Cross Guard: A Tool to Check if Your Website Works on All Browsers

Cross Guard is a desktop software that helps developers check if their code will work properly on different web browsers. When people build websites, they write code using HTML, CSS, and JavaScript. However, this code sometimes works differently on Chrome, Firefox, Safari, and Edge browsers. Right now, developers have to manually check their websites on each browser or read long documentation to find out if something will work. This takes a lot of time and is difficult to do. Many times, developers find problems very late when the website is almost ready, which causes delays. Cross Guard will solve this problem by checking the code automatically and telling developers about any issues early, so they can fix them before it becomes a big problem.

The desktop software will have a simple window where users can select their HTML, CSS, and JavaScript files from their computer. After the files are selected, the software will read through the code and find all the special features being used. For example, it will look for things like CSS Grid, Flexbox, or newer JavaScript commands. Then, it will compare these features with a database called Can I Use, which has information about which browsers support which features. This database will be stored on the user's computer, so the software works completely offline. The tool will create a report that shows which browsers will work with the code and which browsers might have problems. Users will see the results with charts and tables that are easy to understand. The report will show compatibility scores and list all the issues found, marking which ones are serious and which ones are minor. If users want to keep a copy of the report, they can save it as a PDF file or a JSON file. All the work happens on the user's own computer, so their files stay private and never go anywhere else.

This tool will help developers save time by doing the checking work for them, so they can find and fix browser problems before the website goes live. To build this tool, we will use Python programming language to create an easy-to-use desktop application interface, a system to read and check the code files, and ways to show the results using simple charts and detailed reports. Python is good for reading and working with text files, and there are helpful libraries available for parsing HTML, CSS, and JavaScript code. The Can I Use database will be downloaded from the official source and included with the software, so it works right away without needing any setup. Users can also update the database when they want to get the latest information. This approach means the software is fast, private, and works without needing an internet connection after installation.