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COP3813 HW 4 Report

Purpose

This page was built to introduce the concept of compound interest, calculate a basic compound interest formula, and provide some fun trivia that uses compound interest. Although I earned a bachelor's degree in mathematics, I didn't really understand compound interest until I started paying off credit card debts and looking at ways to invest my money. Playing with the values in a compound interest formula is a fun way to visualize long-term financial goals, so I wanted to give that opportunity to people visiting this page. The page design and layout is meant to be consistent with my project portal, so that it maintains ease of use and familiarity. The first section serves to define compound interest, and give a link to more information if needed. A user can then try a few numbers in the calculator application to see what an investment or loan will total. To further drive website interaction, the trivia section poses a problem that can be solved using the calculator, giving an interesting result. In the end, I hope that visitors will learn something about compound interest, or will be amused with the amount of money Fry had sitting in his bank account (which he spent on a can of anchovies).

Design

Like homework three, the Jumbotron template from getbootstrap.com was used for the layout of this website. I also kept the same color scheme, favicon, navbar link back to my assignment hub, and footer content. The Jumbotron template was modified from 3 equal-width grid columns to 1 narrow and 1 wide grid column. Input elements taken from Bootstrap's website were used, as they provided an intuitive way to direct input styling and values. The overall design is consistent with my homework hub, easy to use, and mobile responsive.

Development

Tools

- Brackets for coding.
- Bootstrap for template, stylesheet, and JavaScript.
- Favicon-generator.org for favicon.
- OSX Terminal and Cyberduck for SSH and SFTP to LAMP server.
- OSX Terminal and SourceTree for GitHub repository management.
- Safari (OSX and iOS), Chrome, Firefox for viewing and testing.
- Nu HTML Checker for validation (no errors or warnings found).
- JSLint in Brackets for JavaScript validation (no errors or warnings found).
- IMBD for Futurama trivia (S1E6: A Fishful of Dollars).

To begin this assignment, I implemented the temperature conversion app provided in the assignment description. Some preliminary research was done on making this a gravity

calculator, but I decided to go with compound interest because it's more relevant, relatable, and has a Futurama reference. I was able to drop the example code into a Bootstrap template with some extra elements and modify it to be functional. The biggest problem I encountered was getting the numbers to typecast correctly in the JavaScript. Once the calculation was working, I found a very concise regular expression to format the output into dollars with commas. To add more color, I tried using an image from Futurama as the background of the trivia section, but I felt it broke the visual flow of the page. Although the template provided layout and styling, there is a problem with the navbar's width when the window is larger than 991px wide. I did some research and testing, but wasn't able to fix the @media CSS functions.

This assignment was a bit more complex than previous ones due to the use of JavaScript, but I spent about the same amount of time on it - around 10 hours. Fixing minor errors found through validation tools was the most difficult subtask, and writing all the code took the most time, as I rewrote several sections multiple times. Overall, however, this assignment has been the most enjoyable so far.