As we build user interfaces using HTML, CSS and JavaScript, it's important to test our work and make sure it renders properly in all browsers.  What are some best practices for testing our work?  What online tools can we use?  At what point in our development process should we begin testing?

Cross browser testing is tough. There are multiple browsers and a seemingly endless number of devices. Manually testing all device and browser combinations is impossible without a huge team of QA engineers. As a developer, I think we should focus on testing with the four main browsers (Chrome, FireFox, Edge, and Safari if on a Mac), with at least one desktop/laptop computer, an iPad and Android tablet, and an iPhone and Android phone. That said, even this is a big list to me. So, in practice maybe take an hour or two at the end of the week to test any new features we have been working on, or just open and use the app to look for any bugs.

If you don’t have access to a repository of devices to test with, there are some great tools available such as Browserstack (<https://www.browserstack.com/)> and CrossBrowserTesting (<https://crossbrowsertesting.com/>

). Each of these services boast they have over 2000 devices and browsers to test with! Other tools include the xCode simulator and the mobile emulator in Chrome and FireFox.

Testing should not be an afterthought, but should start at day one of the project. Testing can reveal flaws in our design/code, and if we wait until the project is ‘done’ to start testing it can be very costly in terms of both time and money to fix the problems.