

# Agri–Web App

This document consists of information related to the current version of the Agri–Web app.

Software: Android Studio 3.6.2

Programming Language: JAVA

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# 1 Important Notes

This app is developed on **Android Studio 3.6.2**, and the programming language is **JAVA**. Also, the current version is tested on the Nexus 6 API 25 emulator on the Android Studio and also on Motorola Nexus 6 in USB debugging mode. Furthermore, the recent version of the APK is also installed on a Motorola Nexus 6 phone.

Some of the important notes are as follows.

- APK of the most recent version of the app is attached as *app-debug.apk*.
- The source code of the most recent version is attached in the *Agri-Web-App.zip* folder.
- This version is built by editing a copy of the COMPASS app source file because;
  - creating a new project (even a simple sample project) threw some errors (i.e., “Failed to add Navigation Dependency” Error) in *my* Android Studio software.
  - COMPASS app consists of some of the similar functionalities that the Agri–Web app required. Therefore, I thought it would be easy to edit files appropriately.
- First, a copy of the COMPASS app was created, and then a separate new folder (*agri*) was created for the Agri–Web app. All the main .java files related to the Agri–Web app can be found inside this folder (see Fig. 1).
- In addition to these main .java files, *HomePage.java* is located in the *compass* folder.
- Relevant .xml files are located in the *res > layout* folder.
- Relevant adapter .java files are located in the *adapter* folder.

First, unzip the source code folder. Then open Android Studio and import the project (File > Nex > Import Project). Next, the functionality of each file is discussed.

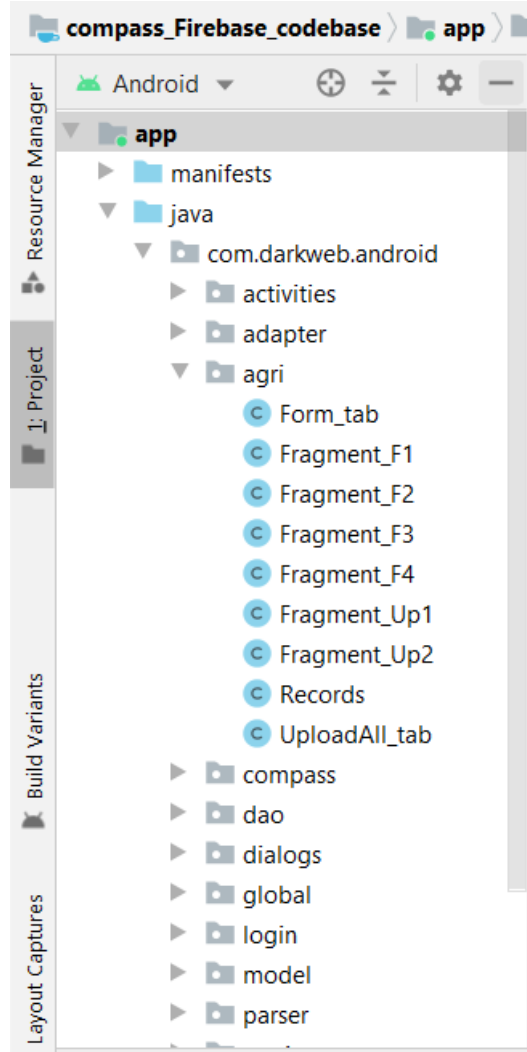


Figure 1: Location of the .java files related to Agri-Web app.

## 2 Required Files Information

Agri-Web app consists of a navigation drawer (see Fig. 2) and three main pages named: *Form*, *Records*, and *Learn More*. These pages are designed as *Fragments*. Also, *HomePage.java* is the main .java file that connects all the fragments and navigation drawer together. See Fig. 3 for the corresponding main views of the app. See Fig. 4 for the fragment views of the *Form*. Next, each .java page is described.

- **HomePage.java** : This is the main file for the overall functions. This is associated with *activity-home-page.xml* file and *PagerAdapterNav.java*. Here some of the func-

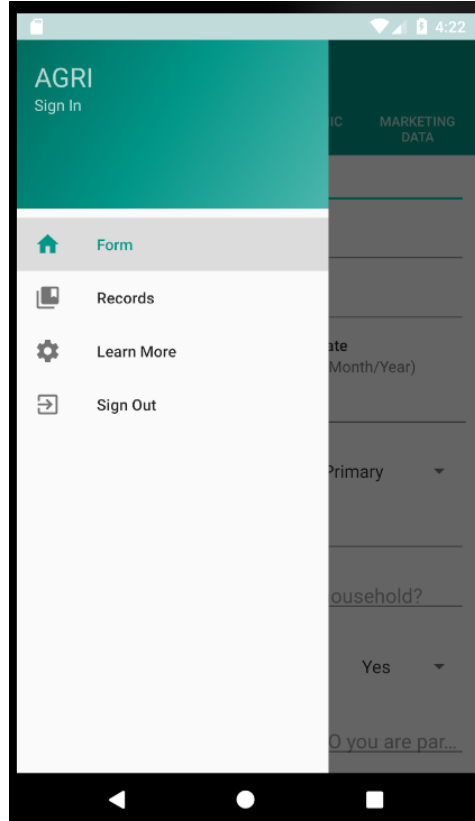


Figure 2: Navigation Drawer.

tions (e.g., Sign In) from the COMPASS app are commented temporarily as it may be helpful in the future to develop Agri-Web App as well.

- **Fragment-F1.java** : This is the first fragment of the *Form* view. This consists of questions related to “Farmer Bio Data”. This file is associated with a *ag-fragment-f1.xml*.
- **Fragment-F2.java** : This is the second fragment of the *Form* view. This consists of questions related to “Production Area”. This file is associated with a *ag-fragment-f2.xml*.
- **Fragment-F3.java** : This is the third fragment of the *Form* view. This consists of questions related to “Agronomic Data”. This file is associated with a *ag-fragment-f3.xml*.

(a) Form

(b) Records

(c) Learn More

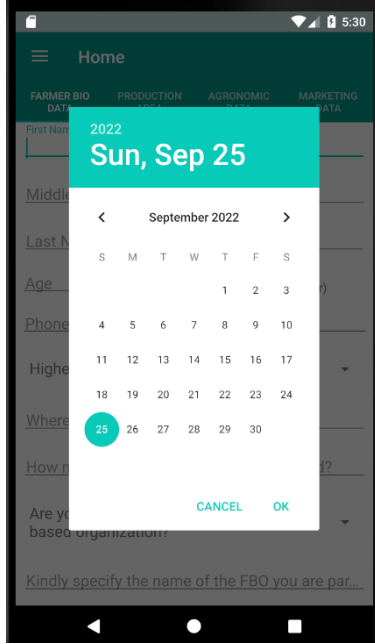
Figure 3: Main views of the Agri-Web app.

(a) Production Area

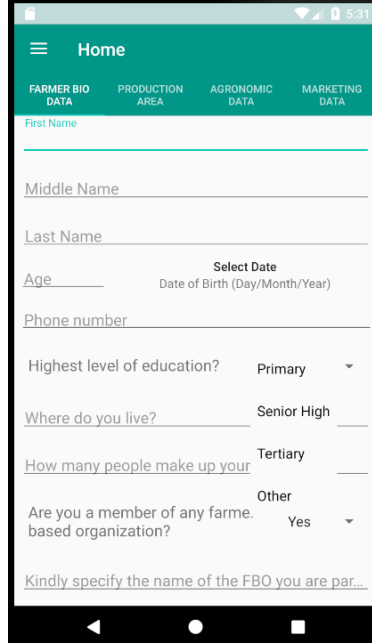
(b) Agronomic Area

(c) Marketing Data

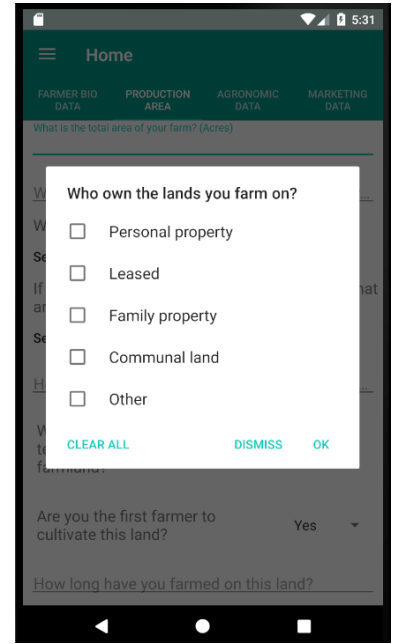
Figure 4: Different fragment views of the Agri-Web app **Form**.



(a) Calendar



(b) Single Choice Option



(c) Multiple Choice Option

Figure 5: Some features of the **Form**.

- **Fragment-F4.java** : This is the fourth fragment of the *Form* view. This consists of questions related to “Marketing Data”. This file is associated with a *ag-fragment-f4.xml*.
- **Form-tab.java**: This is the main file that connects all the *Form* fragments together. This consists of *ag-form-tab.xml* and the corresponding adapter is *Page-adapter-services.java*.
- **Records.java**: This is the file for the *Records* view, and it consists of the *ag-records.xml*. After the *SUBMIT* button is pressed, it is expected to save each locally saved record here as a list. This consists of the *UPLOAD ALL* button which will be used to upload all locally saved records to a server.
- **SettingFragment.java**: This is the relevant .java file for *Learn More* view (it may be an optional view). This is in the *compass* folder and consists of *fragment-setting.xml*. This could be updated with a text about the app’s functionality and how

to use information.

Moreover, the app *Form* consists of some features like a calendar, single choice selection, and multiple-choice selection options, as shown in Fig. 5.



### 3 Suggestions for Next Steps

Some of the suggestions are as follows.

- Update *SUBMIT* button<sup>1</sup> functionality in *Form* page > *MARKETING DATA* fragment.
- Update *Records* page in the navigation drawer.
  - Update *UPLOAD ALL* button functionality.
  - Update (if it is required otherwise we can remove this page) *Learn More* page in the navigation drawer.
- Clean the code (may be at the end).
  - Remove unnecessary .java files and .xml files (e.g., files from the COMPASS app).
  - Remove commented lines (as they are not required for the Agri-web app) carefully.

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<sup>1</sup>Remember to scroll down to see the button.