

Grunt Framework and setup

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Agenda

- ▶ What is Task Runner
- ▶ Adding Grunt to the project
- ▶ Grunt Tasks
- ▶ Demo
- ▶ Exercise

Learning Objectives

- ▶ Understand what Grunt does and why
- ▶ Learn what tasks are typical for Angular development
- ▶ Learn how to add & configure grunt tasks

What is Task Runner?

Tool that helps to automate repetitive tasks with minimum effort.



maven

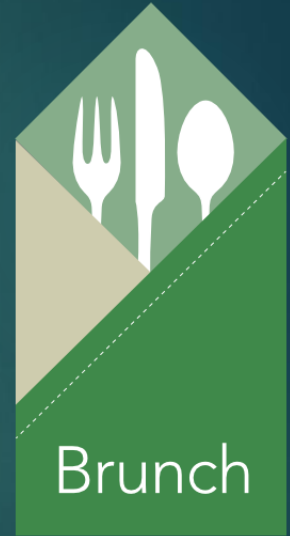


What is Task Runner?

Tool that helps to automate repetitive tasks with minimum effort.

- ▶ Minification
 - ▶ Html/js/CSS
- ▶ Compilation
 - ▶ SASS/LESS to CSS
 - ▶ Templates to JS
- ▶ Unit testing
- ▶ Image Processing
 - ▶ Optimization
 - ▶ Creating sprites
- ▶ Analyze

Task Runner



Pre-requisites

- ▶ Node & npm
- ▶ “Introduction to Grunt”
(Pluralsight.com Course)

Introduction to Grunt

A real world introduction to Grunt. Learn how to quickly get up and running using Grunt to perform tasks against your HTML web application.

by [Derek Whittaker](#)

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Course content

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What about project phases?

There are NO defined phases in Grunt

grunt server

grunt serve

grunt test

grunt build

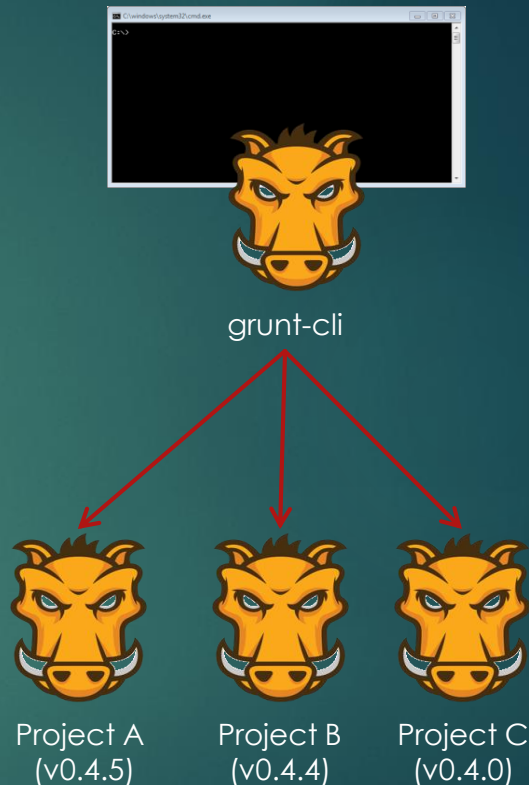
grunt ...

How to use Grunt

Grunt is just task runner

Step 0: Install Grunt command line interface (cli)

► `npm install grunt-cli -g`



How to use Grunt

Working with existing Grunt project

1. Install project dependencies with
2. Run Grunt

Preparing new Grunt project

1. Create package.json
2. Create Gruntfile.js
3. Add grunt plugin

Working with existing Grunt project

1. Install project dependencies

```
npm install
```

2. Run Grunt

- ▶ `grunt`
- ▶ `grunt serve`
- ▶ `grunt test`
- ▶ `grunt analyze`

```
$ grunt
Running "uglify:build" (uglify) task
>> 1 file created.

Running "wiredep:app" (wiredep) task

Done, without errors.
```

Preparing new Grunt project

Step 1: Project dependencies

- Create packages.json

```
npm install grunt --save-dev
```

```
{  
  "name": "grunt-exercise",  
  "version": "0.0.1",  
  "devDependencies": {  
    "grunt": "~0.4.5"  
  }  
}
```

Preparing new Grunt project

Step 2: Create Gruntfile.js

- ▶ The "wrapper" function
- ▶ Project and task configuration
- ▶ Loading Grunt plugins and registering tasks

```
module.exports = function(grunt) {  
    // Project configuration.  
    grunt.initConfig({  
        pkg: grunt.file.readJSON('package.json'),  
    });  
    // Load the plugins  
    grunt.loadNpmTasks('');  
    // Default task(s).  
    grunt.registerTask('default', []);  
};
```

Preparing new Grunt project

Step 3: Install grunt plugin

```
npm install grunt-contrib-uglify --  
save-dev
```

```
{  
  "name": "main",  
  "version": "0.0.1",  
  "devDependencies": {  
    "grunt": "^0.4.5",  
    "grunt-contrib-uglify": "^0.6.0"  
  }  
}
```

Preparing new Grunt project

Step 3: Configure Grunt plugin

- ▶ Task configuration
- ▶ Load Grunt plugin
- ▶ Register plugin

```
// Project configuration.
grunt.initConfig({
  pkg: grunt.file.readJSON('package.json'),
  uglify: {
    options: {
      banner: '/*! <%= pkg.name %> <%= grunt.template.today("yyyy-mm-dd") %> */\n'
    },
    build: {
      src: 'src/<%= pkg.name %>.js',
      dest: 'build/<%= pkg.name %>.min.js'
    }
  }
});

// Load the plugins
grunt.loadNpmTasks('grunt-contrib-uglify');

// Default task(s).
grunt.registerTask('default', ['uglify']);
```

Typical Angular Grunt Plugins

Plugin	Description
grunt-wiredep	Adds bower dependencies to index.html
grunt-contrib-watch	Run tasks whenever watched files change
grunt-contrib-jshint	Checks code style
grunt-contrib-uglify	File minification
grunt-contrib-cssmin	Compress css files
grunt-contrib-imagemin	Minify PNG and JPEG images
grunt-ng-annotate	Fixing Angular DI issue with minification

Preparing new Grunt project

Step 3: Adding JSHint Plugin

► Install

```
npm install grunt-contrib-jshint --  
save-dev
```

► Add configuration

```
jshint: {  
  options: {  
    force: true,  
    jshintrc: '.jshintrc'  
  },  
  src: ['src/*.js', '!Gruntfile.js']  
}  
  
// Load the plugins  
grunt.loadNpmTasks('grunt-contrib-jshint');  
// Default task(s).  
grunt.registerTask('analyze', ['jshint']);
```

Preparing new Grunt project

Step 3: Adding grunt-wiredep plugin

```
npm install grunt-wiredep --save-dev
```

```
wiredep: {  
  app: {  
    src: ['src/index.html'],  
    ignorePath: /\.\\.\\.\\//  
  }  
}  
  
grunt.loadNpmTasks('grunt-wiredep');  
  
grunt.registerTask('default', ['uglify',  
  'wiredep']);
```

Exercise

1. git checkout step-2
2. Add & configure **uglify** plugin for Grunt to run with default 'grunt' task.
3. Add & configure **JSHint** plugin for Grunt so it will run with 'grunt analyze' task
4. Add & configure **wiredep** plugin for Grunt to run with default 'grunt' task.