Section 3: React Basics and Working With Components

Brian Nguyen

October 14, 2021

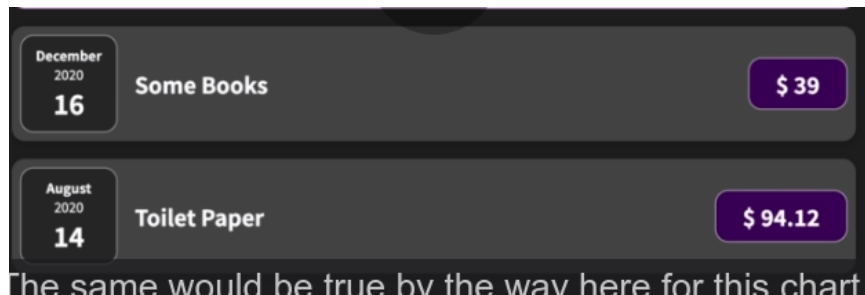## Contents

1 Module Introduction

We will learn how to use everything that makes up React

- React Core Syntax & JSX

- Work with components

- Work with data

2 1. What Are Components? And Why is React All About them?

- React is a JavaScript library for building user interfaces

1

- HTML/CSS/JS are about building user interfaces as well

- We use libraries like React <u>to simplify building user interfaces</u>

  - This is through the use of **components**

- All user interfaces in the end are made up of components

- in this picture, these components are the same; they are just reused twice

- **components** <u>are reusable building blocks in your user interface</u>

  - though you don't have to reuse components

- components are made up of HTML for text, CSS for styling, and possibly JS for logic

- React embraces the concept of components because of

  1. Resusablility - not repeating yourself
  2. Separation of concerns - keeping code base small and manageable. Don't do too many things in one and the same place

3 2. React Code is Written in a "Declarative Way"

3.1 How exactly is a component built?

- in the end, components are built with HTML, CSS, and JS, then we combine the components to build a user interface

- mostly, they're about HTML and JS; CSS could be a factor but it's not too important

3.2 The Declarative Approach

- React allows you to create **reusable and reactive components** consisting of **HTML and JavaScript** (and CSS)

- React is built using the **declarative approach**, which means that you should not tell React that a certain HTML element should be created and inserted in a specific place on the UI

  - instead, you will always define the desired target state(s) and let React figure out the actual JavaScript DOM instructions

- in the end, we are essentially building our own custom HTML elements

4 3. Creating a New Project

4.1 Preface

- the easiest way to create a React app is through this GitHub Repo

  - `https://github.com/facebook/create-react-app`

- this has preconfigured folders with basic React code files

- the `create-react-app` tool creates a development environment for our app

- You can also visit this site to view the documentation:

  - `https://reactjs.org/`

- Make sure you have Node JS installed on your machine

4.2 Creating the Project

Run these commands in your terminal

```
npx create-react-app my-app
cd my-app
npm start
```