Software Engineering Capstone

Task 4

Deployment Documentation

Capstone Proposal Project Name: Student Planner Mobile Application

Student Name: Vittone

Table of Contents

DEPLOYMENT DOCUMENTATION

Cloud Service Provider

I deployed my full stack software product to Firebase. Firebase is a cloud service provider that provides a platform to help developers build apps and games. I chose this cloud service provider because of its simplicity, connection to Google, and variety of tools they offer. To start off, the process to deploy an application to Firebase, such as my Student Planner Android app, is incredibly simple. To deploy my app to Firebase hosting within minutes, I first signed into Firebase, added a new project, used the Firebase command line to initialize my project, selected configurations for my project, and deployed my app. Compared to some other cloud service providers, Firebase makes deploying mobile apps an uncomplicated task. Furthermore, I chose Firebase as my cloud service provider because it is a product owned by Google. For this reason, Firebase is integrated with many Google features. Some of these features include Google account, Google Play services, Google Analytics, and Google Ads. Firebase's connection to these Google features are important to me because they will help contribute to the success of my app. Once my app is fully released to Google Play Store, I will be able to use Google Analytics to assess my app's performance and track other statistics. I can also incorporate the use of Google Ads to further promote my Android mobile application. Moreover, Firebase offers an abundant amount of different tools and services to help developers with their app. A few services they offer include app hosting, cloud storage, and realtime database. Through their hosting service, I was able to deploy my Student Planner app. Firebase also offers tools such as Google analytics, crashlytics, A/B testing, and app distribution. For instance, if I wanted to have my app tested before I release it, I can set up testing. This tool will allow my app to be distributed to trusted testers. I can then use the test analyses to improve my app before it is released any further. Overall, I chose Firebase as my cloud service provider because of its user-friendly app hosting process, relation to Google, and variety of services.

Deployment Link:

[redacted]

Container Images

I did not use container images for my mobile application. Container images are files that contain all the necessary components needed to run a container. Container images are used so that the software product can be run on different environments. Since the container includes everything the application needs to run, developers are able to ensure that the software product works consistently in varying environments. I chose to not use container images for my software product because I specifically designed my app as an Android mobile application. My software product runs natively on Android and this means that I do not need a container image to allow it to run on a different environment. In addition, my Android app uses a Room database. This database is used locally to store and manage data within the app. It is not necessary to use a container image to handle the app's database aspects because the data is managed by the built-in Room database. Additionally, I have deployed my Android app to Firebase, which eliminates the need for a container image. Firebase is a cloud service that provides a diverse selection of backend services including hosting, scaling, and authentication. Instead of using a container image to handle my app's backend requirements, my software product uses Firebase's backend services. Therefore, my app does not use container images because it is intended to only run on Android devices, the database is local, and Firebase's backend services are utilized.