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# Mobile Web Development

Overview of
Mobile Browsers

*Part 5*

# Overview of Mobile Browsers

# Overview

- ❖ The most advanced browsers are mobile

- ❖ Chrome, Android, and Safari

- ❖ Webkit and WebView

- ❖ Supporting older browsers

# The Latest CSS and DOM

❖ Compile as much as many web page features as possible into the browser, to reduce page size and speed interpretation and execution.

❖ Reduce custom code in JavaScript, HTML, or CSS.

❖ Features such as smooth animations and 3D are hard to achieve without being built into the browser.

❖ As Blackboard has shown us, JavaScript performance can be annoyingly slow even on desktop.

# Frequent Browser Updates

❖ Mobile browsers are updated frequently, and phones are replaced every two years.

❖ The Chrome browser has quickly replaced the Android browser as the default on Android devices.

# Chrome & Safari

- Safari and Chrome are very similar and share a WebKit heritage.

- Safari's web debugger is good but not as functional as Chrome's.

- Both browsers are fast and browser settings are well integrated into Google and Apple's cloud data setup.

# WebKit, WebView, & UIWebView

❖ WebKit is the browser engine responsible for the Safari browser and used to power Chrome as well. Chrome is now built on Google's Blink web browser engine, based on WebKit.

❖ WebKit was originally KHTML, then built on by Apple, Google, and others.

❖ A WebView is often used as the name for native mobile OS components that embed a browser. iOS's component is called UIWebView, while Android's is called WebView. PhoneGap uses them to embed a browser into a native app.

# Progressive Enhancement

* Or "graceful degradation" from the older browser's point of view.

* This concept means that browsers will gracefully handle tags and styles that they don't understand. New features are progressively added on top of existing ones in a way that does not change existing any syntax, but builds on top of it.

# Browser CSS Prefixes

❖ The custom browser prefixes seen in front of new CSS styles are an attempt to introduce styles by a browser maker in a way that does not clash with future web standards.

❖ They are "temporary" styles, to be used until a web standard has evolved. For example:

-webkit-box-sizing: border-box; /* Android ≤ 2.3, iOS ≤ 4 */

-moz-box-sizing: border-box; /* Firefox ≤ 28 */

box-sizing: border-box; /* Chrome, Firefox 29+, IE 8+, Opera, Safari 5.1 */