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COMP494 - Web Development

Midterm Project Report

This midterm project was a test of our ability to design and create a functional website on our own from scratch. Our project needed to explain how to do something to the reader and give information about a specific topic. For my project, I decided to talk about Git, a code collaboration tool, and show a bit of how to use it. However, the main focus of this project was not the content of the pages, but, more importantly, the use and implementation of different webpage elements. Images, a video, a quiz, and twelve Bootstrap components were required to be included in this project. Implementing these is the key part of the project, which displays my capability of functionally implementing these elements.

In this project, I implemented 12 Bootstrap components on the different pages of my site. Some of these components were put where they are for obvious reasons: The carousel was to display multiple images, the navbar helps with site navigation, dropdown to show multiple options, button, and the list group to list information. Some of the other components have great functionality, but I would like to explain their use in more detail. The Accordion helps to show the information for each main operating system, but without having to show the content for the other two operating systems that are irrelevant to the reader. On the Linux page, I wanted to showcase all of the different types of commands that can be used with Git, but sometimes multiple need to be run to perform an action. The solution to this was to use cards for each of the groups of commands that execute a certain function. For one specific card, I marked it with a special badge element to make it as potentially dangerous to run, since it has the potential to delete code if run carelessly. On the download buttons, that take you to the download page for Github, I wanted to show the user that this is the proper download button by including tooltips that show when the button is hovered over. One of the other implementations was using a

modal on the homepage image of Linus Torvalds to pop out a larger image with a caption. I did not want to have to include a caption on the main page because it would look messy, but I think that getting that caption is much cleaner when placed under the image in the modal. I did not implement this on every page, mostly because of issues with back-copying the code to other pages. This showed me the importance of making a webpage's code modular so that it is easy to retrofit a page with new changes and modifying existing code to work with new elements. One of the issues that I had was dealing with the Offcanvas Bootstrap element. In order to get it to work properly, I had to include an older version of the Bootstrap Javascript and CSS style sheet. This caused some problems because it messed with the rest of the page's CSS in ways that I had not foreseen. To fix this, I worked to try to localize the style sheet, as well as making the site's global style sheet more robust, causing it to override the undesired modifications of the new stylesheet. This taught me the importance of strictly defining the look of a web page through CSS, making sure that the browser has minimal control over the style of the page, such as if a different browser decides to use a different font. Not being very specific about the page's style leaves too much room for small changes that completely disrupt the formatting of the webpage. I decided to use the Offcanvas element on the quiz page to show the right answers, in case the quiz-taker needs a hint. I felt that this element was appropriate for this usage since it stays hidden off of the screen, and the quiz taker cannot directly see the answers while typing in the answer boxes.

For the quiz, I needed to write a simple bit of Javascript that could check that the forms are properly filled in. If this project were for an enterprise application and many students had to take this quiz for a grade, there are certainly things that I would have to do differently. I would want to make sure that the inputs are sanitized and that things like whitespace, capitalization, and minor misspellings do not result in a failed quiz.

While this does not cover all of the intricacies of my midterm webpage, it covers much of the most important aspects. This project taught me a lot about full webpage design, giving me

the opportunity to have hands-on experience needed when making a website from start to finish.

List of Used Bootstrap Elements:

1. Accordion
2. Badges
3. Button
4. Card
5. Carousel
6. Collapse
7. Dropdown
8. List Groups
9. Modal
10. Navbar
11. Offcanvas
12. Tooltips