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Project 4 Developing a Tic Tac Toe Web Application with jQuery and Bootstrap

As a college computer science student enrolled in an Intro to Internet Computing course, I was assigned the task of developing a Tic Tac Toe web application using jQuery and the Bootstrap CSS framework. The objective was to create a functional game with a visually appealing design and provide a responsive user interface. This report details the development process, tools used, and challenges encountered throughout the project.

Visual Studio Code (VSCode) was used as the primary code editor for this project. The editor provided useful features such as syntax highlighting, autocompletion, and integrated version control, making it easy to write, debug, and organize the code. The web application was tested on multiple browsers, including Safari, to ensure cross-browser compatibility and provide a seamless user experience for a wide range of users. jQuery, a popular JavaScript library, was utilized to facilitate DOM manipulation, event handling, and animation. Although the learning curve was steep, it proved to be a powerful tool that greatly simplified various tasks and improved the overall efficiency of the project. The Bootstrap CSS framework was employed to create a responsive and mobile-friendly user interface. Although initially frustrating, integrating the framework ultimately simplified the development process and resulted in a clean, modern design.

Mastering the jQuery library was a significant challenge during this project. It took several days and multiple restarts to understand the syntax and concepts. However, as proficiency in jQuery increased, it became evident that the library streamlined various aspects of

the project, such as event handling and DOM manipulation. Implementing the game logic, specifically the win condition and score counter, proved to be a time-consuming task. There were instances where the counter would break, or the lines between the squares would not appear on the game board. It required multiple iterations and adjustments to the code to ensure proper functionality. Incorporating the Bootstrap CSS framework into the project was initially frustrating, as it required a comprehensive understanding of the framework's components and classes. However, once the integration was complete, it saved time and made the code simpler and more maintainable.

In conclusion, the Tic Tac Toe web application project provided valuable experience in utilizing jQuery and the Bootstrap CSS framework to create a functional, visually appealing, and responsive web application. The challenges faced, such as mastering jQuery and integrating Bootstrap, ultimately contributed to a deeper understanding of the tools and technologies used in modern web development. The project serves as a testament to the importance of perseverance, adaptability, and continuous learning in the ever-evolving field of computer science.