Beginners Web Development Workshop
(rev 0.4)

Introduction
This weekend workshop provides an introduction to the basics and fundamentals of web development. At the end of the workshop, attendees will be able to create and deploy a static multi-page website from scratch. More importantly, this workshop will introduce a lot of foundation information which allow attendees to have an easier time to explore and learn more about web development in the future.

This workshop provides a hands-on lesson on building a mock "Coffee Shop Website", with responsive design considerations, basic forms inputs, and basic interactivity using JavaScript. The completed classroom project will be given to each attendee at the beginning of the workshop, along with notes, code comments, unit-tests, and checkpoints containing a snapshot of the project along the way.

Workshop Duration
Approximately 14 hours total

Hands-On Project: Coffee Shop Website
- A simple 3 page website showcasing a coffee shop: Home Page, About Page, Jobs Page
- Site will be responsive to different viewport sizes, self fitting to mobile and desktop screens
- A mocked "sign up to our newsletter" form to practice data connectivity
- On mobile devices, the navigation will be displayed as a flyout menu accessible via a "hamburger" menu toggle button

Bonus Topics (If time allows, otherwise sample code will be provided):
- Adding a Google Maps snippet to display the coffee shop's location
- Simple "sticky" element stationary to page regardless of scroll (using JavaScript)
- A simple "reserve tables" mechanism using AJAX
- Writing tests against code, and understanding the importance of automated testing

Workshop Prerequisites:
- Download VSCode: https://code.visualstudio.com/download
- Sign up an Azure account: https://azure.microsoft.com/en-us/free/
    Then, complete the following walkthrough to enable fast static file deployments:
    https://code.visualstudio.com/tutorials/static-website/getting-started
- Chrome browser for development https://www.google.com/chrome
- Download and install Node: https://nodejs.org/en/download/

Skills Required from Attendees:
- Ability to navigate file systems at ease (copy/paste/unzip files)
- Basic concepts of programming
- Ability to switch between applications quickly (eg: between editors and web browser)
- Basic command line operations

Learning Outcomes
1. Ability to read and write HTML to build web pages
   a. HTML syntax, and basic schematics
   b. Frequently used HTML tags
   c. Meta tags
   d. SEO friendly tags
2. CSS basics interpretation skills
   a. Inline styling vs Internal stylesheets
   b. Unit of measurements
   c. Selectors
   d. Media query for responsive web design
   e. Fonts and typography
   f. Background images
   g. Creating a "parallax" effect for background images while scrolling
   h. CSS pseudo-classes
   i. CSS grid fundamentals
   j. CSS flexbox
3. JavaScript basics
   a. const, let, var variable assignments
   b. ES6 arrow functions
   c. Scoping
   d. Understanding DOM, and manipulating content using JavaScript
   e. Event handler
   f. Asynchronous JavaScript
   g. Data connectivity using fetch
   h. async vs defer attribute in <script> tags, and script loading order
4. Browser and debugging tools
   a. "Can I Use" - Browser restrictions
   b. Responsive Design Mode / "device toolbar"
   c. Elements selector
   d. Other important tools such as Console, Network, and other tabs
5. Important web development terminologies and other industry related information:
   a. Front end development terminologies
   b. SEO related terms, and considerations
   c. Browser Stats
   d. Tips & Tricks on thriving at front end development