

KNOWARTH

welcomes



Introduction of



Today's Agenda

- Introduction of Group
- JavaScript MVC
- TODO App using Backbone
- Introduction to Famo.us
- Manage your code using GIT

Java Script MVC



By Amij Patel
UI Architect

Presentation For

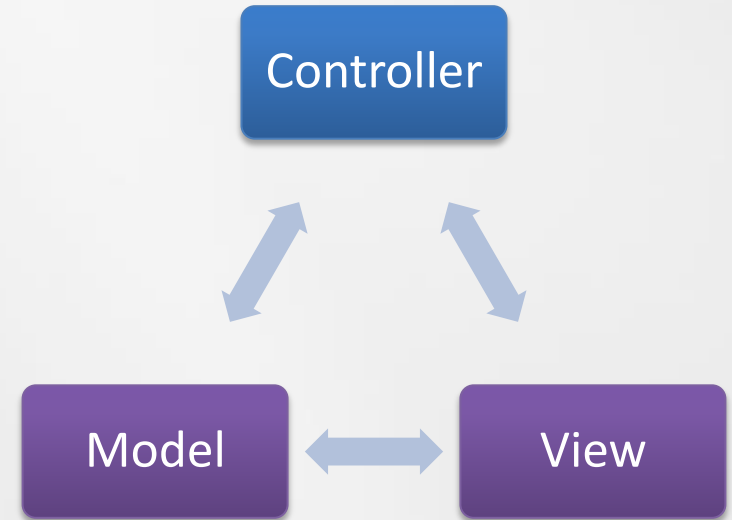
- Developers
- UI Developer
- UI Designer
- Web Developer
- Web Designer
- Any one knows Java Script

Hey!!! I am UI Developer,
so... can you please start
with what is MVC?

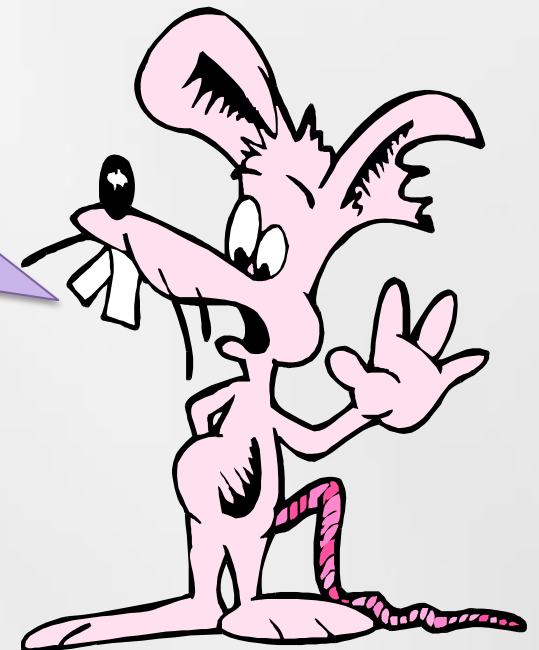


What is MVC?

- Model–View–Controller (MVC) is a software architectural pattern
- Two principal separations
 - Presentation from the model
 - Controller from the view
- Separation of presentation and model is the most important design principle.



I am working on Front End Development (HTML5, CSS3 and Java Script). Where and why do I need MVC?



Web evolution

- Moved from desktop application to Web application
- Classic Multi page Web
 - Poor User experience, after each action user has to wait for page to load.
 - JavaScript used only for
 - Form Validation
 - Handling DOM events
 - Web Applications are good, but not as productive as Desktop applications.

Single Page Application

- From 2005 , AJAX has introduced
- Only required data traverse on network
- Why do we need to reload page?
- JavaScript is playing Key Role
 - Sending Data to Server
 - Parsing Response from Server
 - Rendering Data using creating and Manipulating DOM Elements

I know jQuery and I can
do everything using
jQuery than what's need
of MVC ???



Need of MVC

- jQuery is Library
- jQuery is more focused on DOM
- SPAs has lots of JavaScript code
- No guidance on organization or structure for code
- Result is
 - Large function
 - Nested Call backs
 - Unmaintainable code
 - Tightly coupled so not easily scalable



Okay!!!, but
everything is on
front end what
should be
separated?

What should be separated

- AJAX Requests
- Data Manipulation
- Rendering Data
- DOM element creation & manipulation
- Event Handling

How to separate them

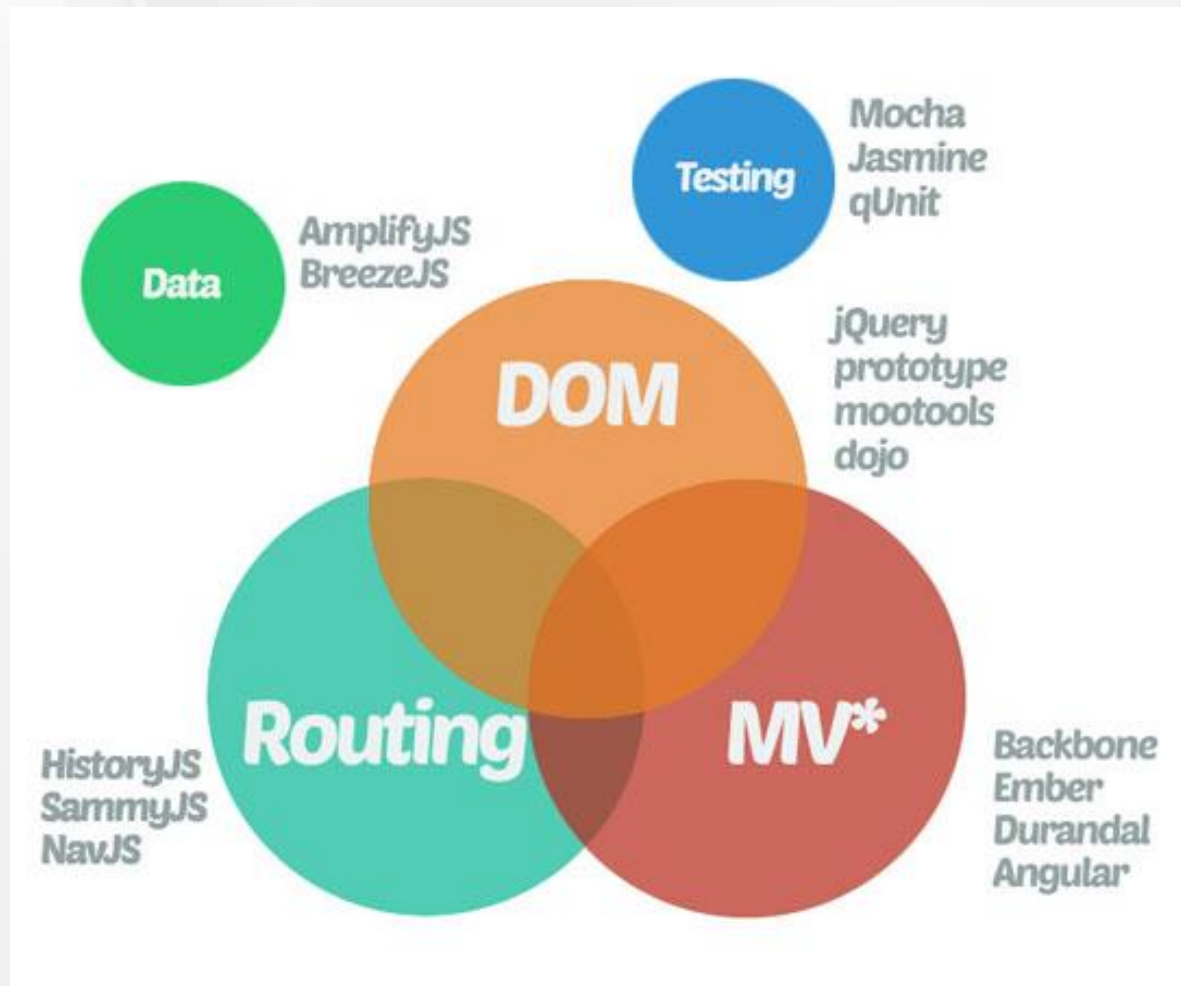
- Model
 - AJAX Requests
 - Data
- View
 - Rendering Data
 - DOM manipulation and creation
- Controller
 - User Action / Event Handling

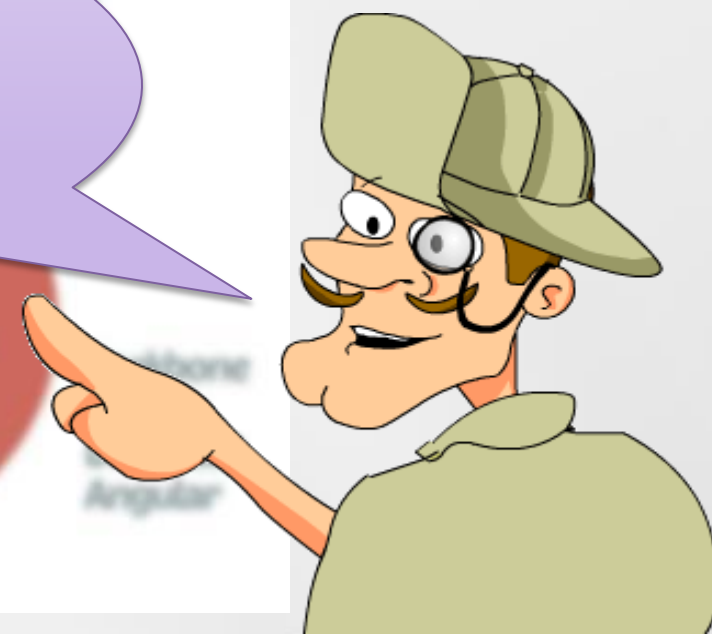


Is there any simple way
to achieve this?

Java Script MVC Frameworks

- Framework make it easy to implement MVC pattern
- Framework has all necessary things which makes each layer independent and scalable
- Good News
 - Many JS MVC frameworks available
 - Framework can be used with libs for taking advantage of simplicity and interactivity with structured code.
 - Some of them can be used with jQuery ☺





MV* Frameworks

- Where is Controllers ?
- More than one layer plays controller role
- For Example
 - Views handling rendering of data
 - View handling events
 - Routes handling navigation
- Remember, “Separation of presentation and model is the most important design principle”



Hey!!!, I am ready, Can
you show me how to
start?



BACKBONE.JS

SAMPLE MV* APPLICATION

By Dinesh, Chintan & Parth

What Is Backbone?

- Light Weight MV* Framework (Separate UI logic from Business Logic)
- Creating Single Page Applications
- Communication to the server only through a RESTful API.
- Make Your Code Modular.
- Incredible Small Library.
- Structure Your Application (jQuery lacks here)

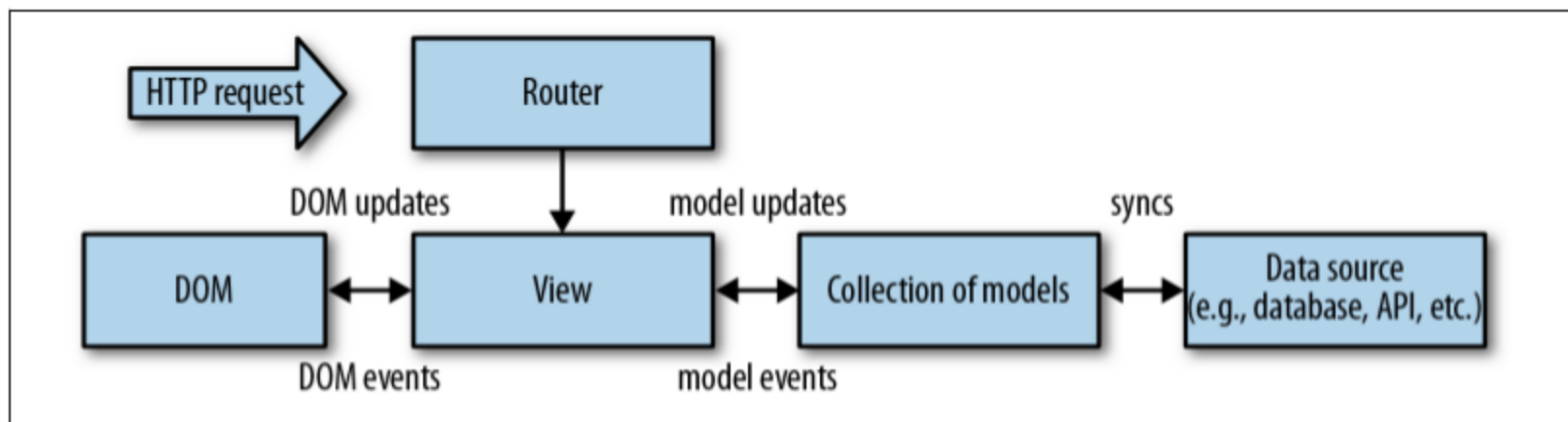
Dependencies & useful Libraries

- Underscore.js : Sole and Hard dependency
- JQuery.js : handling DOM Operations easily
- Marionette JS : Taking backbone one step ahead
- Jasmine/Coffee/Mocha/Chai : Testing Your JS logic

DEMO OF TODO APPLICATION

What Backbone consists of?

- Router
- Model
- Collection
- View
- Template
- History
- Template
- History



Routers

- Routing Your Application URL's When Using Hash Tags
- Dynamic Routing (based on the Parameter after #)

Routers In Current Application

- On Page Load (#todos/index)
- Creating a new note (#todo/new)

Model And Collection

Model

- Contains Data
- Validate Data
- Implements Business Logic

Collection

- Set Of Models
- Provides Options of Processing Data stored in Models.

Models And Collection in Current Application

Model

- App.todoModel
 - Contains the Data for a single To-do
 - Defaults
 - Validation

Collections

- App.todoCollection
 - Collection of All To-do (App.todoModel)

Views

- Rendering Data in to HTML Code
- Acts As A Bridge Between Business Logic And A User.
- Handle Events on the Template Bound to it.
- Views can Render Model And Collections
- Backbone View Relies On JQuery for easy DOM Manipulations.

Views in Current Application

- App.todoIndexView
 - Displaying the Collection of To-dos
- App.todoRowView
 - For Displaying single To-do Activity in a Row.
- App.todoNewView
 - New To-do Creation

Template

- Separate HTML Markup
- More Structured And Clean Application
- Templating Logic Provided by:
Underscore.js, Handlebars and more libraries

Template In Current Application

- indexTemplate
 - My Main Page Where in My all To-do's and option of creating a new To-do are shown.
- rowTemplate
 - shows my singleTo-do.
- FormTemplate
 - Rendered When Creating A New To-Do.

Where NOW From HERE?

- Advanced Backbone Features
 - Using Backbone plugins, Inheritance, Best Practices, Marionette and more.
- From Simple to do list to Complex Applications
 - Walmart Mobile App.
 - USA Today.
 - LinkedIn Mobile App.

QUERY & QUESTIONS



THANK YOU



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