Web Apps Development

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Part II - Advanced Features
Model-View-Controller Design Pattern

Repository

https://github.com/leonardomra/web-apps-dev-course

What is a Design Pattern?

"Each pattern describes a problem that occurs over and over again in our environment, and then describes the core of the solution to that problem in such a way that you can use this solution a million times over, without ever doing it the same way twice"
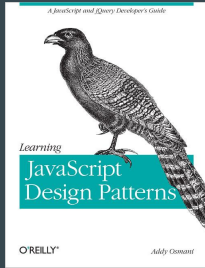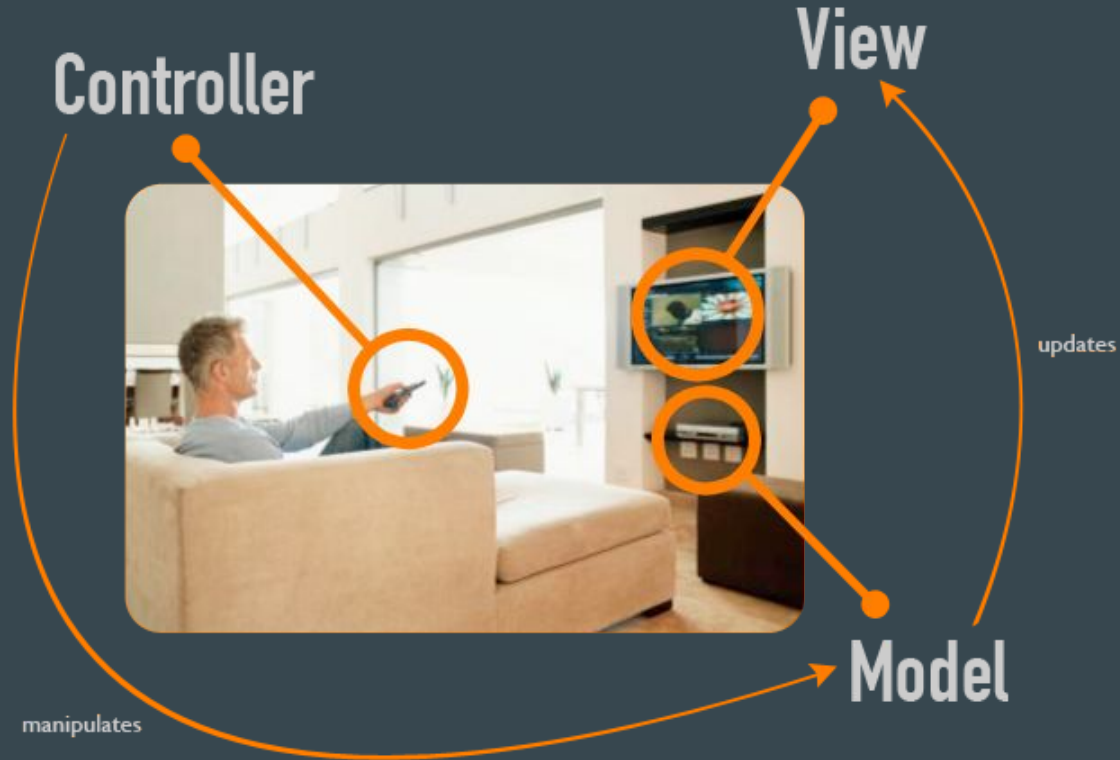
Why to use MVC?

structure or die

More info...

http://addyosmani.com/resources/essentialjsdesignpatterns/book/

MVC: What is it like?

Controller

View

Model

updates

manipulates

Exercise

game

Javascript MVC: how should it be?

fat and intelligent models

dumb views

thin controllers

Javascript MVC: a possible and simple implementation

```javascript
var Model = {};   // Process Data e.g. download and upload of data,
calculations, etc.


var View = {};   // Update Screen e.g. adding html elements, modify css, etc.
Attention: NO DATA PROCESSING


var Controller = {};   // Listen to User Input & manipulate the model.
```

Javascript MVC: a possible and simple implementation

```javascript
var Model = {
        Thing: {
                view: null,

                init: function() {
                        this.view = Object.create(View.Thing);

                        this.view.init();

                },

        }
};
var View = {
        Thing: {
                element: null,

                init: function() {
                        alert('Hello World!');

                }

        }
};
```

```javascript
var Controller = {
        Thing: {
                model: null,

                init: function() {
                        this.model = Object.create(Model.Thing);

                        this.model.init();

                }

        }
};


(function() {
        var myThing = Object.create(Controller.Thing);

        myThing.init();

})();
```

Exercise

implementing mvc

Javascript MVC: what to put where

```javascript
var Model = {};   // Instantiate the View, Call View Methods, Perform
Calculations


var View = {};   // e.g. Manipulate HTML & CSS


var Controller = {};   // e.g. Instantiate the Model, Call Model Methods,
Event Listeners
```

Homework

- implement response to the user's click
- start thinking about a concept for final project

Final Project

Develop*/remix** a small web app that follows the following criteria:

- must be interesting for you!
- must be responsive regarding screen sizes
- must contain at least 2 of the following: MVC, Device Orientation, Geolocation, Canvas, Media, Web Storage.
- can be done individually or in groups of 2.

* Your own thing / ** either dashboard or game