Unit 10

FINAL PROJECT

For this course's final project, you'll be designing and building a web application of your choice. This project will test your knowledge of JavaScript and ask you to apply everything you've learned throughout the past nine weeks. The result will be a web app you can add to your portfolio. There are three project options below. Work with your mentors to create goals that are realistic for you.

The three options are listed in order of difficulty.

1. Restaurant Website & Reservations App

In this project, you'll develop a restaurant web app for to promote the restaurant's brand and allow patrons to make reservations.

Brand promotion will be done by incorporating at least one of the restaurant's social media platforms, and reservation functionality will be executed through the development of a back-end database.

You will build your site off of the landing page you created in the Unit 9 Project. Alternatively, we will also provide starter code.

Technical Requirements:

- You should utilize Firebase to create a database to store reservation data.
- Your view should show all reservations made in real-time.
- You can create an object for either the patron or the reservation.
- Create a "Store Location" section integrating the Google Maps API.

Bonus (Optional) Challenge:

- Add the ability to cancel reservation
- Add an "Hours" section which list the restaurant's hours as well as tell the user whether it is opened or closed.
- Consume a third-party social media API, and put relevant data into the view. These APIs can be, but are not limited to, Facebook, Instagram, or Twitter.

Why choose this project?

This option allows you to not only exercise your knowledge of the language but also expand your understanding of HTTP, MVC, and full-stack development. For example, to integrate the Google Maps API, you'll need to also read proper API documentation.

To access starter code and for further instructions, proceed to the Final Project Option 1 page.

Final note

You will host your website on a GitHub Page. To do so, follow this set of guidelines. for hosting your project.

2. Build Your Own Car

In this first project, you will create a web page that allows potential car buyers to build and price their ideal car.

We will provide starter code, and you will have the opportunity to put into practice the fundamentals of JavaScript.

Technical Requirements:

- Create an object for a car the user selects, including the model, color and optional packages.
- The website must be a Single-Page Application (SPA).
- Your site must dynamically show the price of the car throughout the entire "build" experience.
  - As your users change the car's color or add features, its price should increase. (E.g., Manipulate the DOM to show what a more expensive color looks like.)

Bonus (Optional) Challenge:

- Utilize Firebase to create a database to store which vehicle, color, and package the user has selected.
- Utilize Google Maps to show the user the nearest dealers according to the user's current location.
- Create a "Directions" feature that helps users find directions to specified dealers based off their current and/or given locations.

Why choose this project?

Choose this option if you are comfortable with JavaScript fundamentals. This option allows you to practice working with objects, in this case a car. Moreover, heavy DOM manipulation is needed to complete this project. Overall, it is a great option if you want to practice the core fundamentals of JavaScript. Optionally, by integrating the Google Maps API, which functions as more of a JavaScript library than a typical API, you can practice various HTTP methods and exercise your knowledge of singletons, functions, and other fundamentals.

To access starter code and for further instructions, proceed to the Final Project Option 2 page.

Final note

You will host your website on a GitHub Page. To do so, follow this set of guidelines.

3. Choose Your Own Adventure

If neither of the two prompts are quite up your alley, feel free to implement your own idea for your final project. Just make sure that it adheres to listed technical requirements and you've discussed it with your mentor.

This option does not have any starter code.

General Technical Requirements

These requirements apply to all final projects:

- Code should be written according to the conventions we covered throughout the course:
  - It should be reusable, clean, and DRY.
  - It should use proper syntax and indentation.
  - It should include consistent variable names throughout.
- For Options 1 and 3, HTTP requests must be made to interact with third-party and/or your own Firebase API.
- For Options 1 and 3, HTTP responses should be

captured and properly handled relative to their purposes, and then saved to variables.
- Code should update the DOM.
- You should use either plain vanilla JavaScript or jQuery to perform DOM manipulation.
- Your final project should be hosted on GitHub Pages.
- You should push to GitHub as you develop.
- You should include thoughtful commits and commit messages.
- Your projects should listen for events and add interactivity based on user input.

Bonus (Optional) Challenge:

- Make HTTP requests to your own Firebase server.
- Make at least one HTTP request to a third-party server.
- Incorporate CRUD functionality.