

web programming
inception



oli



rec

agenda

- course info
- final project
- quick survey
- dev environment setup

course info

course goals

- *"After successfully completing this course, you will:*
 - *be able to **create** attractive, small scale web apps that work in most (modern) browsers."*
 - *have the background knowledge to **understand** technical writings/discussions about the web."*
 - *have the foundation to **decide** where to go next."*

course non-goals

- you will **NOT** leave this class knowing:
 - how to code (*)
 - everything there is to know about web programming (**)

(*): Unless you already knew how to. (**) Unless you already knew it.

course overview

introductory

you will learn the fundamentals

opinionated

what we think you need to learn as a beginner

hands-on

you will get your hands dirty, YES

course structure

- the class will be divided in **teams** of 5 people that will mimic "real life" dev teams
- each team will work on a project of **their choice (*)** that will evolve throughout the course, contributing with code and reviews
- **0 exams**
- **1 final presentation**

(*): Must be approved by the teachers.

course deliverables

every GitHub interaction

commits, pull requests, reviews, etc.

web app deploys

URLs of both front & back ends

final presentation

to the rest of the class

course grades

- your participation as an **individual** will be evaluated in the following areas:
 - **solution**: architecture, design, etc.
 - **markup + css**: document structure, semantic tags, etc.
 - **aesthetics**: how much you care about the app's look and feel
 - **team work**: the relationship with your teammates
 - **adherence to standards**: respect for code style and any other convention

less theoretical

more practical

DISCLAIMER

- this is the first offering of the course, which means:
 - **everything** is subject to change
 - there will be **bugs**
 - **feedback** is especially appreciated

final project

quick survey

goo.gl/Tzdi2G



dev environment
setup

prereqs

- before continuing, make sure you have installed:
 - git:
<https://git-scm.com/book/en/v2/Getting-Started-Installing-Git>
 - latest Node.js:
<https://nodejs.org/en/download/current/>
 - latest **Google Chrome**: <https://google.com/chrome/>
 - any IDE, we recommend VS Code:
<https://code.visualstudio.com/>


repository

- go to github.com
- click on "New repository"
- choose the following options and then click "Create repository":
 - name: web-programming-boilerplate
 - public
 - README: yes
 - .gitignore: Node
 - license: MIT
- click on "Clone" and copy the URL

```
$ git clone <repo_url> && \  
    cd web-programming-boilerplate
```

```
$ git checkout -b setup
```

npm

- The npm logo, which consists of the letters 'npm' in a stylized, red, blocky font.
- package manager for Node.js
- CLI helps install and maintain your project's dependencies
- online repository with thousands of packages: [npmjs.com](https://www.npmjs.com)

```
$ npm init
```


package.json

```
{  
  "name": "web-programming-boilerplate",  
  "description": "Web Programming course boilerplate",  
  "version": "0.0.0",  
  "dependencies": {},  
  "devDependencies": {}  
}
```

linting

- **static analysis of code**
 - **code-quality rules:** find problematic patterns in code
 - **formatting rules:** find code that doesn't adhere to style guidelines

linting – ESLint

- 
- open source JavaScript linting utility
- we will use it for code-quality rules only (not formatting)
- custom config: @ucudal/eslint-config

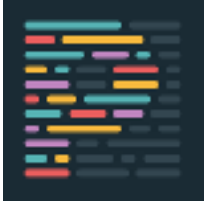
goo.gl/rSAaDP



.eslintrc.json

```
{  
  "env": {  
    "node": true  
  },  
  "extends": "@ucuda1"  
}
```

formatting – Prettier

- 
- code formatter
- opinionated
- we will use it in conjunction with ESLint

goo.gl/L3wCRN




.prettierrc.json

```
{  
  "singleQuote": true,  
  "trailingComma": "all"  
}
```

.eslintrc.json

```
{  
  "env": {  
    "node": true  
  },  
  "extends": ["@ucuda1", "plugin:prettier/recommended"]  
}
```

testing – jest

- The Jest logo is a stylized, maroon-colored 'J' with a white outline. It has a unique shape with three small circles at the top and a curved base.
- zero configuration
- jsdom built-in


```
$ npm i -D jest
```

jest.config.js

```
module.exports = {  
  testEnvironment: 'node',  
  verbose: true,  
};
```

.eslintrc.json

```
{  
  "env": {  
    "jest": true,  
    "node": true  
  },  
  "extends": ["@ucuda1", "plugin:prettier/recommended"]  
}
```

package.json

```
{
  "name": "web-programming-boilerplate",
  "description": "Web Programming course boilerplate",
  "version": "0.0.0",
  "scripts": {
    "lint": "eslint .",
    "pretest": "npm run lint",
    "test": "jest"
  },
  "dependencies": {},
  "devDependencies": {
    "@ucudal/eslint-config": "^0.1.0",
    "eslint": "^4.19.1",
    "eslint-plugin-import": "^2.12.0",
    "jest": "^23.4.2",
    "prettier": "^1.14.0"
  }
}
```

ci

- go to travis-ci.org
- click on "Sign Up" and sign up using GitHub
- click on the "+" symbol next to "My Repositories"
- turn on "web-programming-boilerplate"

.travis.yml

```
language: node_js
node_js:
  - '10'
```

pull request

- go to web-programming-boilerplate on github.com
- switch to "setup" branch
- click on "New pull request"
- give it a name and click on "Create pull request"

thanks!