Ionic and Electron

Cross-Platform development

Cross Platform Development

AKA Hybrid Development

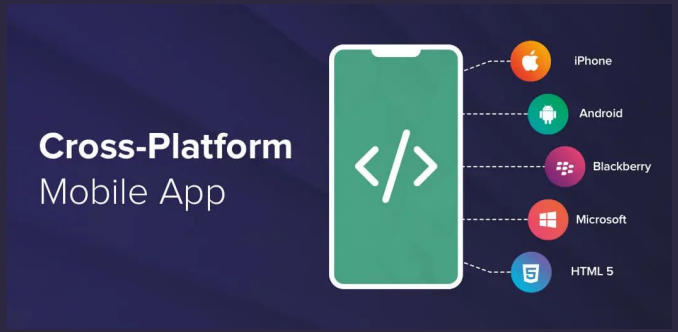
Learn more about the differences between native and hybrid development

What is cross platform development

- Cross-platform development is the creation of software applications that are compatible with on multiple operating systems either being desktop or mobile.
- This is a better alternative to developing different versions on each platform.

The number of smartphone users worldwide is predicted to hit **3.5 billion** by the end of 2020. **87% of smartphone users** spend their mobile time on apps. The mobile app market will generate up to **$581.9 billion in revenue** by the end of 2020.

Source: Statista.com



Less code + More Useability

- Write once, run anywhere
- Use the talent you already in a development team
  - No need to hire new developers to port your code on Windows, mac, android and then IOS.

- Save Time
  - Instead of spending time on learning how to design software on each operating system, learn how to do it once and let the cross development environment deal with the rest.

Drawbacks

- system overhead
  - As everything is rendered in a webview (like) component they tend to use more hardware processing
- Third-party dependence
  - In hybrid apps most of the time will use 3rd party software to access native elements or implement features across platforms
  - This makes more complex code and development
  - 3rd party dependencies are constantly changing and being replaced so you need to keep up to date.

Electron

Overview

Electron is a framework for building desktop applications using JavaScript, HTML, and CSS. By embedding Chromium and Node.js into its binary, Electron allows you to maintain one JavaScript codebase and create cross-platform apps that work on Windows, macOS, and Linux.

Pros

- Allows user to develop Desktop Applications using HTML, JS, and CSS
- Electron uses Chromium engine for rendering UI. This means that you can get several benefits from this like Developer Tools, Storage Access, etc
- Allows users to easily compile code for operating systems

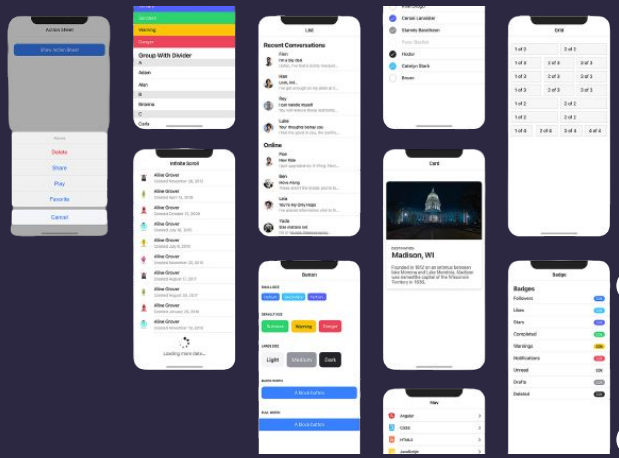
Cons

- The Chromium engine is the quite a heavy engine which can cause large files sizes for even simple applications.
- It can be quite heavy on the system while running due to how chromium is designed.

Hello World

Lets create a simple Electron application where I will show you how you can have it packaged and compiled to be run as an executable.


Ionic



Overview

Like the Electron but…

- Custom pre-built UI elements
- Curated library of plugins
- Multiple front-end development framework compatibility

Pros

- A cloud host to deploy and manage Ionic apps
- Account tiers to support your business
- Build native code from Ionic codebase

Cons

- Increased code complexity; clutter
- Resource intense; large projects can have long build times
- No integrated way to build to desktop sources; only web and mobile

Hello World

1. Introduction
2. Setup/Installation
3. Explore project
    a. Preview project
4. Add views
5. Implement logic
6. Build: Preview In Android (if there's time)

Credits

Thanks you for sticking with the presentation till the end

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