How I Used Bootstrap 5

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Project Title: My Portfolio Website

1. Bootstrap 5 Components and Examples Used

In this project, I used several Bootstrap 5 components to create a responsive and professional portfolio website. A responsive Navbar was used to allow easy navigation between different sections of the website. The Card component was used in the Projects section to display information in a clean and structured way. Progress bars were used in the Skills section to visually represent my proficiency in different cybersecurity skills. A Carousel was implemented in the Testimonials section to display feedback dynamically. Additionally, a Form component was used in the Contact section to allow users to send messages.

These components were chosen because they improve usability, visual clarity, and user experience while demonstrating effective use of Bootstrap's built-in features.

2. Layout Structure and Grid System

The website layout was built using Bootstrap's grid system. I used container elements to center and constrain content, combined with row and col-md-* classes to create responsive layouts. For example, the About Me section uses a two-column layout that adjusts automatically for smaller screen sizes. This approach ensures that the website remains responsive and accessible across different devices, including desktops, tablets, and mobile phones.

3. Custom CSS Usage

Custom CSS was added using an external stylesheet to enhance the visual appearance of the website while preserving Bootstrap's core layout system. Custom styles were used to fix spacing issues caused by the fixed navigation bar, add hover effects to

project cards, and improve typography and section spacing. These styles helped create a professional and creative design without overriding Bootstrap's responsive structure.

4. Challenges and Solutions

One challenge faced during the development process was managing the spacing caused by the fixed navigation bar overlapping content. This issue was resolved by adding custom CSS padding to the body and using scroll margin adjustments. Another challenge was understanding how to properly structure content using Bootstrap's grid system, which was solved through practice and reference to Bootstrap documentation and examples.

5. Learning Outcomes

Through this assignment, I gained a better understanding of how to use Bootstrap 5 to create responsive layouts efficiently. I learned how to combine Bootstrap components with custom CSS to enhance design while maintaining responsiveness. Additionally, I developed practical experience in structuring files correctly and deploying a website using GitHub Pages.