Assignment 3 – Implementing a Website with React

Assigned: Wed Oct 9 2017
Due: Sun Oct 22 2017 11:59 pm

Part 0: Setup (8 pts)

See the GitHub repo: https://github.com/mkery/SSUI-Homework-4. DO NOT CLONE THIS REPO, instead look at its README.md where you'll find *detailed instructions for setting up your React project*. **This repo also contains some example code to get you started.**

Part 1: Getting started learning React (0 pts)

Since we have limited class time, you'll need to learn React independently. Feel free to ask many questions on Piazza!

1. **(optional) Follow this tutorial for React: https://reactjs.org/tutorial/tutorial.html. You do not need to do the entire thing, but please use it to get familiar with how React works.**

2. **(optional) Explore the example repo we've set up for you: https://github.com/mkery/SSUI-Homework-4 This contains some very simple React components. You can open the deployed version of that app here: http://marybethkery.com/SSUI-Homework-4/ and examine it using Chrome developer tools. There's a handy add-on for Chrome found here, that will allow you to inspect an element in React's syntax.**

Example of Chrome dev tools with the React plugin. Notice at the top of dev tools, we've gone to the React tab.

Part 2: Build your shop website in React and add local storage (20pts)

You may copy over your images, fonts, and CSS as-is, only a redo of some Javascript is required to make this work in React.

Requirements:

- **Each item in the store should have the following properties (2pts):**
    - **Price** *(eg. $2)*
    - **Quantity** *(how many of that item the user wants to buy)*
    - **Image**
    - **Title** *(what is the product called?)*
    - **Description** *(a sentence or so describing the product)*
- **Each item in the store should be constructed via a React component (3pts):**

peanut butter dog cookie

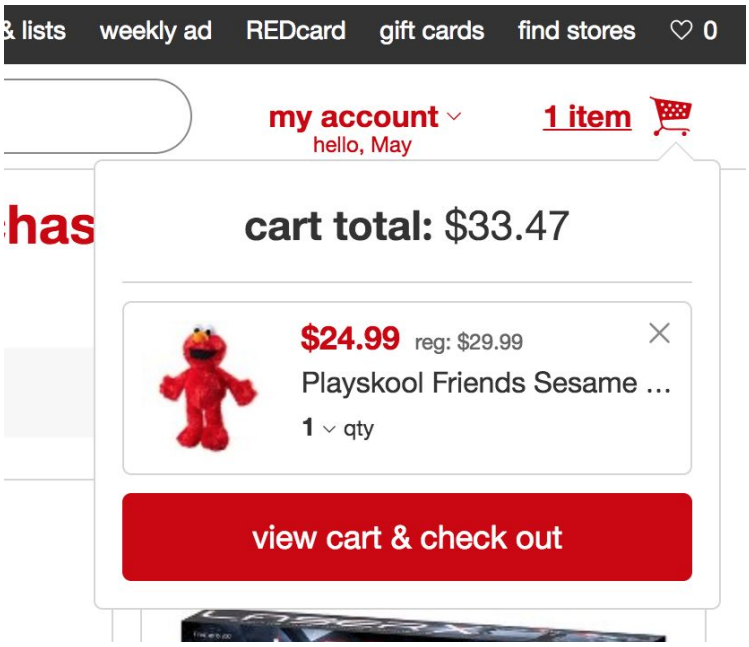
bacon dog cookie

Look at the example code for hints. Each store item should be constructed from the same React component type. In this example above, both the peanut butter dog cookie and the bacon cookie are rendered using the same Reach component type.

- **Cart shows how many items are in it (1pt)**

<-- Here is an example from Target's website.

- **On hover, cart shows a preview of what it contains (5pts)**
  Hint: this can/should also be done using React Components.



<--- here is an example of what a cart hover interaction looks like, from the Target website. *(btw. Can you believe they're still selling Tickle Me Elmo after 20 years? That's scary.)*

- **Cart retains what is in it on all pages (5pts) Please use HTML local storage for this.**
- **Create a detail view for each product using React (9 pts). Instead of having 15 pages for 15 products like on HW3, this time you should be able to generate a view containing product details for any given product. Hint: you don't necessarily need a separate page for the product detail view. React is well known for single-page apps, which are entire apps that exist in an entire web page, and instead of creating new pages for different content, it simply switches out which divs are displayed to show different content.**

Part 3: Write-up (2 pts)

Write-up a paragraph that answers the following questions:

A. **What things do you like about React's syntax? What makes React easier to deal with than vanilla Javascript?**

B. **What makes React harder to use? What features of React still confuse you?**

C. **What did you learn from this assignment? What was challenging?**

Submission:

- **Make sure your github repo is accessible by me!**
- **Submit your write up as a pdf on Canvas**

★ Bonus *(5 pts total)*

- **Put all product data in a JSON file that is dynamically loaded on your page to display products, instead of hardcoding product information in your app itself.**