CS 464P/564 – Front End Web Technologies Homework 3 - React and Charts

Instructions

❏ In this assignment, you will practice working with React and React libraries, while also working with data from a custom REST API and using charts from the Chart.js library.

❏ As always, make sure to check the solutions in more than one browser.

Exercise 01

❏ There is only one exercise in this homework assignment, though there are several parts within this one exercise.

❏ Use a [StackBlitz React project](#) to complete this assignment.

❏ **Part 01 - React Router**

   ❏ Use [react-router-dom](#) to create a navbar with associated routes.

   ❏ You will create a navbar with these routes:

      ❏ **/home**

         ❏ This is the main route that should contain a welcome message.

      ❏ **/list**

         ❏ This route should show a list of the countries of South America, their flags, and information about each country. This data comes from the API.

         ❏ Consider what happens when some of the information is missing from the API.

      ❏ **/population**

❏ In this route, there should be a bar chart showing the population for each country in South America.

❏ **/<custom-route>**

❏ In this route, use the data from the API and a chart or visualization of your choice.

❏ **Part 02 - Fetch Data from API**

❏ Use [axios](#) or another npm module for making HTTP requests to fetch data from the [Countries API](#) we are using in this class.

❏ Note: with StackBlitz, you will need to npm install axios@0.16.2

❏ **Part 03 - Using Chart.js**

❏ Use [react-chartjs-2](#) to create a bar chart that shows the population of the different countries in South America.

❏ Documentation:

❏ [Bar Chart | react-chartjs-2](#)

❏ **Part 04 - Styling the Application**

❏ In this part of the homework, you will need to style the application consistently across the different routes. There are no specific styling guidelines beyond making sure that all the components are styled consistently.

❏ There are many different npm modules that can be used for adding styles, including [bootstrap](#), [react-bootstrap](#), [reactstrap](#), [tailwindcss](#), [material design](#), or many others.

❏ **Part 05 - Custom Chart**

❏ Finally, you will need to create a new chart using the data from the API. This can be a chart or visualization of your choice.

❏ **Code Quality**

❏ Check all JavaScript code follows the rules outlined in the [Airbnb React/JSX Style Guide](#).

❏ Check the solution is responsive by using the Device Toolbar or Design View in DevTools.

- ❏ Check the solution is accessible by using the Wave AIM extension.
- ❏ Check the code is formatted and consistent throughout all exercises.
- ❏ Make sure to delete unnecessary code from the submission.
- ❏ Cite any outside sources used to come up with the solution.

Submission Guidelines

- ❏ **Due date:** Week 6 on Wednesday at 5:00 pm.
- ❏ Submit the URL to the pull request in the **Discussion: Code Review for Homework 3** as part of the initial post on Wednesday.
- ❏ Add all discussion groups members as reviewers.
- ❏ You will need to review all submissions as part of the discussion follow up post.