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## Getting Started:

### Requirements:

- Android Studio Version 2.2 or above, with an emulator or Android device that has a minimum SDK of API 14: Android 4.0 (the target SDK is API 23: Android 6.0).
- A Facebook account
- A paypal sandbox account or you can use the following test account:  
account name: cpen321float-buyer-2@gmail.com  
password: cpen321f

### Building the Project:

- First, clone the github repository at <https://github.com/Junwei-Su/CPEN321Float>
- Open up Android Studio. Click "Import Project" and locate the folder in which you have cloned the repository. Click on the file "FloatProject" and press "OK"
- The project should now be loaded on Android Studio. Click **Run > Run 'app'**
- Select the Android device or emulator you wish to load the application on and press "OK".

### Running Tests:

- The tests in the document "Exploratory Testing" can be manually executed following the instructions outlined in each table under "Activities"
- There are some functional test cases under the test folder

## Documentation:

- Project documentation and information can be found in the docs directory under the branch "tree": <https://github.com/Junwei-Su/CPEN321Float/tree/docs>

## Source Code:

### Source code directory structure:

```
src
├── main
│   ├── java/
│   │   └── com/
│   │       └── cpen321/
│   │           └── floatproject/ - Java files for app functionality
│   │               ├── algorithm/ - Source code for algorithms used in the app.
│   │               ├── campaigns/ - Source code for the Campaign class.
│   │               ├── charities/ - Source code for the Charity class.
│   │               ├── database/ - Source code for interacting with the db.
│   │               ├── CampaignDBinteractor.java
│   │               ├── CharityDBinteractor.java
│   │               ├── UserDBinteractor.java
│   │               ├── user/ - Source code for the User class
│   │               └── utilities/ - Source code for utility functions in the
app.
├── res/
│   ├── activities/ -source code for the android activity
│   ├── xml files for GUI
│   └── drawable/ - Source for .png/.jpg images and xml Drawable
resources.
```

```
|   |   | layout/ - Source code for all the layouts of the app.
|   |   | AndroidManifest.xml - file that provides essential info to run app.
|   |   | AndroidTest/ - Source code for tests.
|   |   |   | com/
|   |   |   |   | cpen321/
|   |   |   |   |   | floatproject/ - Java files to run tests.
```

The files highlighted in blue are the core files to read to start on the project. First, one should read through the objects(campaign, charity, and user) source file to understand how each object is represented in the project and then read through the database interactor source file to understand how each object interacts with Firebase. With these knowledge, one might find easier to understand how different activities class use these objects and interact with Firebase.

**Location:**

On your computer's File Explorer:

To locate the source Java files (functionality of the application)

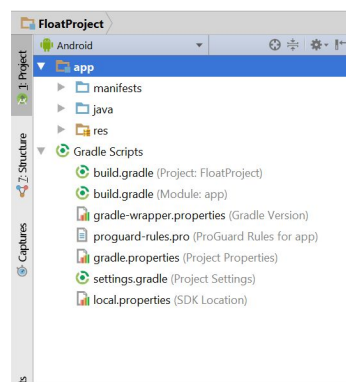
- Go to the project folder and click on *FloatProject* > *app* > *src* > *main* > *java* > *com* > *cpen321* > *floatproject*.

To locate the source xml files (GUI)

- Go to the project folder and click on *FloatProject* > *app* > *src* > *main* > *res*. The main XML files are under the folder *layout*.

On Android Studio:

Select the tab *1.Project* on the left of the window to open up the sidebar navigation. At the top of the sidebar, check to see that it is currently on *Android*



To locate the source Java files (functionality of the application)

- Go to `app > java > com.cpen321.floatproject`

To locate the source xml files (GUI)

- Go to `app > java > res`. The main XML files are located under `layout`

**Design Patterns**(refer to design document for more details):

- **Model View Controller**
- **Strategy**
- **Singleton**

