CSCI 3313- Spring 2020- Final Project

Device Name: SuperCoolAndroidDevice   Platform: Android

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App Name: Inbuddy

Project Description: Our app, InBuddy (a play on the word inmate, mate – buddy), will serve as an employee tool for prison staff. The app will allow the user to track, edit information and communicate with a database as done so. Inmate information is usually kept on computer devices and paper documentation, but this app would allow employees to remotely access said information while on the job to increase efficiency.

What we propose to do is create an app that will do the following:

- The system shall allow an employee to view a list of inmates.
- The system shall allow an authorized employee to add a new inmate.
- The system shall allow an authorized employee to remove an inmate.
- The system shall allow an authorized employee to edit the information pertaining to each inmate.
- The system shall allow pictures of the inmates to be uploaded.
- The system shall allow voice recordings to be stored for additional information.
- The system will allow for employee authorization (sign up, log in and log out.)

We plan to incorporate the following features:

- Camera – Employees can take a picture of the inmates to identify them.
- Microphone – Employees will take voice recordings of the inmates, for possible evidence, legal record (stated consent, agreement to conditions, etc.)
- Data storage using SQLite – The app will communicate with the database in order to store the data of the inmates efficiently.
- Build and consume your own web service using a third-party platform- The app will allow employees to sign up, log in and out and the information will be stored in Firebase.

Platform Justification-- The primary reason we chose Android over iOS is the overall versatility that android software offers. Not only can android apps be developed for a broad range of devices ranging from computers to tablets and smart TV's (our app could be made to run on a LG smart fridge) as opposed to Apple's forced exclusivity. We felt the open source community has more potential than an enterprised one.

Features -- On startup, you have the chance to sign up for InBuddy (or existing users may click on "Sign in"). Once in, there are 4 buttons displayed: Logout, Camera, Database and Audio. Logout is self-explanatory. Pressing the camera button takes you to the next screen, where you can capture a new image or access ones stored externally (but on your device.) Pressing the Database button takes you to the main inmate data. Here you add an entry including Name, Age, Previous Arrests, and unique id (for array index.) You can also view already inserted data, update (edit) it or delete it. In the Recorder screen you can record, stop and play a voice recording used for additional information regarding inmate cases such as testimonials and record statements/agreements.

Here, the Camera function for adding images is 15 points.
Database entries are stored using SQLite, 20 points.
The username/password for signup and logins is handled by Firebase, 15 points.
The microphone function for audible entries as registries is 15 points.
This puts the optional features at 65 points.

Testing the app involved creating different users for log in, entering and removing database entries (over the storage unit and null values) to try to break the code. Checking to see if the ID's would match the original once an entry was inserted or removed. Running the app on emulators and physical device.
No given login is required, as users can create their own account to use the app.

Countless lessons were re-apprehended from our past assignments to this one, but my personal favorite was reminding myself to link the java class activities to the .xml documents, specifically the manifest and main. It was very time consuming to troubleshoot where there was a failed linkage between them, as the design and syntax were all correct, the problem was that the files were not communicating. At first, the whole app development process seemed extremely intricate, but it was primarily because of my lack of knowledge on java; because, once I was accustomed to the designing and implementation, it makes a clear connection in my head, I simply need more practice with coding.