Modern Web Browser Overview

Here's a brief history and description of some major web browsers:

Browsers

1. **Internet Explorer**: Developed by Microsoft, Internet Explorer (IE) was first released as part of the add-on package Plus! for Windows 95 in August 1995. IE was one of the most widely used web browsers, attaining a peak of about 95% usage share during 2002 and 2003. However, it has since lost the majority of its user base to other browsers. Microsoft ceased updates for Internet Explorer in 2016 and moved to Microsoft Edge as its primary browser.

2. **Mozilla Firefox**: Firefox is a free and open-source web browser developed by the Mozilla Foundation and its subsidiary, the Mozilla Corporation. Firefox was released in 2002 under the name "Phoenix" by the Mozilla community who desired a standalone browser, rather than the Mozilla Application Suite bundle. As of 2021, Firefox has approximately 3.5% of worldwide usage share of web browsers.

3. **Google Chrome**: Developed by Google, Chrome was first released in 2008 for Microsoft Windows and was later ported to Linux, macOS, iOS, and Android. Google Chrome is currently the most popular web browser, holding a dominating market share. It's known for its speed, simplicity, and security.

4. **Safari**: Safari is a graphical web browser developed by Apple, based on the WebKit engine. First released on desktop in 2003 with Mac OS X Panther, a mobile version has been bundled with iOS devices since the iPhone's introduction in 2007. Safari is the default browser on Apple devices.

5. **Microsoft Edge**: Microsoft Edge is a web browser developed by Microsoft. It was first released for Windows 10 and Xbox One in 2015, then for Android and iOS in 2017, and for macOS in 2019. Edge was initially built with Microsoft's own proprietary rendering engine called EdgeHTML and their Chakra JavaScript engine, a departure from Internet Explorer's Trident. However, in 2019, Microsoft announced that Edge would transition to the Chromium platform, using the Blink and V8 engines.

6. **Opera**: Opera is a multi-platform web browser developed by Opera Software. Opera was first released in 1995 and it has gone through several major iterations. In 2013, Opera switched from its own Presto layout engine to the Blink engine, the same layout engine used in Chrome.

Browser Runtime Environments

Browser	Runtime Environment
Internet Explorer	Trident layout engine, JScript
Mozilla Firefox	Gecko layout engine, SpiderMonkey JavaScript engine
Google Chrome	Blink layout engine (WebKit on iOS), V8 JavaScript engine

Browser	Runtime Environment
Safari	WebKit layout engine, JavaScriptCore
Microsoft Edge	Originally EdgeHTML and Chakra, later switched to Blink and V8 (Chromium)
Opera	Originally Presto, later switched to Blink, Carakan JavaScript engine

> Note: The Layout engine is responsible for rendering the webpage i.e., layout and rendering of HTML and CSS. The JavaScript engine is responsible for executing JavaScript on the webpage.

Operating System Synchronicities:

Browser	Supported OS
Internet Explorer	Windows
Mozilla Firefox	Windows, macOS, Linux, Android, iOS (limited support)
Google Chrome	Windows, macOS, Linux, Android, iOS
Safari	macOS, iOS
Microsoft Edge	Windows, macOS, Android, iOS
Opera	Windows, macOS, Linux, Android

> Note: While all the mentioned browsers have versions for various operating systems, they are often optimized for their native OS. For example, Safari is optimized for macOS and iOS, and Microsoft Edge is optimized for Windows.