What is/are your name(s)? What assignment group are you?

Ju Yeon Kim / Canvas Group: A5 Group 15

Which framework did you select (Fitbit, Alexa, A-Frame)?

Fitbit

Q1: How, if at all, does this framework support package and library management?

Due to the limited resources and memory of Fitbit device, Fitbit supports Companion API where developers can add additional operations. Main App API and Companion API can communicate via Messaging API, which extends the capabilities of the framework.

Q2: How, if at all, does this framework support principles for code separation, like Model-View-Controller? Would the separation principles effectively support creation of a larger application? Why or why not?

Fitbit provides “widget.defs” file as Model, “index.view” file as View, and supports other JavaScript files like “index.js” as Controller. This separation principles will be effective when creating a larger application. Since Model has a basic data definitions or structures that can be used in other files like “index.view” and “styles.css”, it is easier to change a component’s structure in Model rather than changing its properties in all files.

Q3: In lecture, we discussed a few design recommendations for each respective device. How, if at all, does the framework support the recommendations for that device? What recommendations are left to the developer to decide how or whether to implement?

Since the watch device has a small screen and it is better for an app’s screen to keep words and interactions to a minimum (one visual thought per screen), Fitbit supports components that can be effectively displayed on small screens. For instance, Fitbit enables scrolling feature by supporting “scrollview” option and other scrollable components. Also, animated components such as “Marquee Text”, which is the “text that continuously scrolls horizontally from right to left”, (Text Components Guide) let users to view long texts or sentences well without having tiny letters displayed on the screen.

Also, on a watch device, colors need to have high contrast. To make the color-choosing process easier, Fitbit provides a list of “Fitbit Named Colors” which have high contrast.

It’s the developer’s decision whether to use vibration or voice control inputs, as these features’ capabilities can be different depending on watch devices, and they can greatly affect the user experience in general.

Q4: What appear to be benefits to using web technologies for development on this device? Conversely, what advantages might a native framework have over the framework you used?

Being able to use web technology such as Web API, JavaScript, and CSS is beneficial in Fitbit app development. First, it is easier for web developers to engage in Fitbit app development as they are already familiar with the web technologies. Additionally, this makes it easier to share the code base with others. On the other hand, a native framework would be faster and more suitable for using hardware features of a specific device it was designed for. For instance, Apple Watch supports a great integration with iOS and exclusive features such as Siri.

Q5: What did you find easy and challenging about development in this framework?

It was fairly easy to understand the code’s syntax since it has many similarities with other frameworks I used in previous assignments. Yet, whenever I faced an error it was hard to find resources about it as the online community for Fitbit app developers is much smaller than other frameworks’ developer communities.