Capstone 1

IMPORTANT: Make all of your changes for this capstone in a single feature branch in your student repository, and create a pull request when it is ready for review

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Introduction

Your task is to build a website for the business of your choice. It can be for a grocery store, a car dealership, a jewelry shop, a cell phone store, a bookstore, or any other legitimate business that maintains an inventory and sells products. One limitation is that the business should not contain any content that is potentially ethically offensive or graphic (drugs, sexuality, etc.) Take some time to plan out your strategy for completing this project. As the saying goes, "If you fail to plan, you plan to fail."

The App must be a Single Page Application (SPA) created using the React.js and React Router libraries.

As part of your planning/design process, you may want to investigate some UX design tools, otherwise known as "wireframing" tools. A few examples are:

- Figma
- Sketch
- Balsamiq
- Omni Graffle
- Mockplus
- Adobe XD

It is highly recommended to design your application first, before starting to code, creating user stories, etc. This doesn't have to be reflective of your final product but will help you think through how to fit all the pieces together.

While not required, it's also recommended that you include this design in your pull request, if you can do so in a small, self-contained way (e.g.: no links to an online site, unless it doesn't require the reviewer to sign in; no files/images/screenshots unless they're only a MB or 2).

IMPORTANT: The capstone project is a demonstration of your understanding of the topics covered to-date in the boot camp. You may need to learn from tutorials to complete parts of the project. It is acceptable to use tutorials to learn how to add specific functionality to your project, but you cannot simply copy a tutorial repository or follow a single tutorial from start to finish to develop your application. See guidelines below for using tutorials:

- Do not fork a tutorial repository. This would be considered plagiarism and result in an automatic grade of zero and potential removal from the boot camp.
- Do not simply follow the tutorial from start to finish.
- You must be able to explain how all functionality included in your project works.
- ***List ALL tutorials or aids used in your Read Me file. Include:***
  - ***The name of the tutorial,***
  - ***Which section(s) you used, and***
  - ***The functionality you learned from the tutorial.***
- Failure to list tutorials used will result in significant reduction of your grade.

Project Setup

It's recommended that you initialize your React App using the "npx create-react-app" command.

- As you complete a piece of functionality, commit push (with detailed comments) to your remote GitHub repo often
- You're encouraged, but not required, to "build to" your design mockup and reference the mockup in your comments where appropriate.

Submission Instructions

Create a new feature branch in your TEKbootcamp repository. Commit and push frequently. When your work is done and ready for review, please merge the feature branch into the develop branch.

Following instructions for CodeGrade submission:

1. Click on the "Launch exercise" button on the exercise page at TEKsystems Academy.

2. In the new CodeGrade window, click on the "Connect Git" button.

3. Select GitHub as your Git host. Connect your TEKbootcamp repository to the exercise*.

After selecting a repository, this repository will be cloned to CodeGrade as a first submission. After this, you can start to use Git like you usually would. Every time you push to the develop branch, it will automatically result in a new submission in CodeGrade. Pushes made after the submission deadline will not be taken into consideration.

* You will only have to log in and authorize CodeGrade once; after that, it will be available for all your other assignments inside CodeGrade too.

WARNING: Be sure to connect the proper repository to the exercise. You will not be able to connect to another one immediately using the CodeGrade connection. You can undo your Git connection with CodeGrade by revoking access to the External Tool "CodeGrade" in your GitHub account only.

Minimum Functionality:

The following functionality needs to be in place before adding any extended features:

- A Product Page View that displays Products with a thumbnail image
- A Shopping Cart View that allows for Purchase Functionality
- A Product Detail View that displays details of the product with the following details:
    - Product Name
    - Serial Number
    - Price
    - Manufacturer (Optional, especially if there is only 1 manufacturer for all products)
    - Category / Tag
    - Quantity

- o Product Image
- Search Functionality

- Inventory of at least 10 items
- Error Handling when customers attempt to purchase more than what is currently available
- Error Handling when customers search for something that is not in the inventory
- If applicable to your storefront, allow customers to purchase multiple quantities of the same item

For this project, no backend database is required. You can simply store all your "inventory data" in a simple .json file, initialized in React State, local storage, Dexie.db or in any way that is easiest for you to store the inventory data.

Full Functionality

Add as many of the following features/ functionality as you can, within the time limit for your capstone – like the core functionality, this will be graded on completeness and quality of implementation:

- Staff View - Protected Route (with a fake login screen)
  - o Modify Inventory Quantities (which update the inventory data)
  - o Add New Products
  - o Remove Products
  - o Update Product details
- Search functionality by multiple item details (serial, price, manufacturer, category)
- Persistent storage of inventory and/or customer (shopping cart) data

If time permits, and you have completed all required functionality, you are welcome to incorporate functionality beyond what is specified; however, there are no bonus points to be awarded and poor code quality could diminish your grade.