9-2 Final Project Part II Final Submission: Design Defense

Dave Hinds

Southern New Hampshire University

August 24th, 2020

**Function and Requirements**

As I focused on the developing of the mobile app, I must first design all complexities in the most simplistic way for all users. I decided to work on the “Healing Hospital” for many reasons. The app brings many great features that will solve a critical problem; therefore. the functionality and the design must have an easy flow. The function of the app is to help patients enjoy their doctors visit from the comfort of their homes - with the telenet option. Considering the pandemic that we are currently experiencing, patients that are unable to visit their doctors can have a video call with their doctors and complete the entire visit on this platform. The application design is very simple since it focuses on assisting individuals of different backgrounds.

**Application Fidelity**

The application has resolved a few major challenges that the medical team were experiencing. For example, there is an option to make payments on any past due balance. People dislike the fact of calling to make a payment over the phone. With the app, there is the option of making a one time payment and not worry about any having to wait for long periods on the phone to pay your medical bill. Another interesting feature is the option of reaching out to the physician. It can be frustrating when a medication refill is urgently needed and the medical team is difficult to reach; however, the app solves the issue by sending messages directly to your doctor. Once his/her name appears on the email recipient list, it must be selected, have the message composed and then send it. This has proved to be such an invaluable tool since doctors seem to respond at a much rapid pace than before.

**Design Decisions**

The reason why I chose this particular project is due to my passion for healthcare and technology. A lot of insight went into the development of this app. On the home page, their is the option to chose from various options. For example, there is Cardio, Orthopedic, Cancer, Find a Doctor, Careers, and Pay Your Bill. There are also corresponding icons for every service. Once you are logged in patients can access other services such as: sending direct emails to the doctor, searching for employment, getting neuroscience services etc. With this simplistic feeling, patients can feel less stressful and continue to maintain their optimum health. The app will be able to function on all platforms and available for download on the google play or app store. Once logged in patients will see the updates. This will ensure that the app runs smoothly and without any issues. In developing the app, I thought of the older population and how they can benefit the most. The features mentioned will make it easy for all to enjoy the app.

**Interface Requirements**

This is certainly the most important topic of this entire section. The interface must meet certain requirements for things to work according.  In a mobile interface, symbols may be used more extensively and controls may be automatically hidden until accessed. The symbols themselves must also be smaller and there is not enough room for text labels on everything, which can cause confusion (techtarget). To successfully develop this interface, the development must begin by having anticipating what the end-user will experience. For example, click points must be usable for touch-based selection with a finger. This means a click point can't be too small or narrow in any direction, to avoid unwanted selection of nearby items, sometimes referred to as fat fingering (techtarget). If the interface is designed poorly, then the user will actually delete mu app or not show any further interest.

**Framework Selection**

The framework that I used is called Android Application Framework. The reason why this framework is perfect for my design is because it contains all the necessary tools to build a perfect application. More importantly, it contains the Android Kit which is so necessary in developing and building functional mobile application. Android SDK provides you the API libraries and tools for building and developing new applications on Android operating environment using the java programming language. This procedure of developing the applications on Android platform in java programming language using the tools and API libraries provided by Android SDK is called as **Android Application Framework (roseindia).** Another reason why Android Studio seems to be the most important and widely used framework is because of the features it provides. For example, it has: WebKit engine based integrated browser, SQL for storage of structured data, and yes my favorite of all the a Device emulator and tools for debugging, etc.

**Framework Evidence**

Since I haven not had much experience with this framework, I wasn't able to much application. This application has all the bells and whistles when compared to other frameworks. Android studio provides all the necessary tools that a developer needs to design and build a functional application. It can be developed within lightening speed and it can design any type of application a client desires. After reviewing and studying several different videos, I can confirm that REACT or any other framework does not execute mobile application as efficient.

**Framework Alterations**

There were just a few minor adjustments that were needed to be made in order to have the best functionality of the application. When I started the application and was trying to save my APK file, it kept showing certain error messages. In order to resolve this issue, I had to click on the blue update link, so that the feature could easily be updated. I also had an outdated version of Android. I had a version lower than 4.0 which is considered the highest version. The entire update took a few minutes before everything was updated. Once all the updates were completely installed, I was able to run my emulator and enjoy seeing how my app functioned.

**OS Comparison**

I think after completing my app, I don’t have much to say about the other platform other than they can’t handle open source coding as well as android does. Lets carefully look at how IOS, Windows, and Blackberry system differs from Android. IOS which is Apple’s Operating System is very proprietary and therefore it restricts them in many ways. For example, Android is the most extensively used smartphone platform in the world and it is used by different device manufacturers like LG, Samsung, HTC , etc; iOS is used only on Apple devices like iPad, iTouch, Apple TV etc (Wideskills). Other advantages that Android has on IOS is that Android SDK is available for all platforms: PC, Mac and Linux. It is an open free platform iOS SDK is available for Mac only. It is a closed platform. And the last and final advantage that Android has over IOS is that Android apps can be programmed in C, C++ and JAVA. Anyone can download SDK and start developing for free. Users can download enormous number of apps for free. There is a one time registration fee of $25  for publishing apps on Google Play iOS developers need to pay $99 every year for their access to iOS SDK and right to publish on app store. Here we can see how large the disparity has become for registration (Wideskills). Now let examen the difference between Android and Windows operating system. For example, and Android device uses Android Operating System and it is an open source. Windows phone uses Windows operating system which is a mix of open and closed system. When comparing Blackberries, Android is a touch based system and hence navigation is handled by swapping, tapping and pressing. They also have home screen, back key, etc., which varies from manufacturer to manufacturer. Blackberry provides a track pad for navigation. Older Blackberries had trackball for navigation (Wideskills). There are a number of dependent hardware features that should not be excluded since they tend to largely vary as per the device, though nevertheless **android application framework** support them. Some of the device dependent features supported by android include GSM telephony, network connection profiles such as Bluetooth, Edge, 3G, WiFi, utility features such as camera, compass, GPS, etc. Also Android apps require regular update Blackberry is stable.Android is a open source platform so it can be changed or hacked easily. This is why regular updates are released so that bugs can be fixed. Blackberry uses its on server and hence it is much secured. But if server fails, the problem is widespread and it may take days to fix the error. This is why Android continues to be the most used operating system.

**Approach**

There I feel that at this point, I have certainly honed my skills to undertake this colossal task of building my app. I have learned the benefits of doing Mock-ups and also why it should be so simple. This is a very important process that should be carefully handled; also, seeing the application from the perspective of someone else is very important. Simplicity is what I will be attempting to accomplish but with the focus on solving my clients most difficult and challenging issues. Psuedocode does make it very easy when developing. I have included a number of different features to provide a breathe of freshness whenever my app is viewed. I have used several buttons during the development process, text so that it can feel and have a great flow. Buttons were created so that customers would be able to navigate without any issues. My home screen was designed with a very simplistic approach so that viewers can easily read the information. My design had one intent. Customers must be able to use the app without running into complication.

**Approach Defense**

My entire approach in developing with this operating system signify something very important. Its important to use the the tools and extra feature to design something that could certainly be of great benefit to all end users. My decision to use this particular framework is because it was easy to follow the code and it executed in very little time. Apple and Microsoft are very rigid with the way their operating system runs.

**Industry Ethics**

From security perspective, I think it is very important to protect the user’s information; therefore, our design and search functionality must be designed with the user in mind. Since the interface has a keyboard for input, it is important that whatever information that is being inserted must be secure. Making sure that my code is debug and tested frequently in case of attacks is something that I view as ethical. With the healthcare field making sure that the billing information is salted as they say to provide extra security was priority. Giving customers the satisfaction and ease at accessing the information they need 24/7 is important. Whether its seeing their lap results or just making simple doctors visit, the intent of the app was to live up to the expectation of others by not making simple features complicated.

**References**

Margaret Rousse (n.d) Mobile User Interface retrieved from [https://searchmobilecomputing.techtarget.com/definition/mobile-UI-mobile-user-interface#:~:text=A%20mobile%20user%20interface%20%28mobile%20UI%29%20is%20the,with%20the%20device%E2%80%99s%20apps%2C%20features%2C%20content%20and%20functions.](https://searchmobilecomputing.techtarget.com/definition/mobile-UI-mobile-user-interface%23:~:text=A%2520mobile%2520user%2520interface%2520%2528mobile%2520UI%2529%2520is%2520the,with%2520the%2520device%25E2%2580%2599s%2520apps%252C%2520features%252C%2520content%2520and%2520functions.)

What is an Android Application Framework(n.d) Android Application Framework retrieved from <https://www.roseindia.net/android/what-is-android-application-framework.shtml>

Wideskills (n.d.)Android VS other platform retrieved from <http://www.wideskills.com/android/overview-android/android-versus-other-platforms>