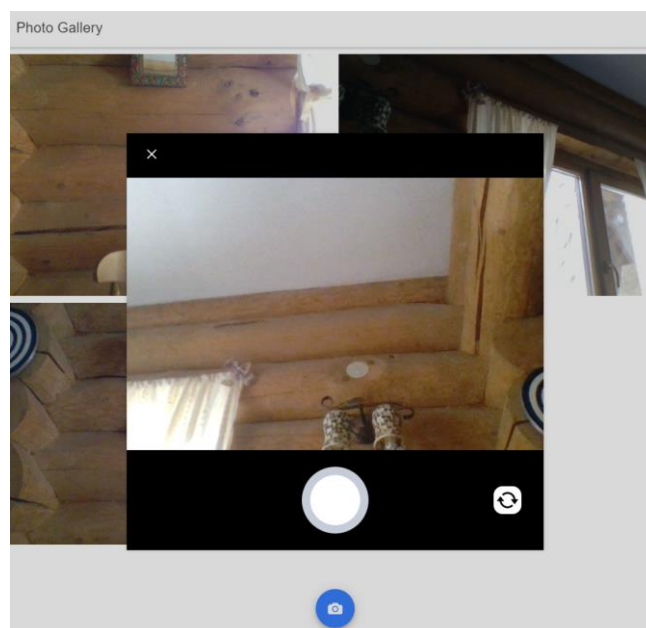
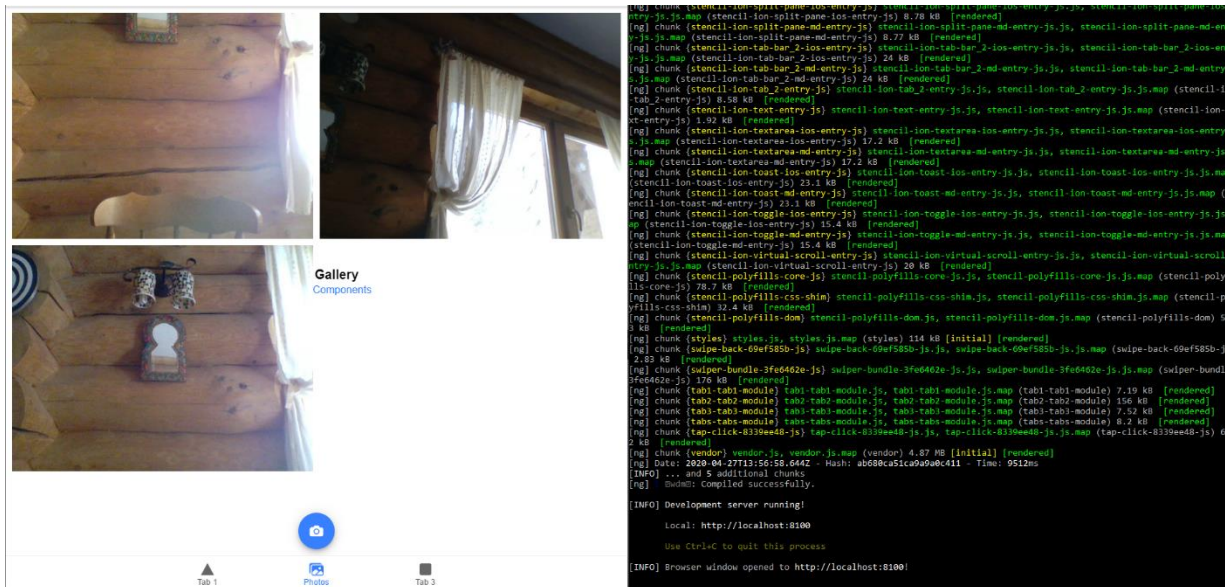


Ex1

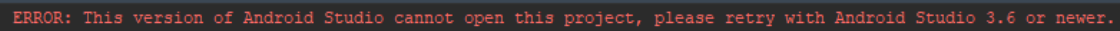
	Native Android SDK	React Native	Ionic
Languages	Java, Kotlin	JS + Custom UI Language / Interpreter	HTML + CSS + JS
Code Reuse	Totally Separate Code Bases per Platform	Shared Business Logic with Different UI Codebases	One codebase, UI codebase stays the same
Target Platforms	Android Native Mobile Apps	iOS & Android Native Mobile Apps	iOS, Android, Electron, Mobile and Desktop Browsers as a Progressive Web App, and anywhere else the web runs
Investment	Largest investment in staff and time	Medium investment in staff and time	Lowest investment in staff and time
UI Elements	Native UI independent to each platform	A selection of Native UI elements for iOS and Android UI elements are specific to the target platform and not shared Custom UI elements begin to require split UI code bases	Web UI elements that are shared across any platform, conforming to the native look & feel of wherever they are deployed Easily use completely custom UI elements
API Access / Native Features	Separate Native API & Codebases for each App	Abstracted Single-Codebase Native Access through Plugins (with ability to write custom Plugins)	Abstracted Single-Codebase Native Access through Plugins (with ability to write custom Plugins)
Offline Access	Works	Works	Works
Performance	"Native Performance" with well written code.	Indistinguishable difference on modern devices with well written code.	Indistinguishable difference on modern devices with well written code.

Ex2

It was a very interesting app. I learned that you don't necessarily need Android Studio in order to develop a nice and working app but still when you try to make it to work on a mobile device you still need it, or Xcode if you are working on IOS. So the only advantage of Ionic over Android Studio is that it's more user friendly and that really really matters because Android Studio is really shitty.



Unfortunately I couldn't make the bonus because of the version of Android Studio. Proof here:

A screenshot of an error message in Android Studio. The message is displayed in a dark-themed window with a light blue header bar. The text is in a monospaced font, with the word "ERROR:" in red and the rest in white.

```
ERROR: This version of Android Studio cannot open this project, please retry with Android Studio 3.6 or newer.
```

and I would definitely not update Android Studio because I'm still working on the project and I don't know what an update will break. (last time I did that I stood for hours to fix the gradle).