AngularJS

MV* Framework for Single Page Web Apps

Objectives

- Understanding MV* structure of AngularJS

- Understanding Two-way dynamic binding

- Understanding Single-Page-Applications

- Understanding Declarative Approach of AngularJs

- Advantages of using AngularJS

- Comparing AngularJS with similar frameworks

What is AngularJS ?

AngularJS is an open-source Javascript MVC (or better MV*) framework created by Google to build dynamic web applications with a proper architecture. It enhances the capabilities of HTML and lets you create Single Page dynamic web apps.
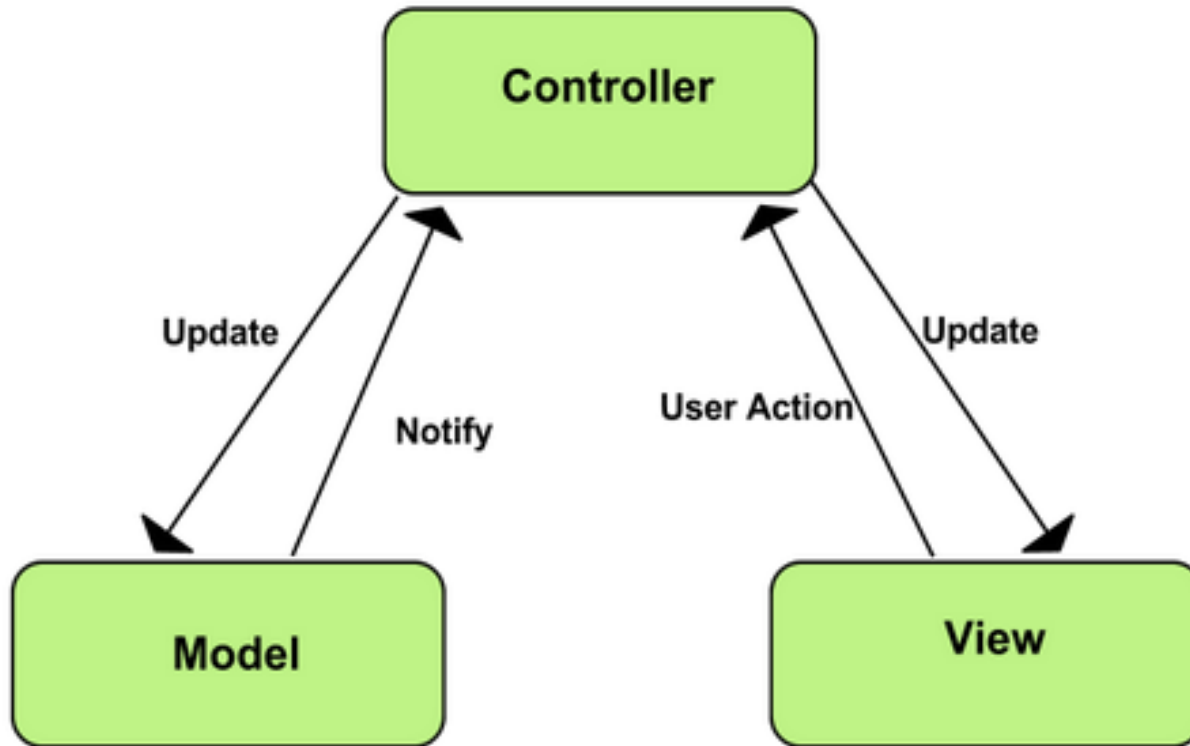

The other popular JavaScript web frameworks are Backbone.js, Ember.js etc.

Single Page Applications
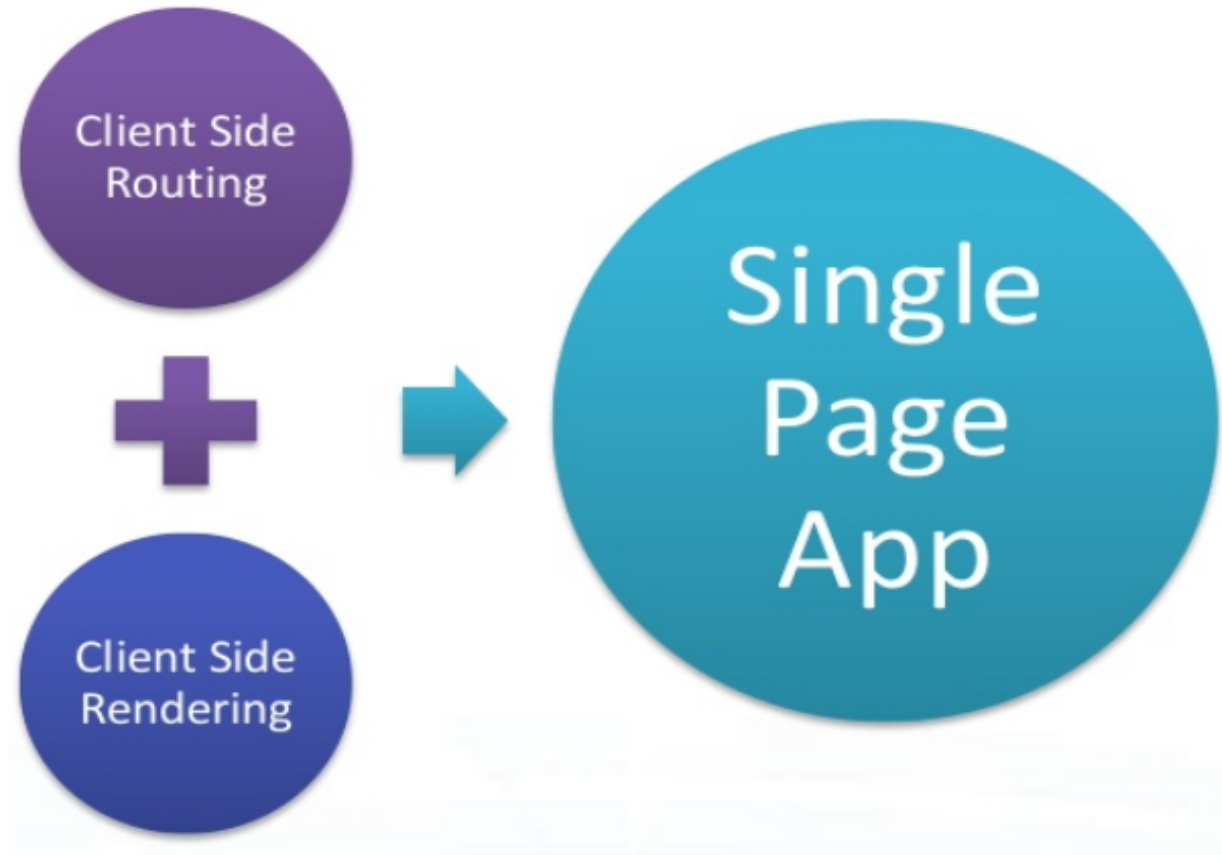
A single-page application (SPA), is a web application or web site that fits on a single web page with the goal of providing a more fluid user experience akin to a desktop application.

Problem with MVC Frameworks

In a typical MVC framework, developer has to code the update mechanism for view or model. However **AngularJS** framework automatically updates model (data) or view according to changes made in any one of them.

JavaScript MVCs: How they do
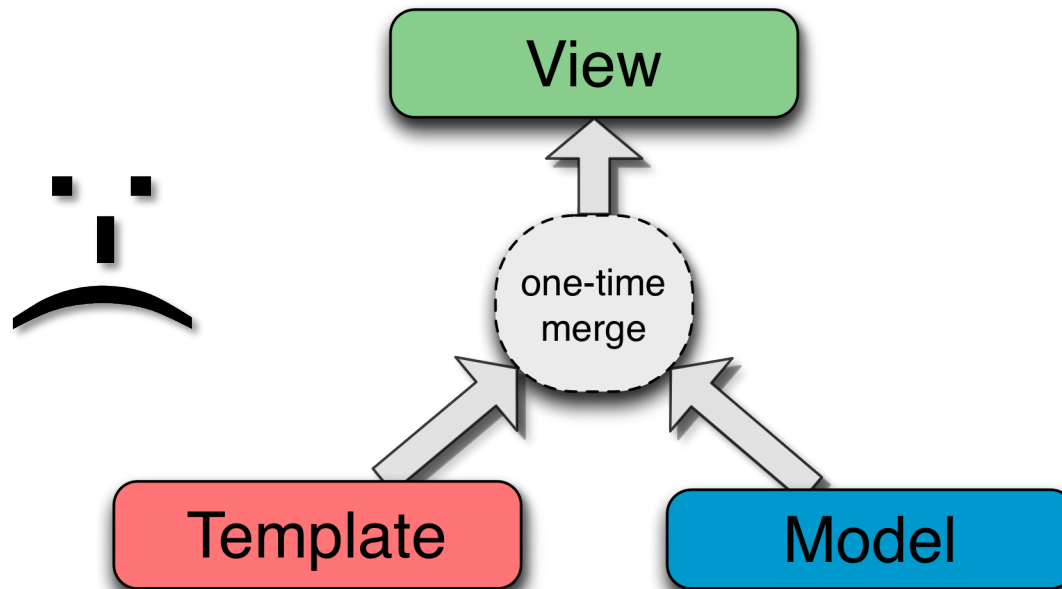
MVC frameworks generally combines model with template and generate view. This approach has a major drawback when it comes to updating. This is **One-way Binding**

AngularJS MVC: How it Does
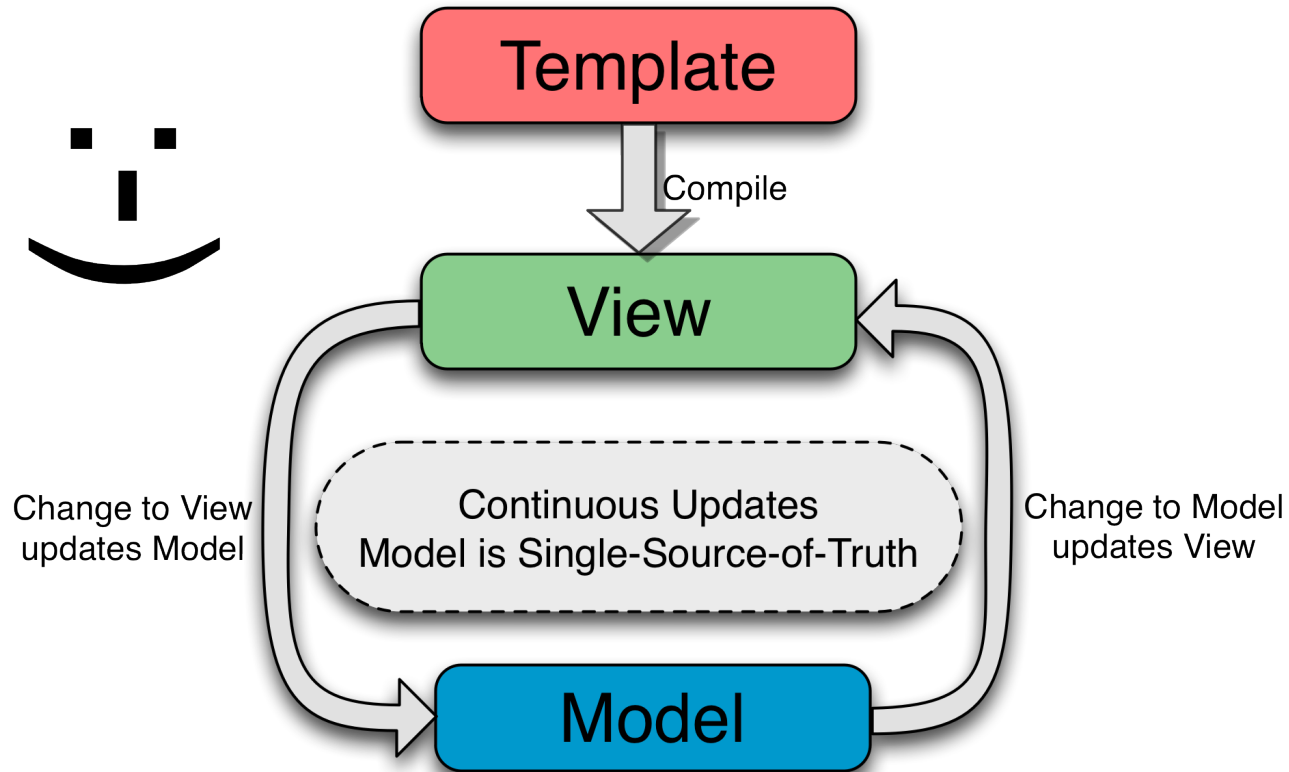
AngularJS deals with the problem by continuously updating model and view on its own. This is **two-way data binding**

Angular Way of Things

Proper separation of concerns

HTML enhanced for web apps

DOM manipulation in AngularJS is controlled by directives which are identical to HTML tags and attributes in declaration. This **Declarative Approach** helps developer to understand the behavior of app easily.

```
[ <a href="" ng-click="archive()">archive</a> ]
```

Hence, Controllers only deal with data updates. **NO Spaghetti code !!**

Write Less. Do More

Localytics Campaign Editor Web App in Backbone and AngularJS (lines of code)
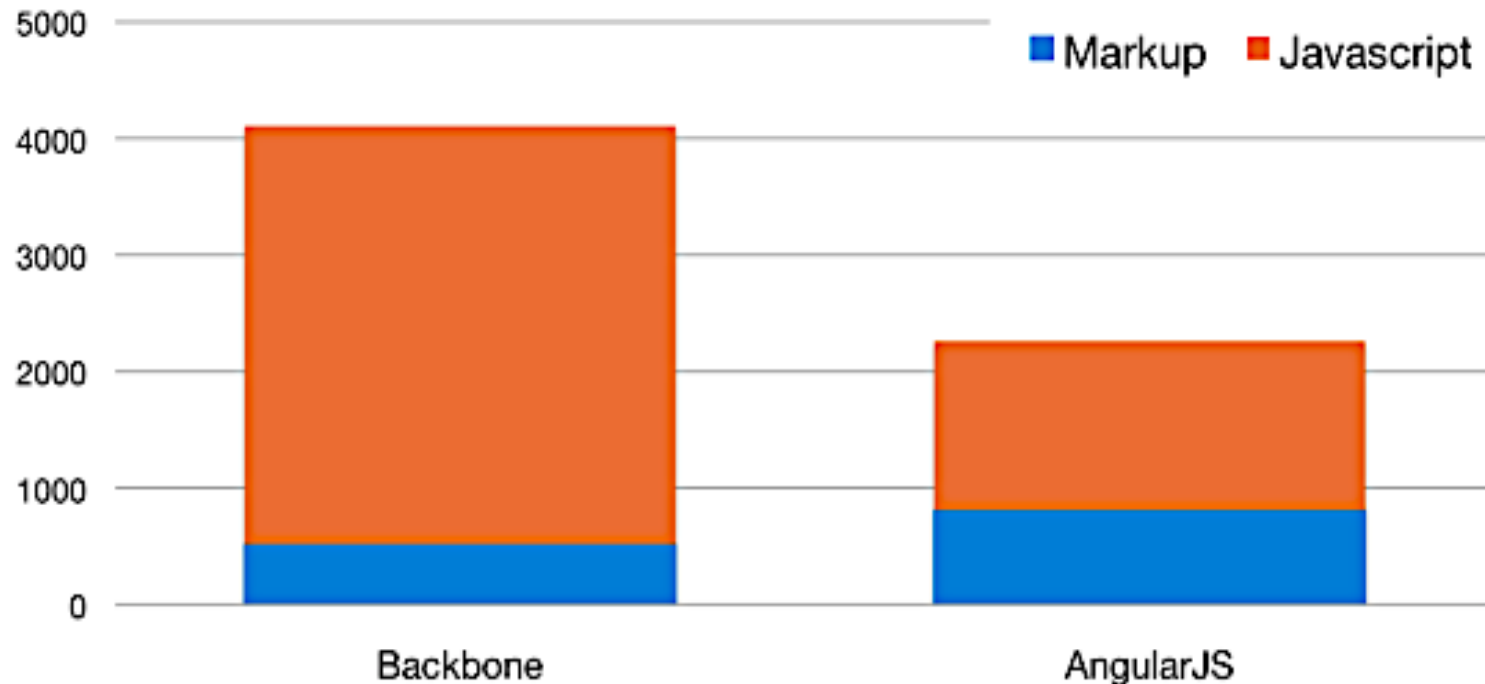
A case study comparing BackboneJS vs AngularJS app in terms of Lines of code.

Angular Toolset

Data Binding	MVC	Routing	Testing
jqLite	Templates	History	Factories

Complete Set of tools for SPA Development

ViewModel	Controllers	Views	Directives
Services	Dependency Injection		Validation

Job Trends

Job Trends from Indeed.com
— Angularjs

Popularity Trend
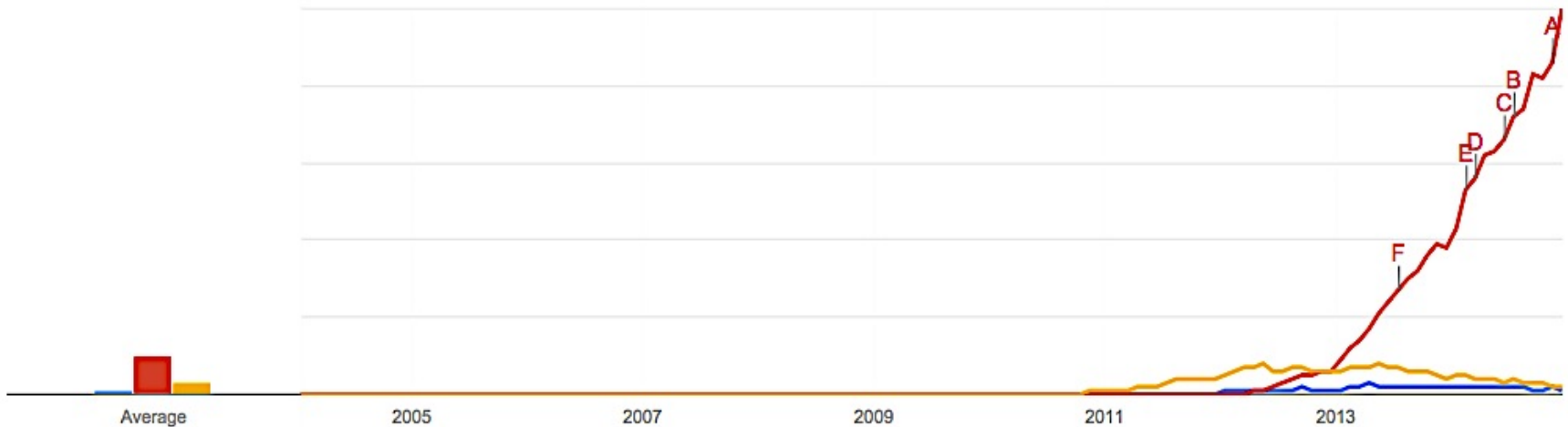
And More Advantages

- HTML Templating (No template engine required)
- More Markup, Less JavaScript Code
- Excellent Testing frameworks support
- Plain Old JavaScript Objects for Data Models
- Form Validation functionalities
- Asynchronous task handling using Promises
- You can also use AngularJS for **Mobile apps**
- Excellent developer community Support

Companies using AngularJS

VEVO

General Motors is using Angular in their cars

HBO mobile site for iPad

Virgin America whole site as an Angular app

Sony in the PS3 youtube app

Google