages available in NPM

==jasmine==
==grunt-contrib-jasmine==

```
$ npm install jasmine --save-dev
$ npm install grunt-contrib-jasmine --save-dev
```

CONFIGURATION

Gruntfile.js

```javascript
module.exports = function(grunt) {
  grunt.initConfig({
    // ...

    jasmine: {
      pivotal: {
        src: 'src/**/*.js',
        options: {
          specs: 'spec/*Spec.js',
          helpers: 'spec/*Helper.js'
        }
      }
    }
  });

  grunt.loadNpmTasks('grunt-contrib-jasmine');

  // ...

  grunt.registerTask('test', ['jasmine']);
};
```

TESTS

```javascript
describe( "Convert library", function () {
    describe( "distance converter", function () {
        it("converts inches to centimeters", function () {
            expect(Convert(12, "inches").to("cm")).toEqual(30.48);
        });
    });

    describe( "volume converter", function () {
        it("converts liters to gallons", function () {
            expect(Convert(3, "liters").to("gallons")).toEqual(0.79);
        });
    });
});
```

FULL CODE

BROWSER

RUN THE TESTS IN A BROWSER

TRAVIS CI

```
409   Running "jasmine:pivotal" (jasmine) task
410   Testing Jasmine specs via PhantomJS
411
412    Convert library
413      - throws an error when passed an unknown from-unit...✓ throws an error when passed an unknown from-unit
414      - throws an error when passed an unknown to-unit...✓ throws an error when passed an unknown to-unit
415      distance converter
416        - converts inches to centimeters...✓ converts inches to centimeters
417        - converts centimeters to yards...✓ converts centimeters to yards
418      volume converter
419        - converts liters to gallons...✓ converts liters to gallons
420        - converts gallons to cups...✓ converts gallons to cups
421
422   6 specs in 0.013s.
423   >> 0 failures
424   (node:2009) DeprecationWarning: Calling an asynchronous function without callback is deprecated.
425
426   Done.
427
428
429   The command "npm test" exited with 0.
430
431   Done. Your build exited with 0.
```

RUN THE TESTS WITH TRAVIS CI

THANKS

QUESTIONS?

 github.com/antfroger

 @__tooni__