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C196

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**Reflection From Mobile Application Creation During C196**

*Explain how your application would be different if it were developed for a tablet rather than a phone, including a discussion of fragments and layouts.*

If I were developing this Scheduler application for a tablet, I would include a traditional menu for navigation purposes. This would work much like a menu >> drop down submenu, to make it easier for navigation within the app. For example, if I just created an assessment, I could go to the menu, select Assessments >> See All Assessments, instead of having to navigate back using the back arrow to return to the main menu page. The Layout for a table using the layout screens would be much more spread out, considering I would be designing it for a larger screen size. This would include more defined buttons and widgets.

*Identify the minimum target operating system your application was developed under and is compatible with.*

The **minimum** operating system would be Android 8.0 Oatmeal Cookie API 26.x

The **target** operating system would be Android 12.0 Snow Cone API 31.x

*Describe the challenges you faced during the development of the mobile application.*

The biggest challenge I faced was figuring out the navigational workflow of the application. This was not very clear from the rubric or from the instructional videos. Once I had the workflow written out on a mockup, I was in a better place to know how the different UI screens are related one to another.

The other challenges I had were determining the different terminology uses in android studio as compared to the Software 1 and Software 2 classes I took. The java language was the same, but the navigational terms such as intent and spinner were new terms I had to associate when creating the user interface and navigation between screens.

*Describe how you overcame each challenge discussed.*

I overcame the navigational workflow challenge by scheduling a few one-on-one mentor times with my course instructor, asking questions, and creating a workflow diagram mockup and confirming the navigation for the app I laid out was correct.

I watched all the demonstrational videos, along with purchasing a book for reference when attempting to learn the new terminology for Android Studio. The book is called Android Cookbook: Problems and Solutions for Android Developers.

*Discuss what you would do differently if you did the project again.*

I would spend more time developing a more appealing user interface for the mobile app. I would add various widgets such as a spinner, radio buttons, and other items to give it a more modern feel instead of just relying on buttons for actions and navigation.

*Describe how emulators are used and the pros and cons of using an emulator vs. using a development device.*

Using an emulator is a convenient way to test Android apps, considering I do not own an Android phone. I personally use an iPhone and thus would not be able to test my application on it. However, using a physical device to test the application would be beneficial to verify a target operating system for a modern phone. 0ne of the pros is that Emulators give you the feel and touch of how it performs on a mobile platform. However, a con is that you lose the feel of navigating, typing, and saving data using your fingers, instead of a keyboard and a mouse. Another con is that by testing on an emulator, we are not able to run things such as a stress test. Whereas, on a physical device, we would be able to run a software program in the background using CPU and memory usage at a high level, and then attempt to determine how our app operates with a high load. I think emulators are good for developmental testing, but I would recommend testing on physical devices if the application were being sold for a price on the Google Play Store.

**Acknowledge sources:**

None