

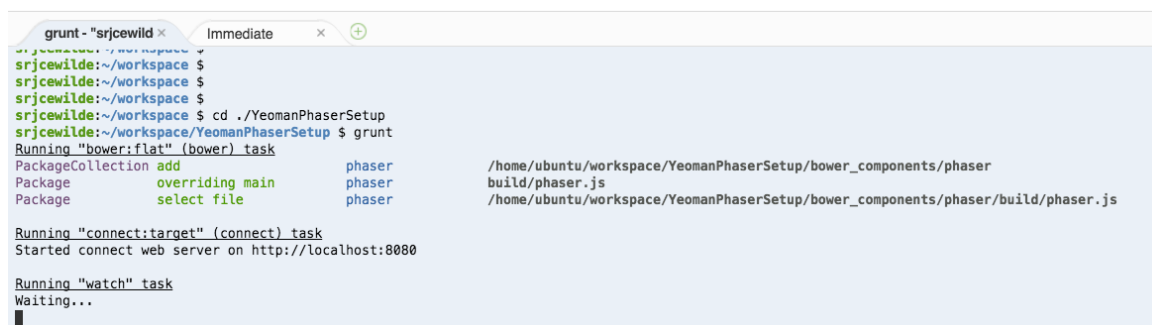
Week 12: Working with Your Build System

Note: While you may use a functional programming pattern for your final project, you are required this week to set up a build system in a new Cloud9 workspace and try using it by building the example game in Chapter 5 of our textbook.

Starting to Code

From now on, each time you wish to do some coding, you will follow a few simple steps to get your environment ready to use:

1. Open your Cloud9 build system workspace.
2. Open bash command line interface.
3. Navigate to your project directory using the **cd** command. (If you haven't created a project directory yet, use Yeoman to create a well-configured project directory.)
4. Launch Grunt by entering **grunt** on the bash command line.
5. If Grunt launched without error, you are now ready to start working with code in your **src** directory.



```

grunt - "srjcewild" x Immediate x
srjcewild:~/workspace $
srjcewild:~/workspace $
srjcewild:~/workspace $
srjcewild:~/workspace $ cd ../YeomanPhaserSetup
srjcewild:~/workspace/YeomanPhaserSetup $ grunt
Running "bower:flat" (bower) task
PackageCollection add phaser /home/ubuntu/workspace/YeomanPhaserSetup/bower_components/phaser
Package overriding main build/phaser.js
Package select file phaser /home/ubuntu/workspace/YeomanPhaserSetup/bower_components/phaser/build/phaser.js

Running "connect:target" (connect) task
Started connect web server on http://localhost:8080

Running "watch" task
Waiting...
  
```

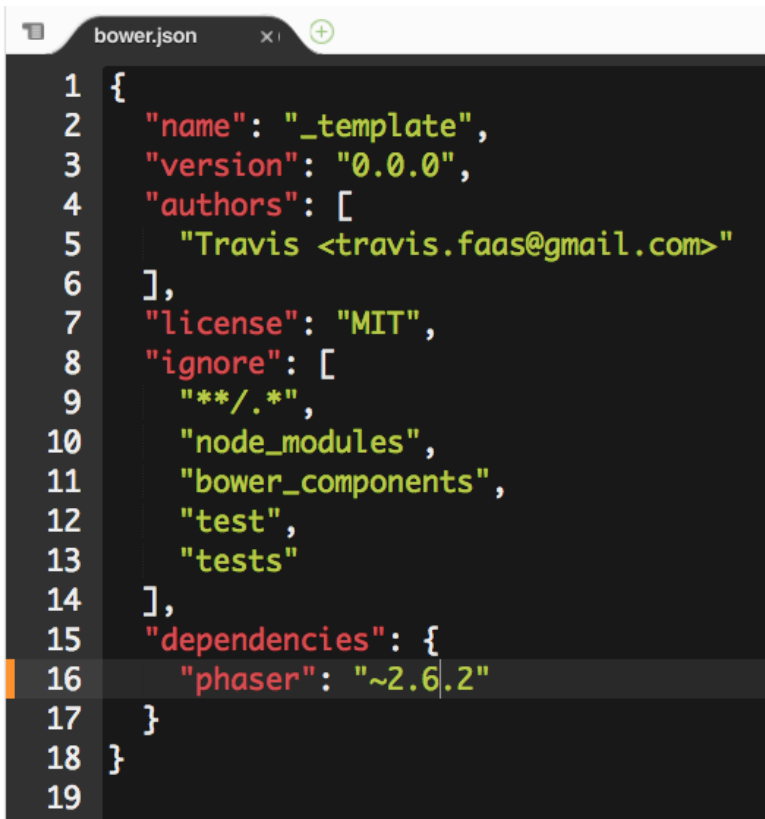
With Grunt running, every time you make an edit to any file with the **.js** suffix within your project's **src** directory, Grunt Watch should detect the change and execute Browserify, Babelify, and Babel to transpile and merge all of your JavaScript code found into a single "transpiled" **app.js** file within the scripts directory. * Transpiled means translated and compiled.

You can preview the final code in a browser tab anytime as you are working by opening the link to the Grunt Connect Web server running on port 8080 for your Cloud9 server. Note that despite the Grunt output reporting the Web server address as *http://localhost:8080* the server is actually running at the Internet-accessible hostname of your Cloud9 server. In my workspace's case, that actual URL is <http://sp18-cs74-42a-build-system-srjcewilde.c9users.io:8080/> [\(http://sp18-cs74-42a-build-system-srjcewilde.c9users.io:8080/\)](http://sp18-cs74-42a-build-system-srjcewilde.c9users.io:8080/).

Errors with Grunt?

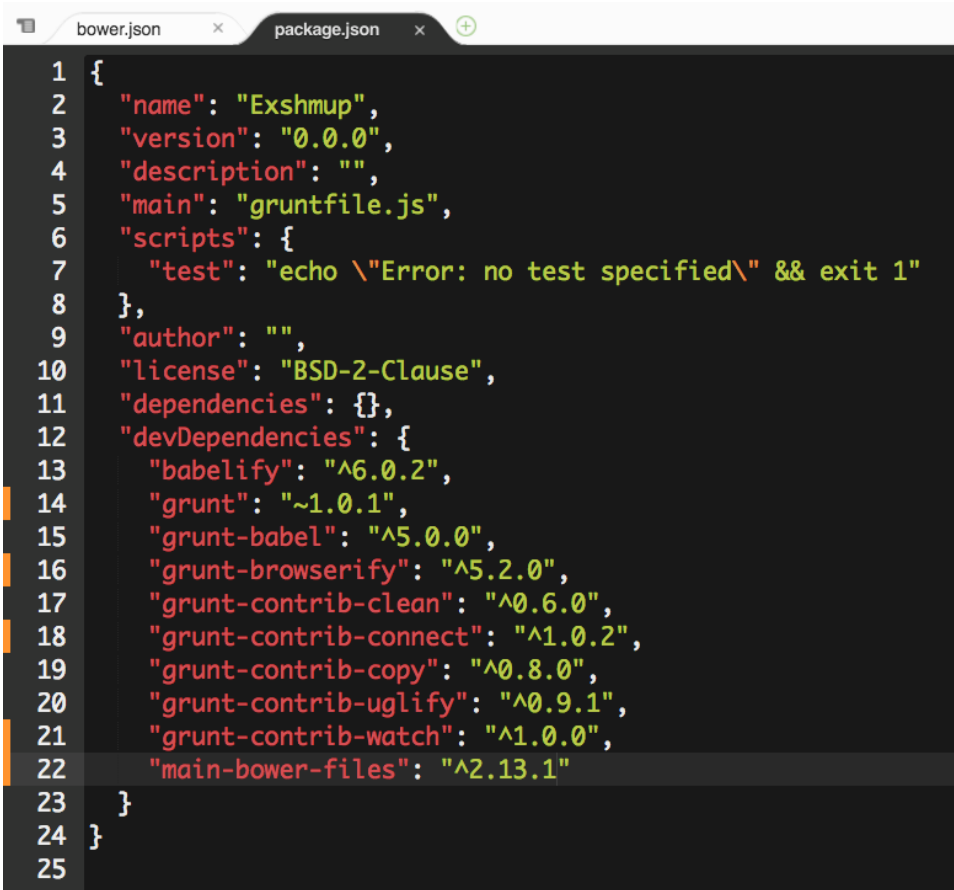
If the app.js file is not being created within your project's scripts directory after each saved edit you make to a .js file, you can troubleshoot your Bower and npm configurations to ensure the most

compatible versions of each package are being used.



```
1 {
2   "name": "_template",
3   "version": "0.0.0",
4   "authors": [
5     "Travis <travis.faas@gmail.com>"
6   ],
7   "license": "MIT",
8   "ignore": [
9     "**/*.*",
10    "node_modules",
11    "bower_components",
12    "test",
13    "tests"
14  ],
15  "dependencies": {
16    "phaser": "~2.6.2"
17  }
18 }
19
```

Note which versions are different than the Yeoman template-installed **bower.json** file.



```
1 {
2   "name": "Exshmup",
3   "version": "0.0.0",
4   "description": "",
5   "main": "gruntfile.js",
6   "scripts": {
7     "test": "echo \"Error: no test specified\" && exit 1"
8   },
9   "author": "",
10  "license": "BSD-2-Clause",
11  "dependencies": {},
12  "devDependencies": {
13    "babelify": "^6.0.2",
14    "grunt": "~1.0.1",
15    "grunt-babel": "^5.0.0",
16    "grunt-browserify": "^5.2.0",
17    "grunt-contrib-clean": "^0.6.0",
18    "grunt-contrib-connect": "^1.0.2",
19    "grunt-contrib-copy": "^0.8.0",
20    "grunt-contrib-uglify": "^0.9.1",
21    "grunt-contrib-watch": "^1.0.0",
22    "main-bower-files": "^2.13.1"
23  }
24 }
25
```

Note which versions are different than the Yeoman template-installed **package.json** file.