ANGULAR JS

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WHAT IS ANGULAR JS?

- used to create dynamic web pages
- a client-side open source JavaScript framework
- made to tackle problems with SPA development
- for quick HTML rendering on client-side with MVC

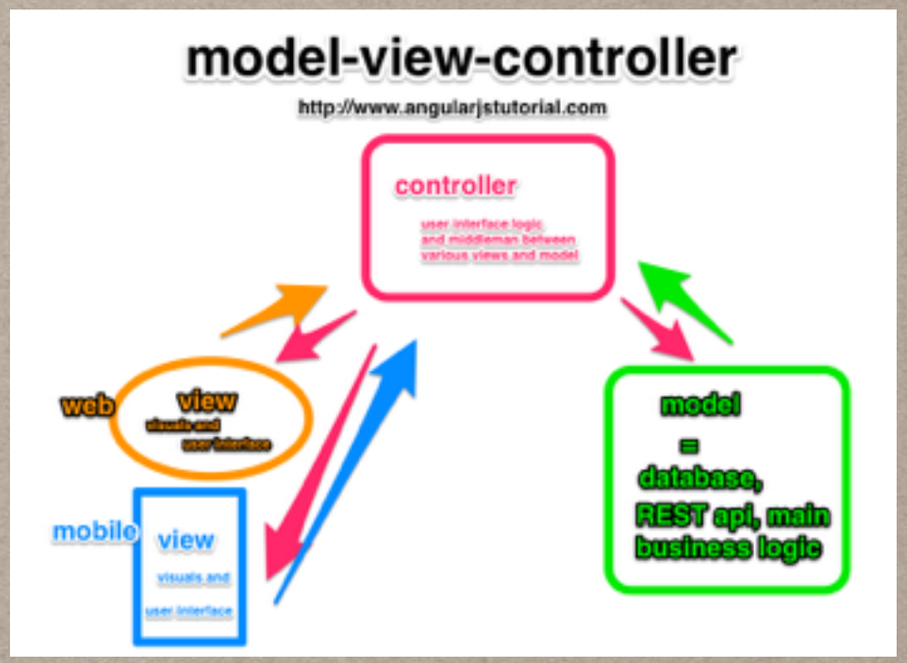
ANGULARJS

HISTORY OF ANGULAR JS

- developed by Brat Tech LLC, Google, and other contributors
- initially released in 2009, with the most recent stable release in March 2015
- made by the philosophy to improve testability and performance, as well as decouple the dependency between client side and server side communication.

MVC(MODEL-VIEW-CONTROLLER)

- angular is a MVC based framework
- where most web services need to talk to the web service via MVC, Angular aims to do this on the client side
- uses only what needs to be displayed dynamically



TERMS

- controller - code that creates model and sends it to the view
- model - the data that is used to create the view
- view - starting as a template that is merged with the model and rendered in the browser

CORE FEATURES

- data binding - auto syntonization of data between view and model
- scope - objects referring to the model
- dependency injection - a design concept, using controllers and services for Inversion Control
- controllers - javascript functions bound to a certain scope
- directives - used to extend HTML

WHY USE ANGULAR JS

- Angular manages the components you make for you and connects them
- the declarative user interface decides which controllers to use rather than loading them all in a linear way
- scopes bound to the view make changes to the interface instant, checking for changes via the controller
- writing less code
- structure, performance, testability

```
<!DOCTYPE html>
<html ng-app="exampleApp">
<head>
    <title>Forms</title>
    <script src="js/angular.min.js"></script>
    <link href="css/bootstrap.min.css" rel="stylesheet" />
    <link href="css/bootstrap-theme.css" rel="stylesheet" />
    <script>
        angular.module("exampleApp", [])
                .controller("defaultCtrl", function ($scope) {
                    $scope.selectValue = false;
                    $scope.skills = [
                        { id: 100, group: "Tools", name: "GruntJS" },
                        { id: 100, group: "Tools", name: "WebStorm" },
                        { id: 100, group: "Tools", name: "Visual Studio" },
                        { id: 100, group: "Languages", name: "JavaScript" },
                        { id: 100, group: "Languages", name: "C#" },
                        { id: 100, group: "Languages", name: "Python" },
                        { id: 100, group: "Databases", name: "MongoDB" },
                        { id: 100, group: "Databases", name: "MySQL" },
                        { id: 100, group: "Databases", name: "Oracle" },
                    ];
                });
    </script>
</head>
<body>
<div id="todoPanel" class="panel" ng-controller="defaultCtrl">
    <form name="myForm" novalidate>

        <div class="well">
            <div class="form-group">
                <label for="slct">Select an Action:</label>
                <select id="slct" ng-model="selectValue"
                        ng-options="item.name group by item.group for item in skills">
                    <option value="">(Pick One)</option>
                </select>
            </div>
        </div>

        <div class="well">
            <p>Selected: {{selectValue || 'None'}}</p>
        </div>
    </form>
</div>
</body>
</html>

```

- generating option elements within the scope.todos array
- creating a view based on two way binding corresponding to user actions
- ng-options iterates through to whole array
- displays the view dynamically on web page

MANY MANY MORE OPTIONS

- directives are powerful
- over tens and tens of directives making your code a lot more versatile
- can make your own directives
- ng-app, ng-controller, and ng-repeat will be the most common you will come across

PROS

- pros are very fast development and creation of scalable apps, as well as having impressive performance.

RESOURCES

- https://angularjs.org/
- http://www.toptal.com/angular-js/a-step-by-step-guide-to-your-first-angularjs-app
- http://en.wikipedia.org/wiki/AngularJS
- http://www.slideshare.net/knoldus/angular-js-29106360