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Cross Browser Compatibility Issues

Abstract

Websites today have evolved from static, content-oriented web pages to feature-rich, complex and dynamic applications over the web. Web applications are popular because they can run on variety of web browsers and platforms on the client side. A user has the option to use one or more browser to view or interact with the web application. This introduces problems for web application developers because HTML, CSS and JavaScript specifications are implemented differently by browser vendors on different web browsers. These differences lead to how a web application looks and behaves in different browsers and they affect the end-user capability to effectively use that web application. The inconsistencies seen between browsers are what we term as "cross-browser issues" which remains the focus for this thesis. With rapidly evolving web technologies, new features in browsers, variations in browser behaviors and evolving web standards, maintaining cross browser compliance is a challenging task for web developers. They spend a considerable amount of their time maintaining compatibility with several popular browsers. To ensure that a web application will function in a similar manner across all browsers, a web developer needs to identify issues and provide solutions that are in compliance with standards while maintaining backward and forward compatibility with previous and future browser versions respectively. In this paper, we identify relevant cross-browser issues, the underlying cause for many of these issues and different frameworks and tools that web developers are currently using to address these issues.

Thesis Committee

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