Angular and Spring Boot

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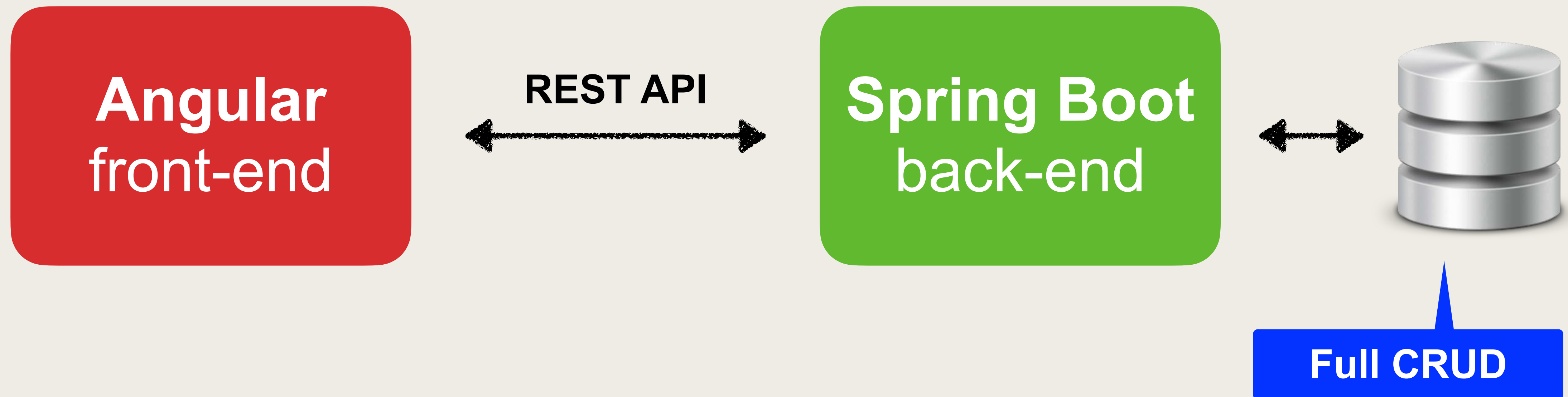# Course Development Team

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Course Objective

- Build a Full-Stack application with Angular and Spring Boot

Prerequisites

- You should have prior experience with

  - Java

  - Spring Boot

  - Maven

  Spring & Hibernate for Beginners

- **NO** prior experience needed for Angular

  - We will teach you Angular from the beginning :-)

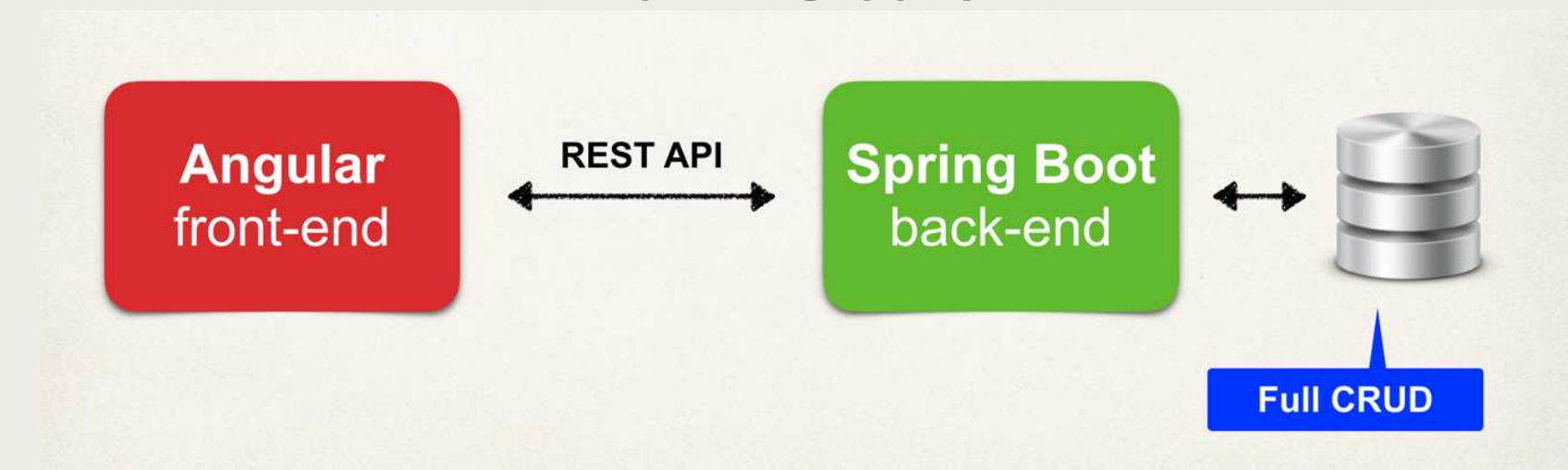 - Not an A-Z coverage of Angular … but enough to build Full-Stack apps

Course Road Map

- Angular Overview

- Set up Development Environment

- TypeScript Crash Course

- Angular Crash Course

- Build Real-time eCommerce App

  - Create Angular front-end

  - Develop Spring Boot back-end

Full-Stack

Source Code and PDFs

All source code is available for download

All PDFs of slides are available for download

Questions / Help

If you have questions or need help…

Post the question in the classroom discussion forum

Angular Overview

What is Angular?

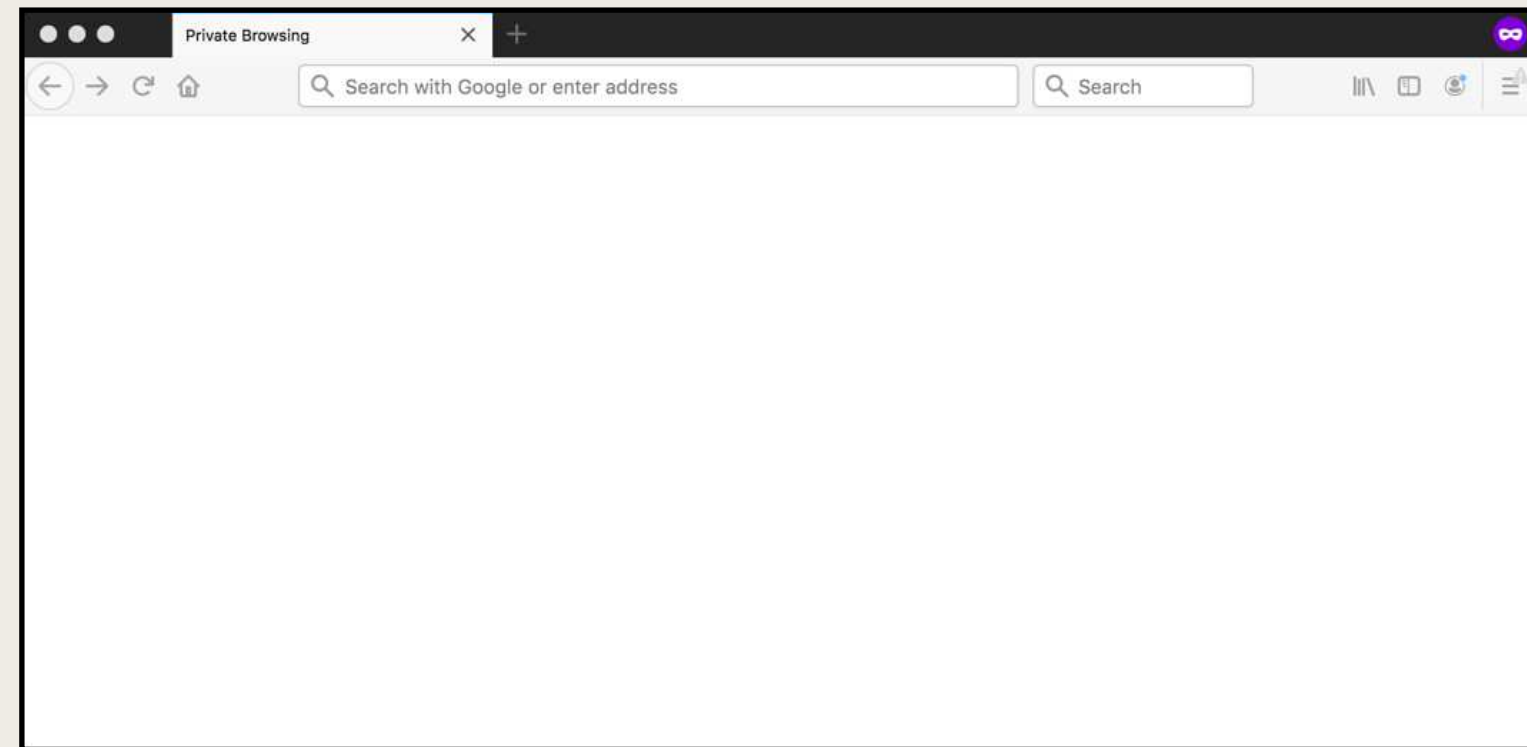- Angular is a framework for building modern single-page applications

**Official docs
Tutorials**

www.angular.io

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How is Single-Page application
different than
Traditional application?

Traditional Application

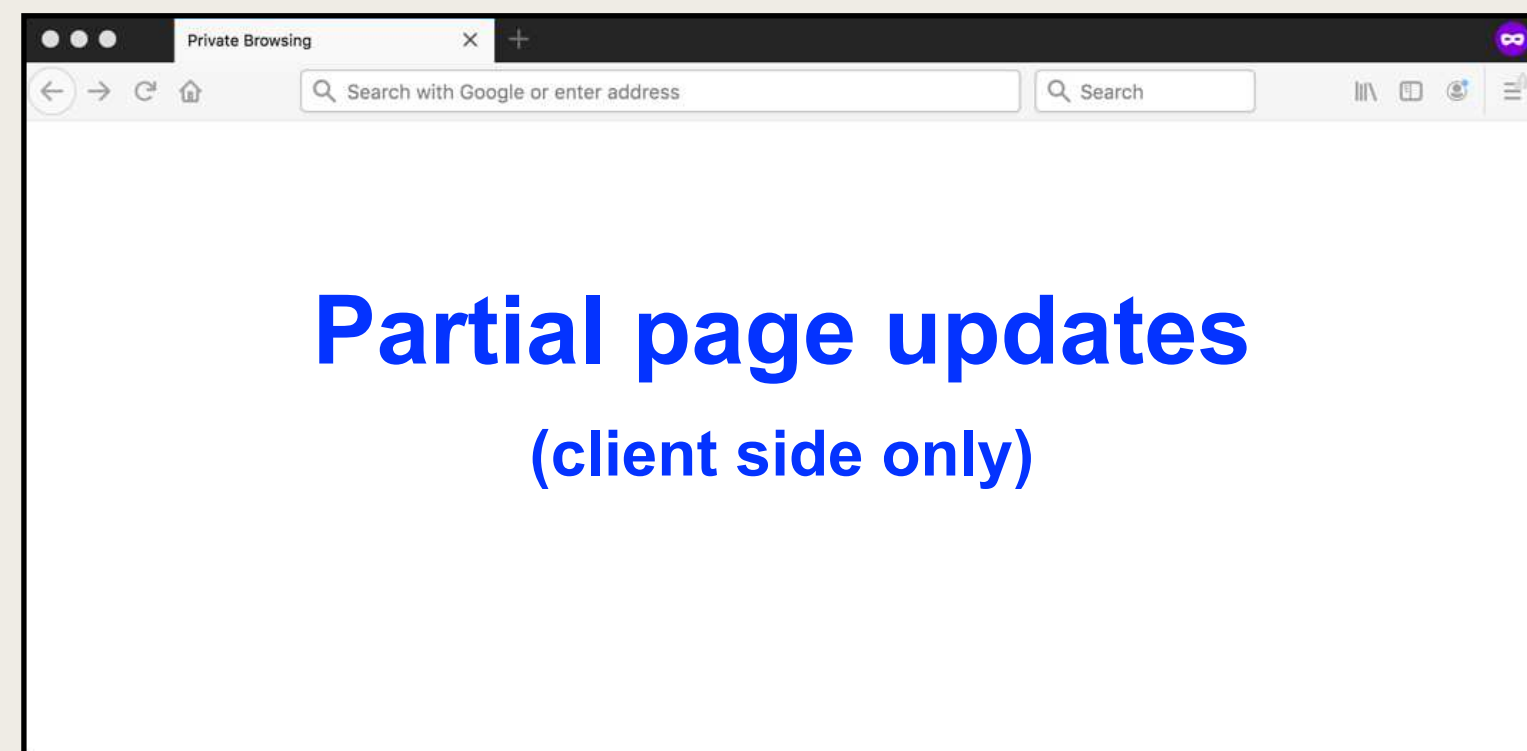- Each user action results in a full HTML page load

Full HTML Page Loads

Server

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Single-Page Application

- A web application that is composed of a single page

- Based on user actions, the application page is updated

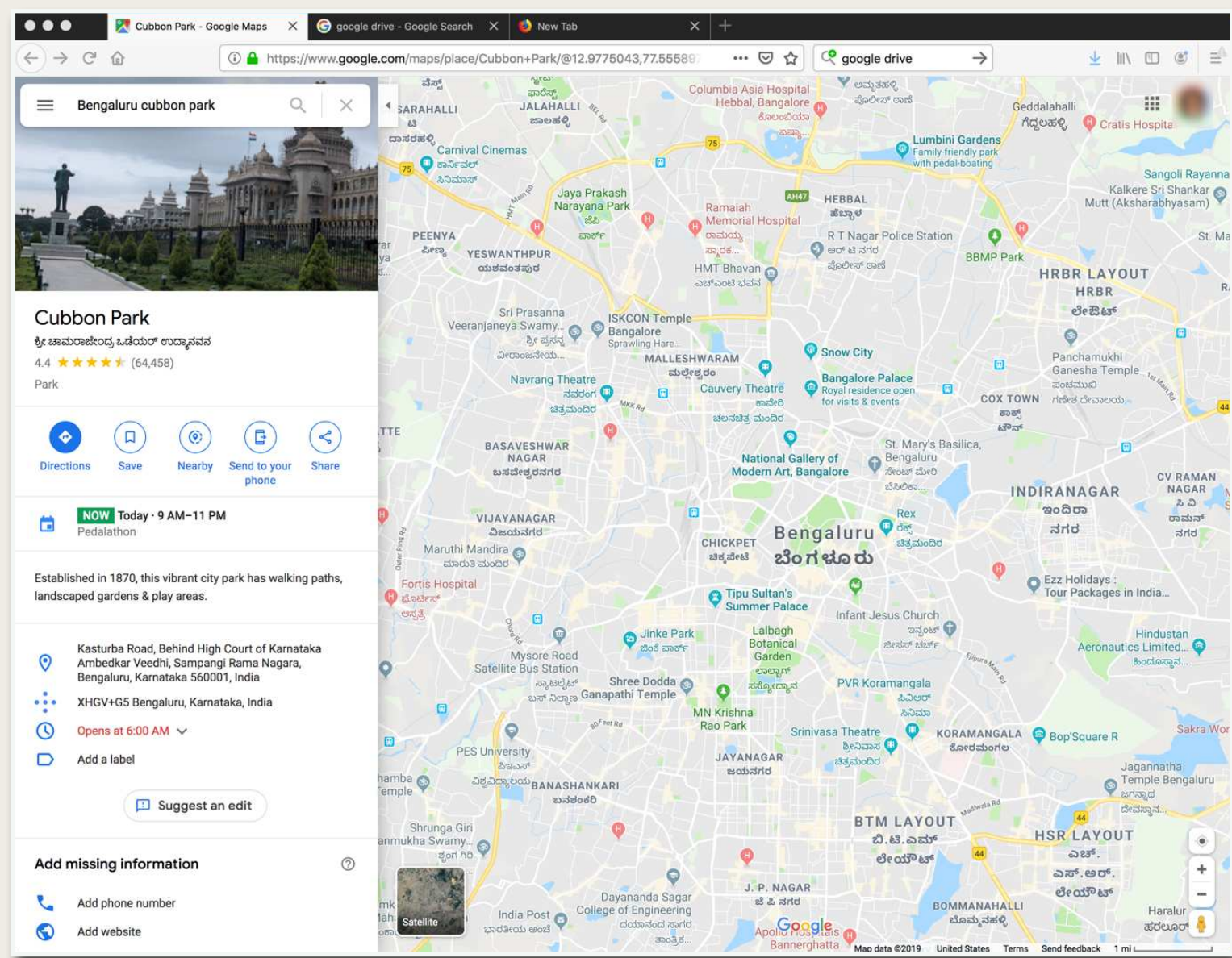   - Normally performs a partial update … instead of full page load
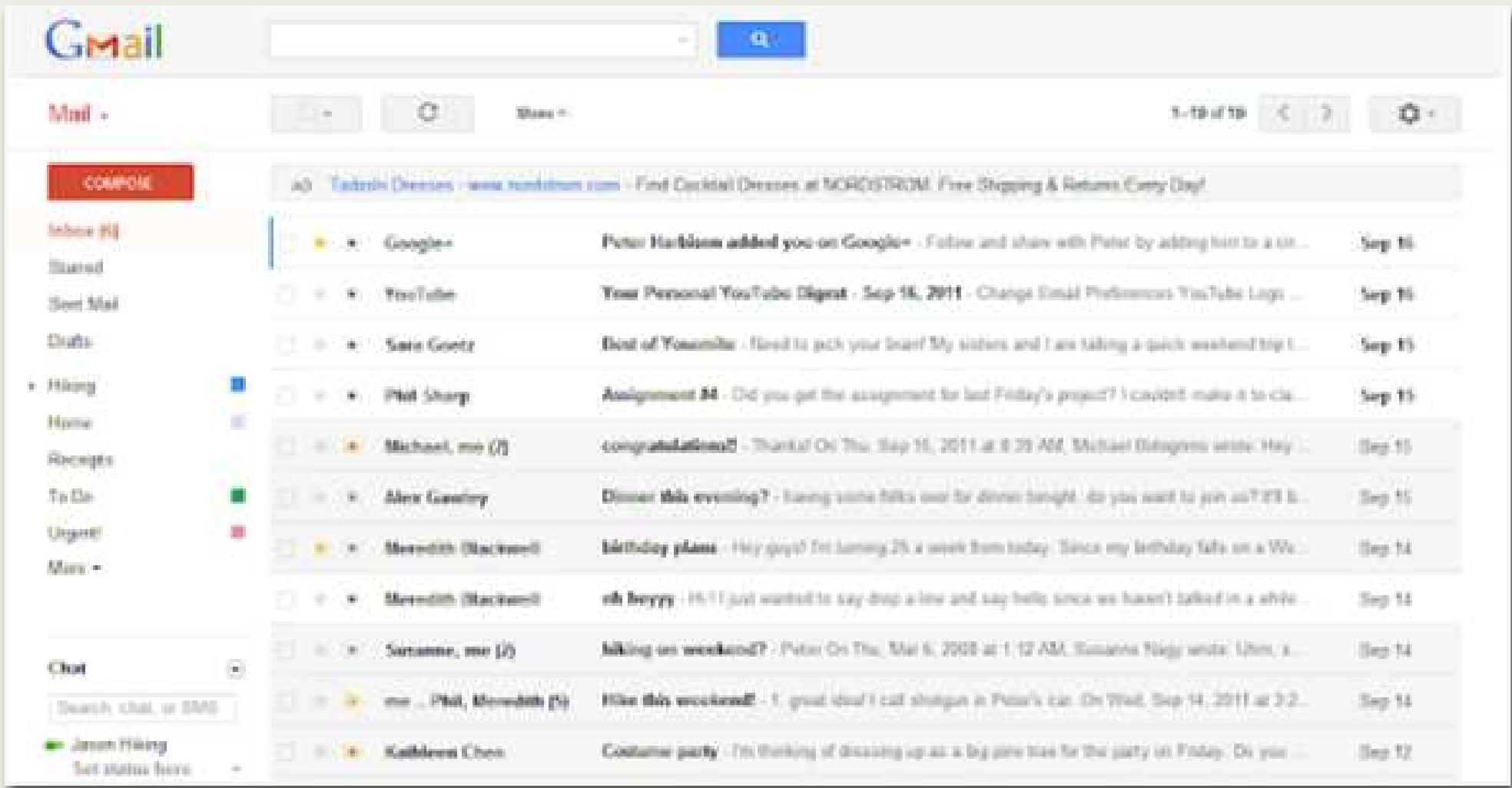
REST API for data

Partial page updates
(client side only)

Server

Examples of Single-Page Applications

Maps

Email

Angular Solution

- Angular is a framework for building modern single-page applications

REST API for data

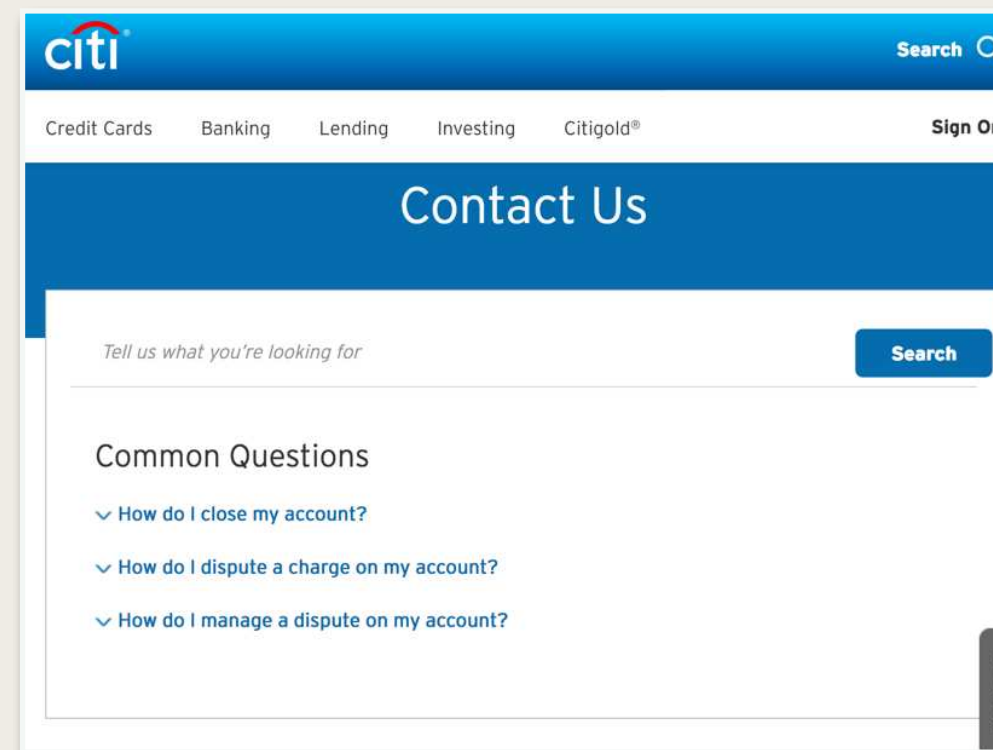**Partial page updates**

(client side only)

Server
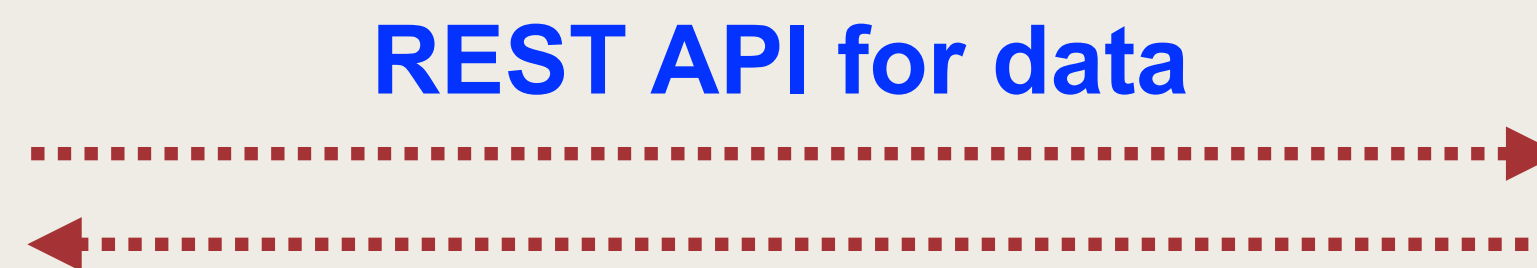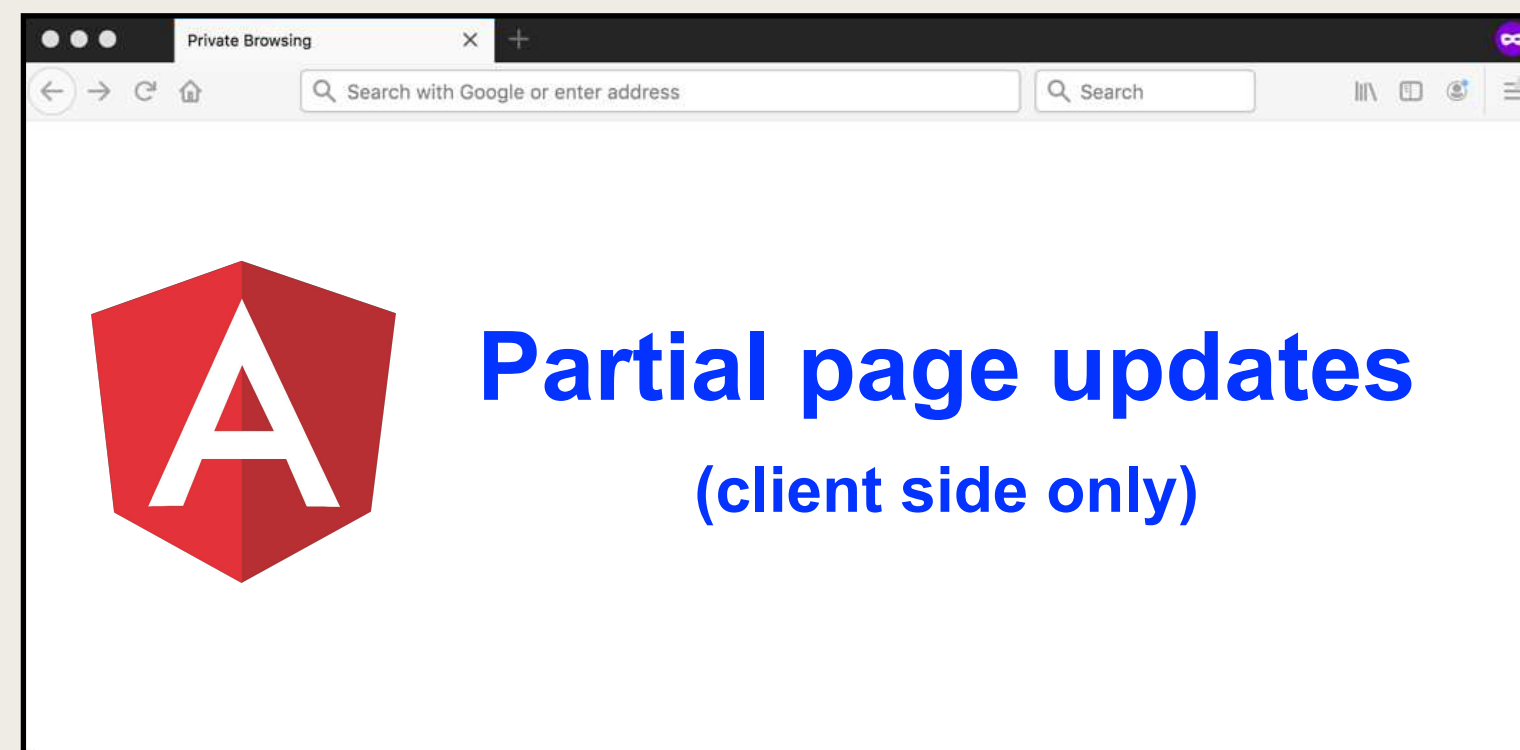
Who's Using Angular?

- Companies around the world are using Angular

Australian Government Immigration

Citi Bank Customer Service

Microsoft Xbox
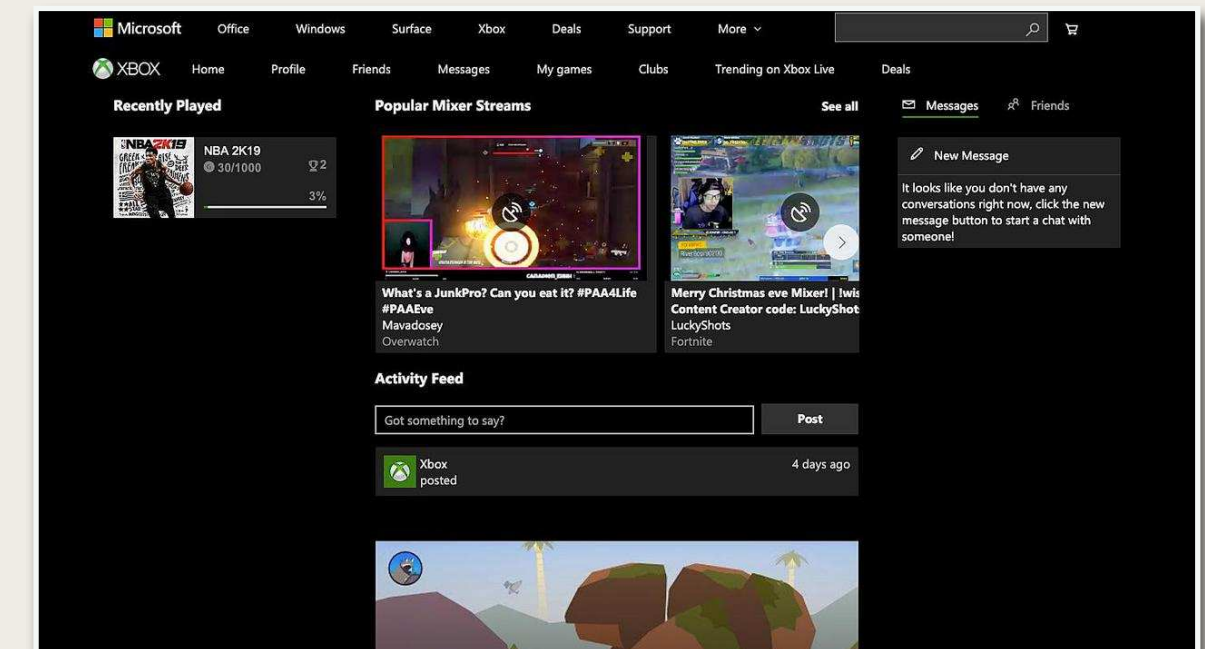
www.madewithangular.com

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Angular History

AngularJS 1.0   Angular 2   Angular 4   Angular 5   Angular 6   Angular 7   Angular8

2010   **2016**   **2017**   **2017**   **2018**   **2018**   **2019**

October   October   March   November   May   October   May
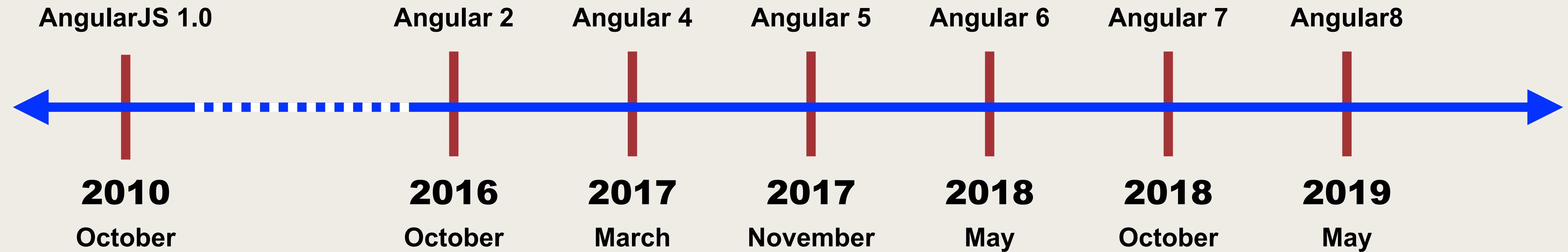
**Angular 2
was a complete rewrite of
AngularJS**

**Angular 2 and higher
follow same framework approach
(incremental improvements)**

www.luv2code.com

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Angular History + Future

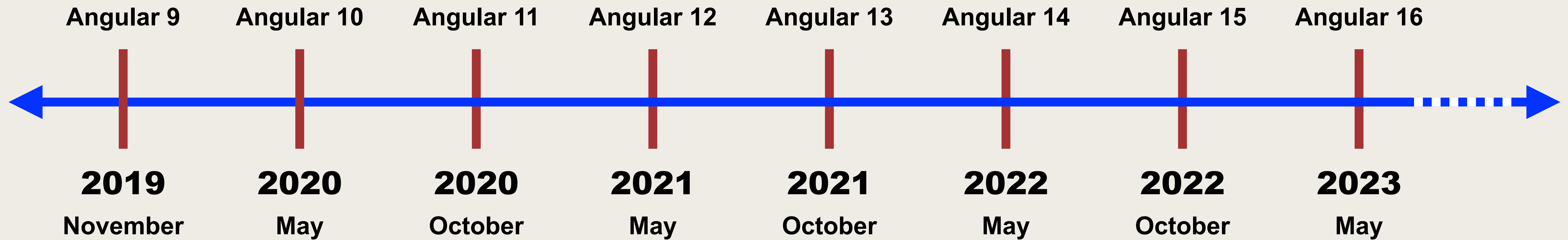| Angular 9	Angular 10	Angular 11	Angular 12	Angular 13	Angular 14	Angular 15	Angular 16
2019	**2020**	**2020**	**2021**	**2021**	**2022**	**2022**	**2023**
November	May	October	May	October	May	October	May

Major release every 6 months

Dates are general guidance from Angular team … may shift accordingly

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What about Do-it-Yourself?

- **FAQ: Couldn't I just do it myself with JavaScript, jQuery, AJAX etc?**

- May work for small basic hobby apps

- For common features such as data binding, you may reinvent the wheel

- Hard to manage and maintain for enterprise real-time applications

- Main reason we have frameworks such **Angular**, **React.js**, **Vue.js**, …

Set up Dev Environment

Angular Development Tools

- You can use any text editor or IDE

- Most Angular developers use the **TypeScript** language

  - Superset of JavaScript

  - Strongly-typed language with compile time checking and IDE support

- Command-line tools to compile code and create Angular apps

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Visual Studio Code

- Free IDE that supports multiple programming languages

- Has built-in support for **TypeScript**

- IDE features such as IntelliSense, Debugging, etc …

http://code.visualstudio.com
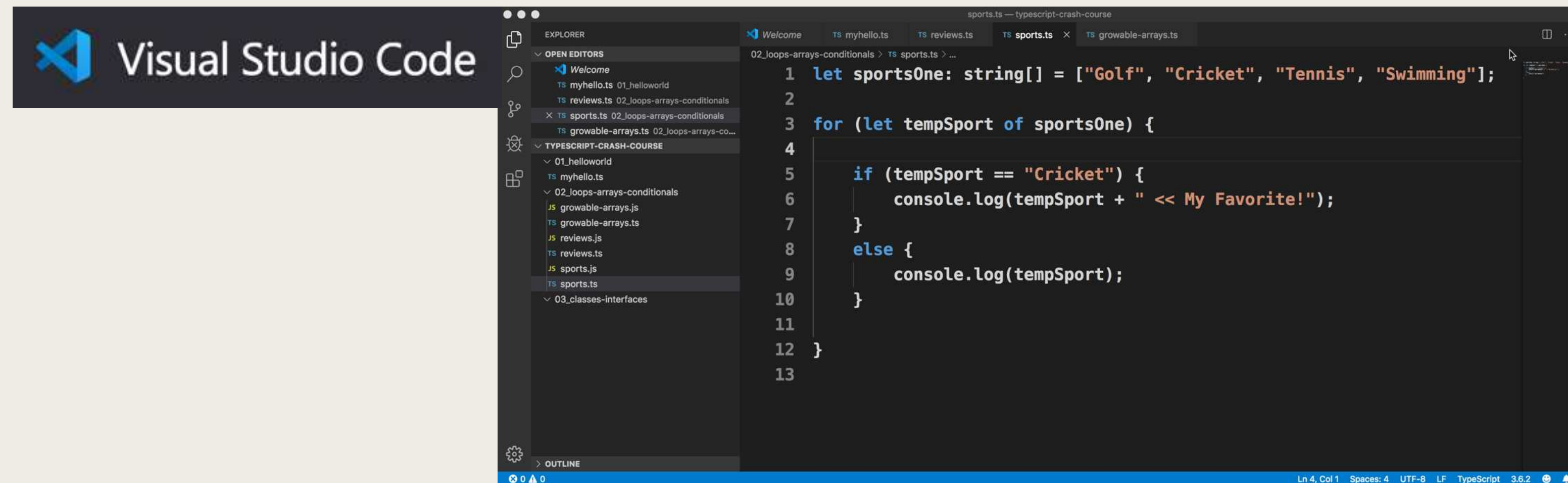
Command-Line Tools

Tool	Purpose
node	For running JavaScript code from command-line
npm	Node Package Manager - Download new node packages and features. Similar to Maven
tsc	TypeScript Compiler

Installation Instructions

- Install tools: Visual Studio Code, node, npm, tsc

- Step-by-step instructions for each operating system

MS Windows   **Mac**   **Linux**

- View the instructions at the following link

www.luv2code.com/angular-install-guides