Bug fixes

**11/30/2015**

1. Lower case string search for nric does not work

Resolution:

**UsersORM.java**

**public static** ArrayList<UsersORM> searchAllByName(String name, String location\_uuid) {  
 Log.*d*(**"debug\_tag"**, **"name"** + Encryption.*Encrypt*(name));  
 **return new** Select().from(UsersORM.**class**)  
 .where(**"(name = ? or name LIKE ? or "** +  
 **"name LIKE ? or "** +  
 **"name LIKE ? or ic = ? or ic = ? ) and location\_uuid = ? and "** +  
 **"deleted\_at IS NULL and is\_terminated = 0"**,  
 **new** String(name),  
 **new** String(**"%"** + name),  
 **new** String(**"%"** + name + **"%"**),  
 **new** String(name + **"%"**),  
 Encryption.*Encrypt*(name.toUpperCase()),  
 Encryption.*Encrypt*(name.toLowerCase()),  
 location\_uuid).execute();  
}

**Future fixes:**

1. Kiosk mode

<http://stackoverflow.com/questions/19920052/disable-the-notification-panel-from-being-pulled-down>

<http://stackoverflow.com/questions/25284233/prevent-status-bar-for-appearing-android-modified?answertab=active#tab-top>

<http://stackoverflow.com/questions/17549478/how-to-disable-home-and-other-system-buttons-in-android>

<http://stackoverflow.com/questions/4548947/how-to-prevent-custom-home-launcher-app-restart-activity#comment4987787_4549337>

Disable notification pull down

- you can call the method on onCreate()

*/\*\*  
 \* Created by herdmacbook1 on 30/11/15.  
 \*  
 \** ***@see*** *for Singleton pattern https://gist.github.com/Akayh/5566992  
 \*/***public class** NoNotificationBarPullDownLayout **extends** ViewGroup {  
 **public static final** String ***TAG*** = **"NoNotificationBarPullDownLayout"**;  
 **public static** NoNotificationBarPullDownLayout *mInstance*;  
 **public** NoNotificationBarPullDownLayout(Context context) {  
 **super**(context);  
 }  
  
 **public static** NoNotificationBarPullDownLayout getInstance(Context applicationContext){  
 **if**(*mInstance* == **null**) {  
 *mInstance* = **new** NoNotificationBarPullDownLayout(applicationContext);  
 }  
 **return** *mInstance*;  
 }  
  
 @Override  
 **protected void** onLayout(**boolean** changed, **int** l, **int** t, **int** r, **int** b) {  
 }  
  
 @Override  
 **public boolean** onInterceptTouchEvent(MotionEvent ev) {  
 Log.*d*(***TAG***, **"onInterceptTouchEvent() notification pull down \*\*\*\*\*\*\*\*\*\*Intercepted"**);  
 **return true**;  
 }  
}

To disable notification pull down on onResume() and enable again on onPause():

@Override  
**protected void** onResume() {  
 *disableNotificationBarPullDown* = NoNotificationBarPullDownLayout.*getInstance*(getApplicationContext());  
 disableNotificationBarPullDown(*disableNotificationBarPullDown*);  
 **super**.onResume();  
}

@Override  
**protected void** onPause() {  
 enableNotificationBarPullDown(getDisableNotificationBarPullDown());  
 *//disableNotificationBarPullDown(getDisableNotificationBarPullDown());* **super**.onPause();  
}

**public** NoNotificationBarPullDownLayout disableNotificationBarPullDown(NoNotificationBarPullDownLayout disableNotificationBarPullDown){  
 **try** {  
 **windowManager**.addView(disableNotificationBarPullDown, **localLayoutParams**);  
 }**catch** (Exception e){  
 Log.*e*(***TAG***, **"disableNotificationBarPullDown already added to windowmanager"**);  
 }  
 **return** disableNotificationBarPullDown;  
}

**public void** enableNotificationBarPullDown(NoNotificationBarPullDownLayout noNotificationBarPullDownLayout){  
 **try** {  
 **windowManager**.removeView(noNotificationBarPullDownLayout);  
 }**catch** (Exception e){  
 Log.*e*(***TAG***, **"disableNotificationBarPullDown already removed from windowmanager"**);  
 }  
}

**private void** initializePullDownLocalLayoutParams(){  
 **localLayoutParams** = **new** WindowManager.LayoutParams();  
 **localLayoutParams**.**type** = WindowManager.LayoutParams.***TYPE\_SYSTEM\_ERROR***;  
 **localLayoutParams**.**gravity** = Gravity.***TOP***;  
 **localLayoutParams**.**flags** = WindowManager.LayoutParams.***FLAG\_NOT\_FOCUSABLE***|  
  
 *// this is to enable the notification to recieve touch events* WindowManager.LayoutParams.***FLAG\_NOT\_TOUCH\_MODAL*** |  
  
 *// Draws over status bar* WindowManager.LayoutParams.***FLAG\_LAYOUT\_IN\_SCREEN***;  
  
 **localLayoutParams**.**width** = WindowManager.LayoutParams.***MATCH\_PARENT***;  
 **localLayoutParams**.**height** = (**int**) (50 \* getApplicationContext().getResources()  
 .getDisplayMetrics().**scaledDensity**);  
 **localLayoutParams**.**format** = PixelFormat.***TRANSPARENT***;  
}

@Override  
**protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 **windowManager** = ((WindowManager) getApplicationContext()  
 .getSystemService(Context.***WINDOW\_SERVICE***));  
 initializePullDownLocalLayoutParams();  
  
  
  
 *//disableHomeButton();*}

2. Custom font:

-Remove the font creation from asset in these custom classes

HelveticaNeueRegular

HelveticaNeueMedium

- Make the typeface a variable

<http://stackoverflow.com/questions/13077525/slow-listview-when-set-custom-font>

(Answer by Scorchio and ASP)

<http://stackoverflow.com/questions/13077525/slow-listview-when-set-custom-font>

(Answer by Moises Olmedo)

<http://stackoverflow.com/questions/4576441/custom-font-in-android-listview>

3. Typeface/custom font on listview

<http://stackoverflow.com/questions/15338016/performance-issue-on-custom-font-textview>

4. Loading of images

<https://www.redfin.com/devblog/2015/10/using-fresco-to-load-images-efficiently-on-android.html>

5. Launcher

Removing my launcher app from being the default launcher then showing the launcher picker dialog

[*http://stackoverflow.com/questions/27991656/how-to-set-default-app-launcher-programmatically*](http://stackoverflow.com/questions/27991656/how-to-set-default-app-launcher-programmatically)[*http://stackoverflow.com/questions/28537576/launcher-app-chooser-dialog-is-not-being-displayed*](http://stackoverflow.com/questions/28537576/launcher-app-chooser-dialog-is-not-being-displayed)[*http://stackoverflow.com/questions/23110047/android-choose-default-launcher-programatically*](http://stackoverflow.com/questions/23110047/android-choose-default-launcher-programatically)

[*http://stackoverflow.com/questions/12594192/remove-activity-as-default-launcher*](http://stackoverflow.com/questions/12594192/remove-activity-as-default-launcher)

*//remove app from being the default launcher*

getPackageManager().clearPackagePreferredActivities(getPackageName());  
  
*//show the launcher picker*Intent intent = **new** Intent(Intent.***ACTION\_MAIN***);  
intent.addCategory(Intent.***CATEGORY\_HOME***);  
intent.setFlags(Intent.***FLAG\_ACTIVITY\_NEW\_TASK***);  
startActivity(intent);

6. Show a dialog after 7 days of inactivity

7. Override home button

<http://stackoverflow.com/questions/4783960/call-method-when-home-button-pressed-on-android>

<http://stackoverflow.com/questions/8881951/detect-home-button-press-in-android/8883447#8883447>

<http://nisha113a5.blogspot.sg/2012/01/intercept-home-key-android.html> (no longer work on 4.0+)

<http://www.andreas-schrade.de/2015/02/16/android-tutorial-how-to-create-a-kiosk-mode-in-android/> (GOOD)

<https://groups.google.com/forum/#!topic/android-developers/trRI99-HszQ> (it can’t be done)

<https://groups.google.com/forum/embed/#!topic/android-developers/_Ex4GOfp4r4> (it can’t be done)

<http://uperones-blog.readthedocs.org/en/latest/_posts/2014-12-05-android-listen-home-button-click/>

<http://stackoverflow.com/questions/9972166/how-to-listener-homebutton-in-android> (it can’t be done)

<http://uperones-blog.readthedocs.org/en/latest/_posts/2014-12-05-android-listen-home-button-click/> (Listen to home button)

8. Triple tap on Home

- works only on devices with software navigation buttons

- not working on devices with hardware home buttons

Req: App is a launcher app

<**activity  
 android:name=".MainActivity"  
 android:launchMode="singleTask"  
 android:label="@string/app\_name"** >  
 <**intent-filter**>  
 <**action android:name="android.intent.action.MAIN"** />  
 <**category android:name="android.intent.category.LAUNCHER"** />  
 *<!-- The following two intent-filters are the key to set homescreen -->* <**category android:name="android.intent.category.HOME"** />  
 <**category android:name="android.intent.category.DEFAULT"** />  
  
 </**intent-filter**>  
</**activity**>

Add these in your launcher activity:

**int homeClickCounter** = 0;  
**public final int HOME\_CLICK\_COUNTER** = 800;

@Override  
**protected void** onResume() {  
 **super**.onResume();  
 **homeClickCounter**++;  
 resetHomeTripleTapTimer(**HOME\_CLICK\_COUNTER**);  
}

@Override  
**protected void** onUserLeaveHint() {  
 **super**.onUserLeaveHint();  
 **homeClickCounter** = 0;  
  
}

**private** Handler **homeTripleTap** = **new** Handler() {  
 **public void** handleMessage(Message msg) {  
  
 }  
};  
**private** Runnable **tripleTapCallback** = **new** Runnable() {  
 @Override  
 **public void** run() {  
 Log.*d*(***TAG***, ***TAG***+**" tripleTapCallback run()"**);  
 *// Perform any required operation on disconnect* **if** (**homeClickCounter**==3){  
 **homeClickCounter** = 0;  
 Log.*d*(***TAG***, ***TAG***+**" tripleTapCallback run() triple tap"**);  
 }**else**{  
 **homeClickCounter** = 0;  
 Log.*d*(***TAG***, ***TAG***+**" tripleTapCallback run() no triple tap"**);  
 }  
 }  
};  
  
**public void** resetHomeTripleTapTimer(**long** timeout) {  
 **homeTripleTap**.removeCallbacks(**tripleTapCallback**);  
 **homeTripleTap**.postDelayed(**tripleTapCallback**, timeout);  
}

**SET BACKGROUND OF ACTIVITY TO WHITE**

<http://stackoverflow.com/questions/4761686/how-to-set-background-color-of-activity-to-white-programmatically>

setContentView(R.layout.main); // Now get a handle to any View contained // within the main layout you are using View someView = findViewById(R.id.randomViewInMainLayout); // Find the root view View root = someView.getRootView() // Set the color root.setBackgroundColor(getResources().getColor(android.R.color.red));

**Robolectric Setup for Unit Testing**

1. On AndroidManifest.xml add the following

<**meta-data  
 android:name="AA\_DB\_NAME"  
 android:value="nameOfDatabaseHere.db"** />  
<**meta-data  
 android:name="AA\_DB\_VERSION"  
 android:value="1"** />  
<**meta-data android:name="AA\_MODELS"  
 android:value="com.example.models.User, com.example.models.Friends "** />

2. In the <application> tag add your Application Class there

3. On your application class,

- extend from **android.app.Application**

**-** create a method initializeDb(), initialize there what you have initialized in the AndroidManifest.xml like so

**private void** initializeDb(){  
 com.activeandroid.Configuration.Builder configurationBuilder = **new** com.activeandroid.Configuration.Builder(**this**);  
 configurationBuilder.setDatabaseName(**"nameOfDatabaseHere.db "**);  
 configurationBuilder.setDatabaseVersion(1);  
 configurationBuilder.addModelClasses(User.**class**);  
 configurationBuilder.addModelClasses(Friends.**class**);  
  
 ActiveAndroid.*initialize*(configurationBuilder.create());  
}

4. On your application class onCreate() call initializeDb(),

5. For unit testing, on build.gradle add the following

dependencies{

…

testCompile **"org.robolectric:robolectric:3.0"**

}

6. Also create another ApplicationTest class that extends the **com.activeandroid.app.Application,**  it is just the same as the Application class created from step 3

**public class** MyApplicationTest **extends** com.activeandroid.app.Application {  
 @Override  
 **public void** onCreate() {  
 **super**.onCreate();initializeDB();  
 }  
  
 **private void** initializeDB(){  
 com.activeandroid.Configuration.Builder configurationBuilder = **new** com.activeandroid.Configuration.Builder(**this**);  
 configurationBuilder.setDatabaseName(**"nameOfDatabaseHere.db "**);  
 configurationBuilder.setDatabaseVersion(1);  
 configurationBuilder.addModelClasses(User.**class**);  
 configurationBuilder.addModelClasses(Friends.**class**);  
 ActiveAndroid.*initialize*(configurationBuilder.create()); }  
}

7. Create your unit test class like so (UserTest.java)

@RunWith(RobolectricGradleTestRunner.**class**)  
@Config(

constants = BuildConfig.**class**,

sdk = 18,

application = MyApplicationTest.**class**,

shadows = {

ShadowEnvironment.**class**,

ShadowMultiDex.**class**}

)

**public class** UserTest {

@Before  
**public void** init(){

}

@Test  
**public void** addUserTest(){

}

}

**Notes:**

* the activeandroid jar library is built by me by downloading the activeandroid master branch in github (IMPORTANT: the .jar files that are available to download on ActiveAndroid github is not updated, you need to do ant build for the jar)

- the downloadable .jar files for ActiveAndroid does not work on Lollipop

see: <https://github.com/pardom/ActiveAndroid>

* I added ShadowEnvironment.class to make sure the file directories like getFilesDirectory() method gets shadowed
* I added ShadowMultidex.class because I have the below code in build.gradle

android{

…

multiDexEnabled **true**

**…**

**}**

Ref: <http://stackoverflow.com/questions/23907037/how-to-disable-scanning-for-model-in-activeandroid/>

<http://stackoverflow.com/questions/26933386/activeandroid-crashes-on-lollipop-noclassdeffounderror>

<https://github.com/pardom/ActiveAndroid/issues/291>

<https://github.com/pardom/ActiveAndroid/issues/109>

<https://github.com/pardom/ActiveAndroid/issues/299>

**Logging -**

1. <http://stackoverflow.com/questions/24475437/is-there-a-way-to-get-android-history-system-log>

2. <http://android.stackexchange.com/questions/14430/how-can-i-view-and-examine-the-android-log>

3. <http://stackoverflow.com/questions/4428643/examine-logs-from-the-past-with-logcat>

TO READ:

<http://forum.xda-developers.com/showthread.php?t=1726238>

<https://wiki.cyanogenmod.org/w/Doc:_debugging_with_logcat>

**UI DESIGN CHEATSHEET**

* <http://petrnohejl.github.io/Android-Cheatsheet-For-Graphic-Designers/>
* helps you find the equivalent of one dimension to ldpi, mdpi, hdpi, xhdpi and xxhdpi like
  + in mdpi – buttonHeight = “20dp”, the app will give you the values for ldpi, hdpi, xhdpi, xxhdpi

**SAMSUNG GALAXY TAB S WIFI ISSUE**

* the whole device can not access the internet, even browsers
* <https://www.ifixit.com/Wiki/Samsung_Galaxy_Tab_S_8.4_Troubleshooting>
* <http://thedroidguy.com/2015/01/samsung-galaxy-tab-s-8-4-problems-errors-glitches-solutions-part-3-101955>

**FONT SIZES**

* <https://www.google.com/design/spec/style/typography.html#typography-other-typographic-guidelines>

**CHEATSHEET**

* <https://drive.google.com/file/d/0B5XIkMkayHgRMVljUVIyZzNmQUU/view?pref=2&pli=1>

**REMOVE/DISABLE HIGHLIGHT ON LISTVIEW CLICK**

* <http://stackoverflow.com/questions/2907335/android-disabling-highlight-on-listview-click/12242564#12242564>
  + make sure to have this in your listview layout:

<ListView

android:listSelector="@android:color/transparent" android:cacheColorHint="@android:color/transparent"

/>

**PREVENT RXJAVA/RXANDROID FROM LEAKING**

* <http://www.philosophicalhacker.com/2015/03/24/how-to-keep-your-rxjava-subscribers-from-leaking/>

**getExternalFilesDir() returns null**

* <http://stackoverflow.com/questions/10114801/getexternalfilesdir-returns-null-not-a-permissions-issue> (sometimes you have to restart the device)

**Delay server response time**

* <http://fake-response.appspot.com/?sleep=10>

**TEST IF A FRAGMENT IS VISIBLE TO USER**

**- useful when populating a fragment when in a viewpager**

* [**http://stackoverflow.com/questions/9323279/how-to-test-if-a-fragment-view-is-visible-to-the-user**](http://stackoverflow.com/questions/9323279/how-to-test-if-a-fragment-view-is-visible-to-the-user)

**CANDIDATE LIBRARIES TO USE**

**UI**

* [**https://github.com/81813780/AVLoadingIndicatorView**](https://github.com/81813780/AVLoadingIndicatorView)
* [**https://github.com/JoanZapata/android-iconify**](https://github.com/JoanZapata/android-iconify)
* [**https://github.com/Pkmmte/CircularImageView**](https://github.com/Pkmmte/CircularImageView)
* [**https://github.com/navasmdc/MaterialDesignLibrary**](https://github.com/navasmdc/MaterialDesignLibrary)
* [**https://fortawesome.github.io/Font-Awesome/icons/**](https://fortawesome.github.io/Font-Awesome/icons/)
* [**https://github.com/JakeWharton/ViewPagerIndicator**](https://github.com/JakeWharton/ViewPagerIndicator)
* [**https://github.com/p-v/FlexibleCalendar**](https://github.com/p-v/FlexibleCalendar)

**ISSUES**

* [**http://stackoverflow.com/questions/33841363/how-to-make-a-page-indicator-for-horizontal-recyclerview**](http://stackoverflow.com/questions/33841363/how-to-make-a-page-indicator-for-horizontal-recyclerview)

**RETROFIT SETUP**

**Build.gradle (app)**

compile **'com.squareup.retrofit2:retrofit:2.0.0-beta4'**compile **'com.squareup.okhttp:okhttp-urlconnection:2.0.0'**compile **'com.squareup.okhttp:okhttp:2.0.0'**compile **'com.squareup.retrofit2:adapter-rxjava:2.0.0-beta4' //for rxjava**compile **'com.squareup.retrofit2:converter-gson:2.0.0-beta4' //for the converter**

**API MANAGER CLASS**

**public class** ApiManager {  
 **public static final** String ***BASE\_URL*** = **""**;  
 Retrofit **retrofit**;  
 ApiInterface **api**;  
  
 **public** ApiManager() {  
 **retrofit** = **new** Retrofit.Builder()  
 .baseUrl(***BASE\_URL***)  
 .addConverterFactory(GsonConverterFactory.*create*())

.addCallAdapterFactory(RxJavaCallAdapterFactory.*create*()) //very important for RXJAVA  
 .build();  
 **api** = **retrofit**.create(ApiInterface.**class**);  
 }  
}

**SAMPLE POST API:**

**public interface** ApiInterface {

**…**

@Headers({  
 **"X-XSRF-TOKEN: 'Ej3NQ4mLspTosE2o9Aili7gp6Q7p5Yn1hfQi6E34'"**,  
 **"X-HOSTNAME: 'demo'"**})  
@FormUrlEncoded  
@POST(***OAUTH\_URL***)  
Observable<Authorize> authorizeObservable(  
 @Field(**"host"**) String host,  
 @Field(**"username"**) String username,  
 @Field(**"password"**) String password,  
 @Field(**"client\_id"**) String client1id,  
 @Field(**"client\_secret"**) String clientSecret,  
 @Field(**"grant\_type"**) String grantType,  
 @Field(**"gcm"**) String gcmid  
);

**…**

}

**GETTING THE HEADER INFORMATION OF THE RESPONSE**

* [**http://stackoverflow.com/questions/26851459/getting-header-information-with-rxjava-and-retrofit**](http://stackoverflow.com/questions/26851459/getting-header-information-with-rxjava-and-retrofit)
* [**http://stackoverflow.com/questions/33774940/get-response-status-code-using-retrofit-2-0-and-rxjava**](http://stackoverflow.com/questions/33774940/get-response-status-code-using-retrofit-2-0-and-rxjava)

**sample:**

@Headers({  
 **"X-XSRF-TOKEN: "**+***HEADER\_XSRFTOKEN***,  
 **"X-HOSTNAME: "**+***HEADER\_HOSTNAME***})  
@FormUrlEncoded  
@POST(***OAUTH\_URL***)  
Observable<**Response<**Authorize**>**> authorizeResponseObservable(

//Authorize is your pojo/class that represents the return json String  
 @Field(**"host"**) String host,  
 @Field(**"username"**) String username,  
 @Field(**"password"**) String password,  
 @Field(**"client\_id"**) String client1id,  
 @Field(**"client\_secret"**) String clientSecret,  
 @Field(**"grant\_type"**) String grantType,  
 @Field(**"gcm"**) String gcmid  
);

**to use it:**

**to get the response:**

ApiManager apiManager = **new** ApiManager();  
  
apiManager.authorizeResponseObservable(**"demo"**, **"admin@admin.com"**, **"herd4008hr"**, **"mobile-android"**, **"28001a630ec3b1d53eaac5463fcc4563"**, **"password"**, **"3424"**)  
 .subscribe(**new** Subscriber<Response<Authorize>>() {  
 @Override  
 **public void** onCompleted() {  
  
 }  
  
 @Override  
 **public void** onError(Throwable e) {  
  
 }  
  
 @Override  
 **public void** onNext(Response<Authorize> authorizeResponse) {  
 okhttp3.Response raw = authorizeResponse.raw(); **//how to get the Header Response**  
Authorize body = authorizeResponse.body(); //**how to get the converted object**

}  
 });