Android InsecureBankv2 Usage Guide

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Usage Guide

This document is divided into 4 parts:

1. Creating the Android Virtual Device (AVD)
2. Running the back-end AndroLab server
3. Installing and running the InsecureBankv2 application – via APK file
4. Building and running the InsecureBankv2 application – via Source Code compilation

Creating the Android Virtual Device (AVD)

In order to test the Android InsecureBankv2 application, we will first need to create an AVD for any Android device configuration.

Step 1: Download the latest version of Android SDK from the below mentioned link.

```
https://developer.android.com/sdk/index.html
```

Step 2: Navigate to the *tools* folder in the downloaded Android SDK and enter the below command to launch the Android SDK Manager.

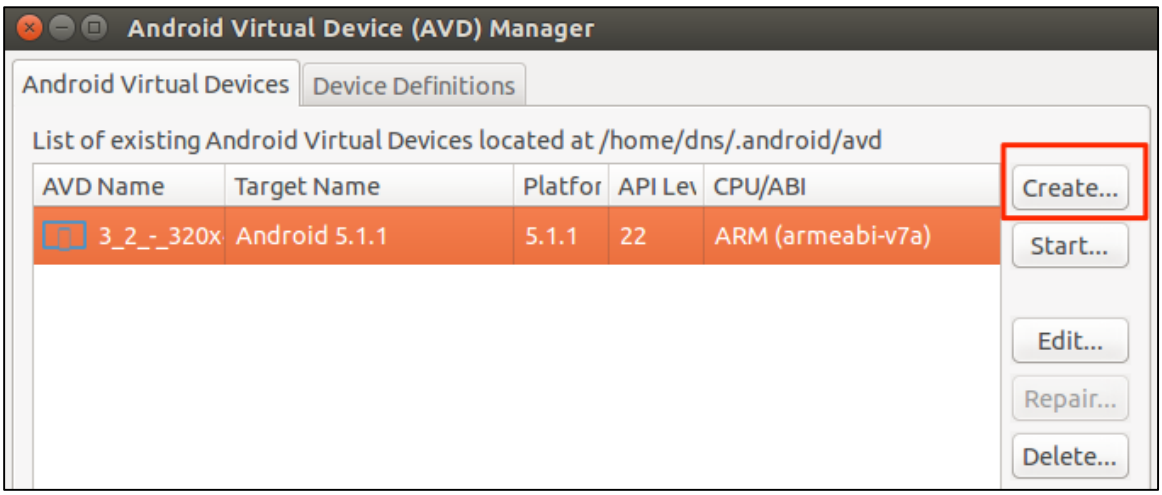
```
./android
```

In the package tree, install the complete tree corresponding to the latest Android version, which in our case is Android 5.1.1 (API 22).

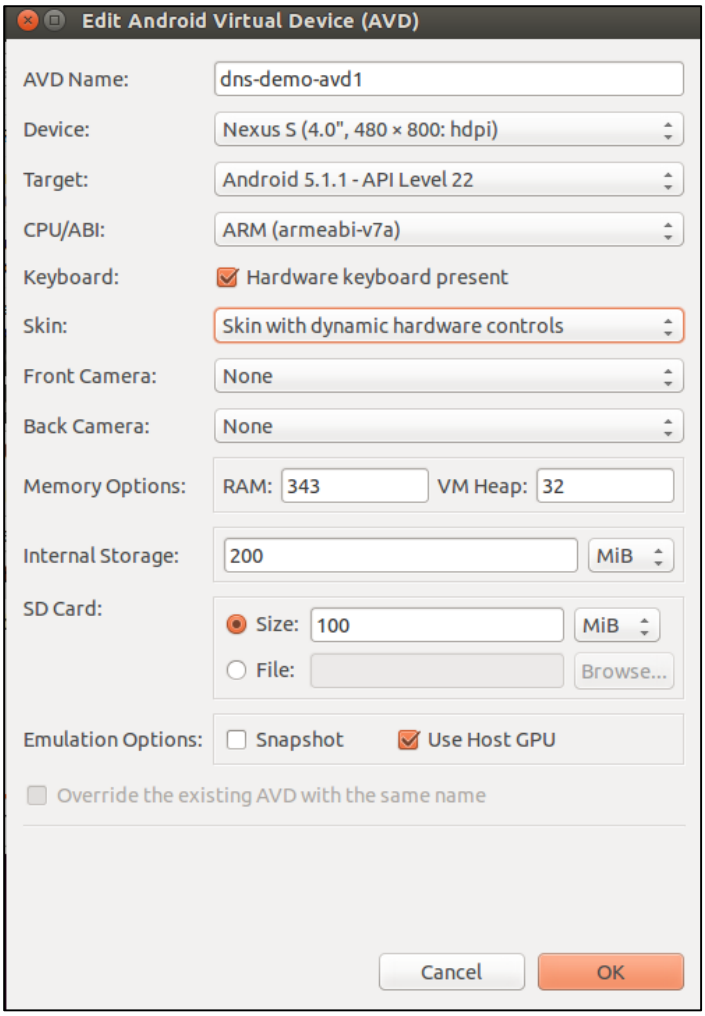
Step 3: Enter the below mentioned command in the tools folder in the Android SDK, to launch the AVD Manager.

```
./android avd
```

Step 4: Click on the *Create* button to create a new AVD.

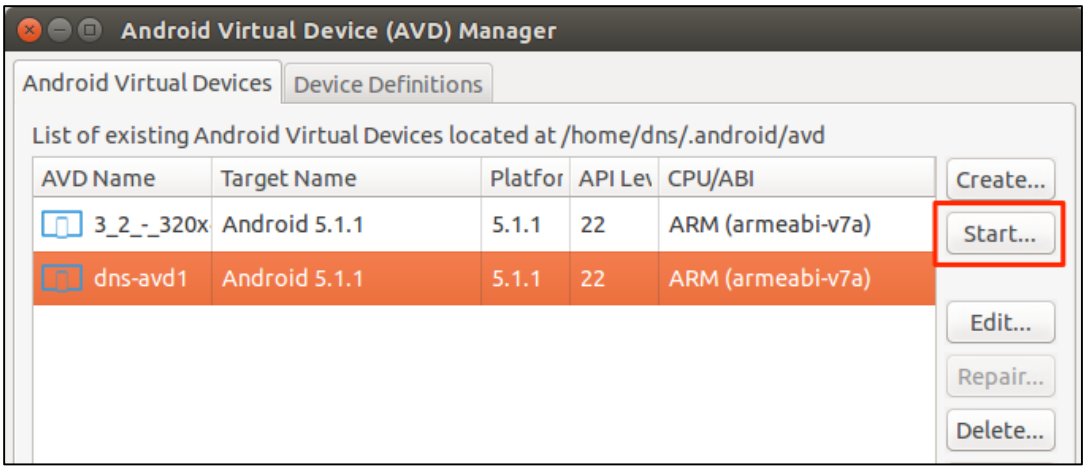


Step 5: Create the Android Virtual Device with the configurations shown in the following screenshot, and click on the *OK* button.

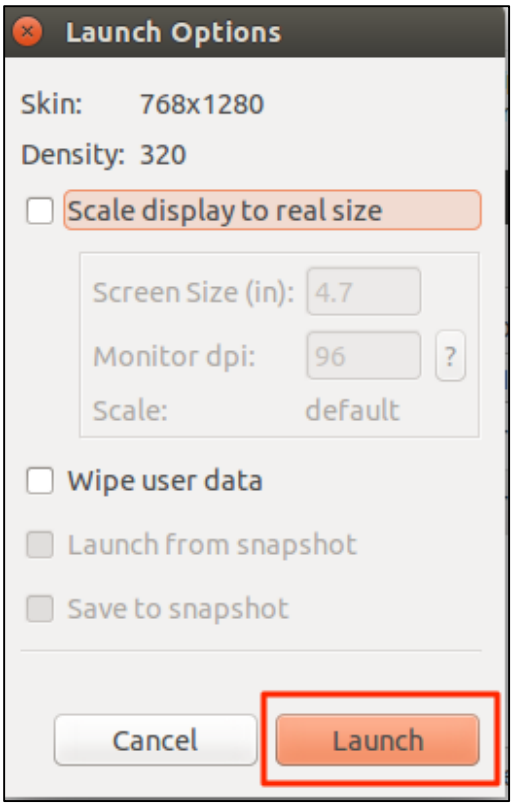


Note: Since InsecureBankv2 makes use of SD Card to store data, make sure to configure the AVD accordingly.

Step 6: Launch the newly created AVD by highlighting its name and clicking the *Start* button.



Step 7: Click on the *Launch* button to continue and load the created AVD.



If the AVD creation was successful, the emulator launches with the newly created AVD as shown in the following screenshot.

5554:dns-demo-avd1
Google
Basic Controls
Hardware Buttons
MENU
DPAD not enabled in AVD
Hardware Keyboard
Use your physical keyboard to provide input

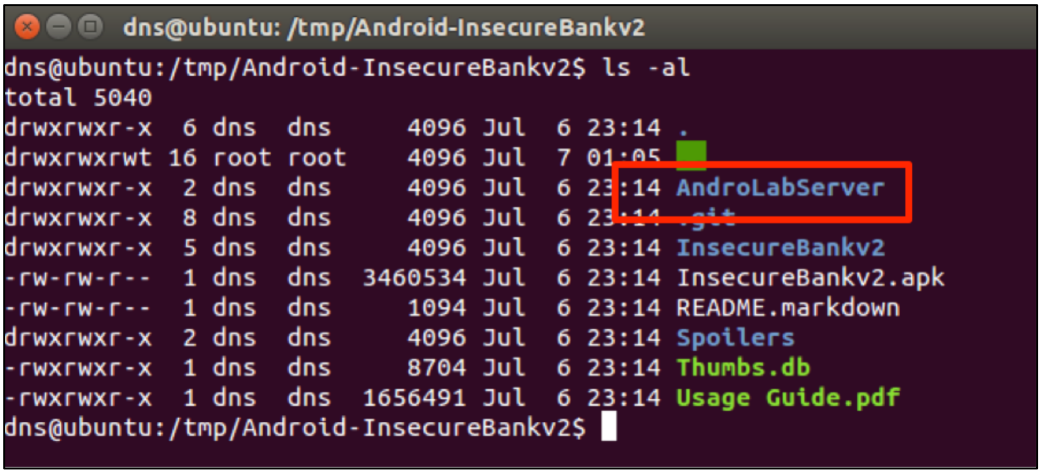
Running the back-end AndroLab server

Before proceeding to install the InsecureBankv2 application on the newly created AVD, ensure that the back-end server is running properly. The back-end for the InsecureBankv2 application is a simple python server running simple Flask and CherryPy web frameworks.

Step 1: Download the latest version of InsecureBankv2 from GitHub using the below mentioned command on the terminal.

```
$ git clone https://github.com/dineshshetty/Android-InsecureBankv2.git
```

Step 2: The server component can be found in the *AndroLabServer* folder in the InsecureBankv2 project source folder.



Step 3: Install the below libraries using the *easy_install* program in your python scripts subdirectory:

- flask
- flask-sqlalchemy
- simplejson
- cherrypy
- web.py

```
$ easy_install flask sqlalchemy simplejson cherrypy web.py
```

Step 4: Navigate to the *AndroLabServer* folder in the downloaded InsecureBankv2 project source code and use the below command to run the HTTP server on the default port 8888:

```
$ python app.py
```

The below mentioned command can be used to view the available arguments for the AndroLab server component.

```
$ python app.py --help
```

Installing and running the InsecureBankv2 application – via APK file

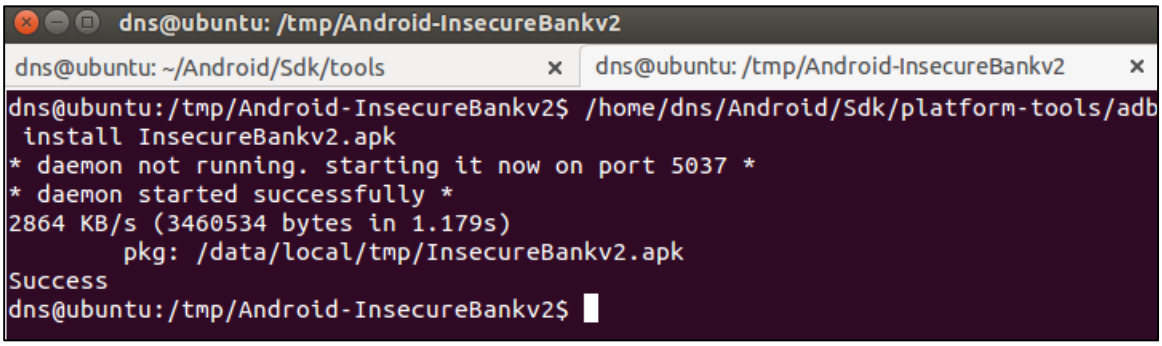
Once the Android Virtual Device is set up and running, we can proceed to install InsecureBankv2 on it. The Android emulator helps *emulate* and *test* the behavior and working of the application in a virtualized environment without the need of buying expensive Android devices.

Step 1: Download the latest version of InsecureBankv2 from GitHub using the below mentioned command on the terminal.

```
$ git clone https://github.com/dineshshetty/Android-InsecureBankv2.git
```

Step 2: Using the *adb* utility in the Android SDK *platform-tools* folder, the *InsecureBankv2.apk* file from the downloaded project can be installed on to the emulator.

```
$ adb install InsecureBankv2.apk
```

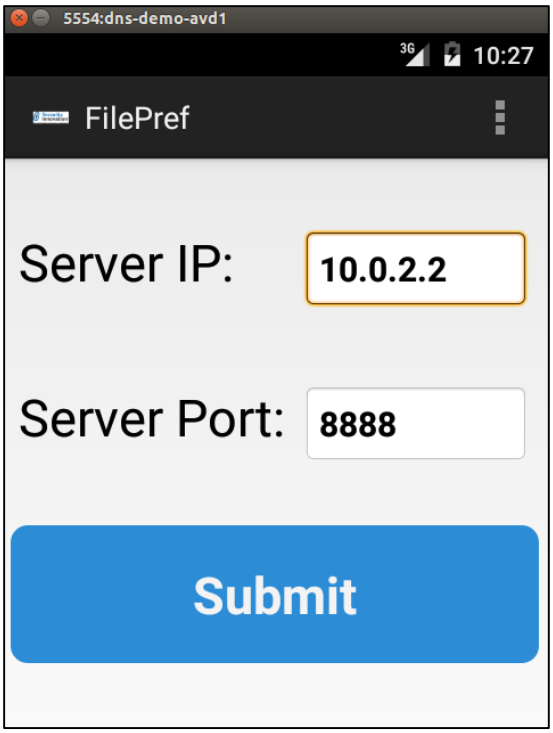


Step 3: Launch the InsecureBankv2 application from the Android app-menu. The following screenshot shows that InsecureBankv2 application was properly installed on the Android Emulator.

Step 4: On the Android emulator, press the hardware or the software *menu* button and select the *Preferences* menu.

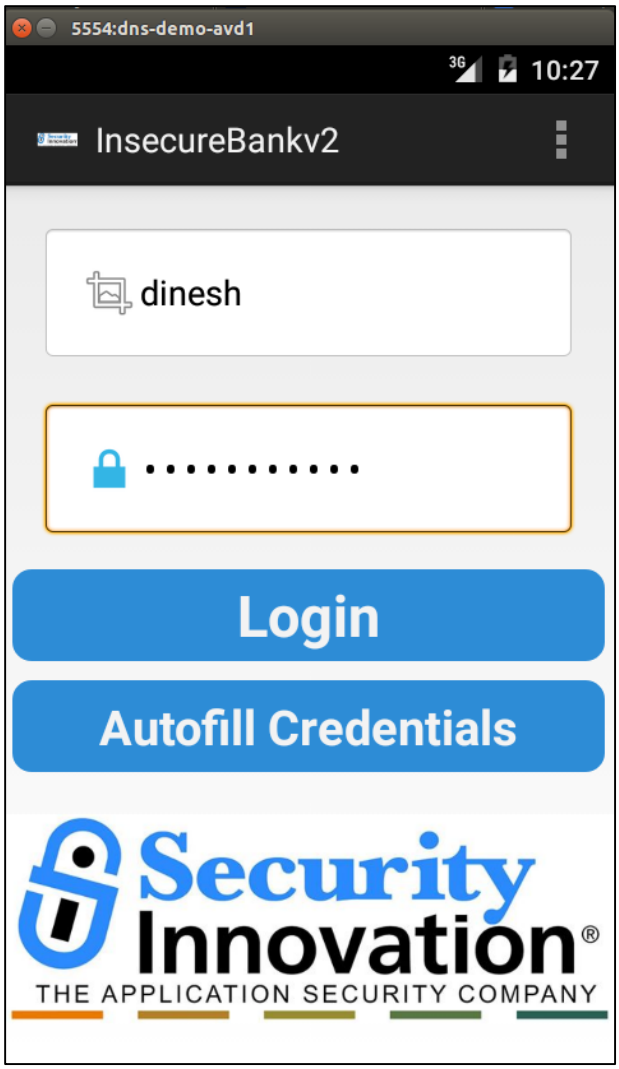
Step 5: Configure the Android emulator to point to the IP address and port number of the machine on which the AndroLab server is running. Click *Submit* to continue.

Note: In the case of Android emulator, *10.0.2.2* points to the base machine on which the emulator is running.

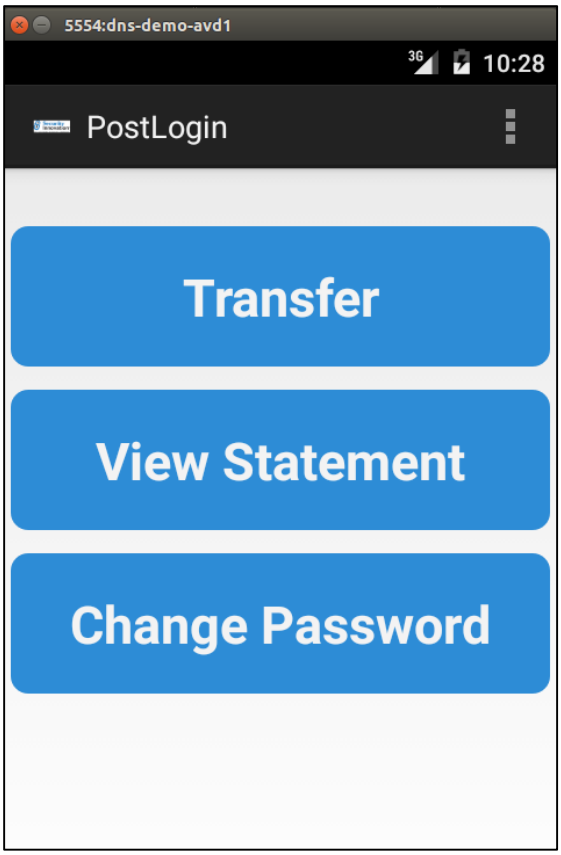


Step 6: Log in to the application using either of the below mentioned credentials:

- dinesh/Dinesh@123$
- jack/Jack@123$



Step 7: When correct set of credentials is entered, the click of the *Login* button redirects the user to the following screen.



The application is now ready to be HACKED!!!.

Building and running the InsecureBankv2 application – via Source Code compilation

An alternate way of running the InsecureBankv2 application is by compiling the latest version of the source code from the GitHub repository. The source code of the project is in built-ready format and can be directly imported into the latest version of Android Studio.

Step 1: Download the latest version of Android Studio from the below mentioned link.

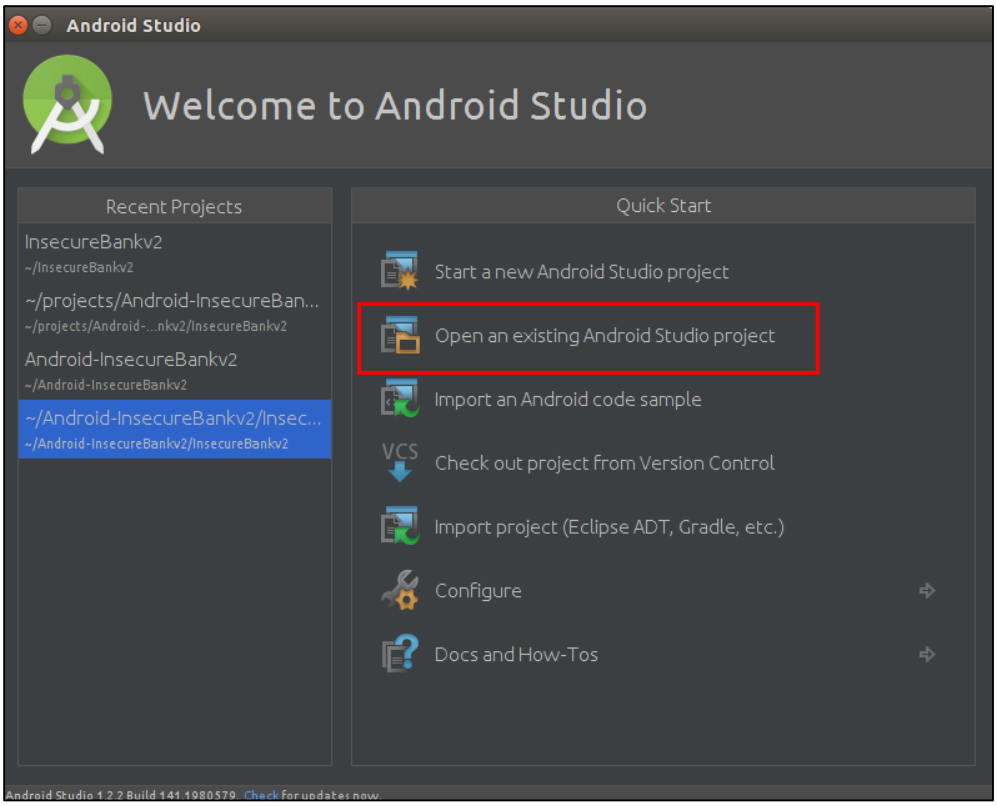
```
https://developer.android.com/sdk/index.html
```

Note: The current build of InsecureBankv2 is ready to be imported into Android Studio 1.2.2.

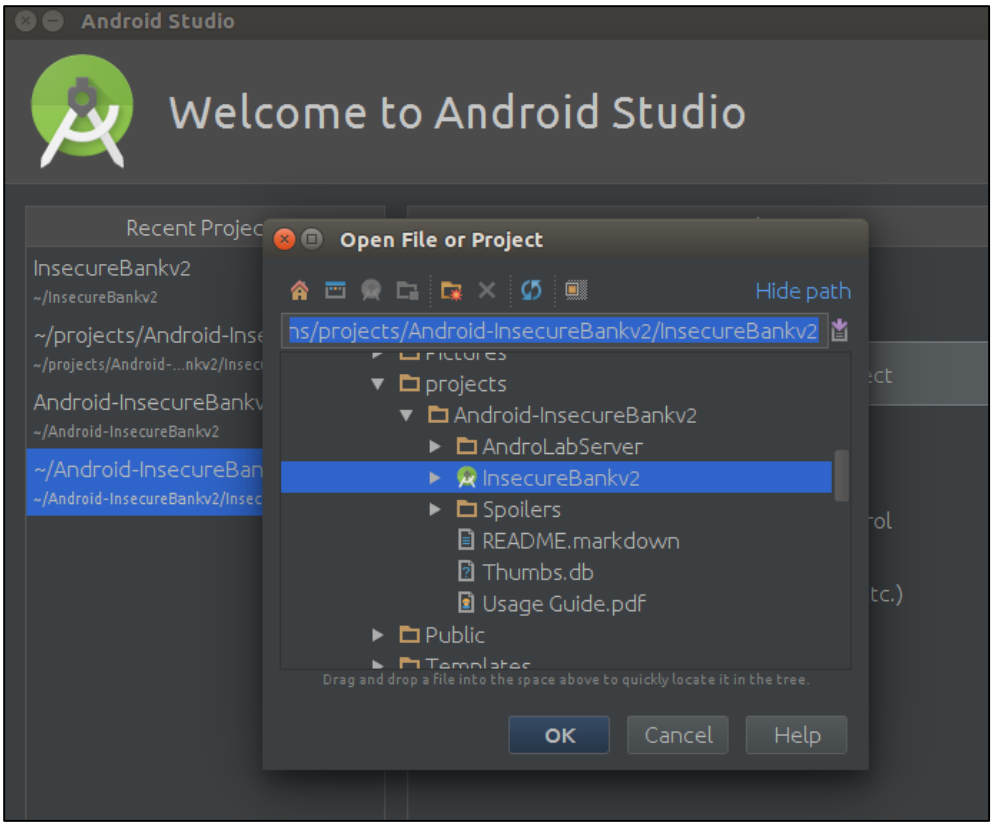
Step 2: Download the latest version of InsecureBankv2 from GitHub using the below mentioned command on the terminal.

```
$ git clone https://github.com/dineshshetty/Android-InsecureBankv2.git
```

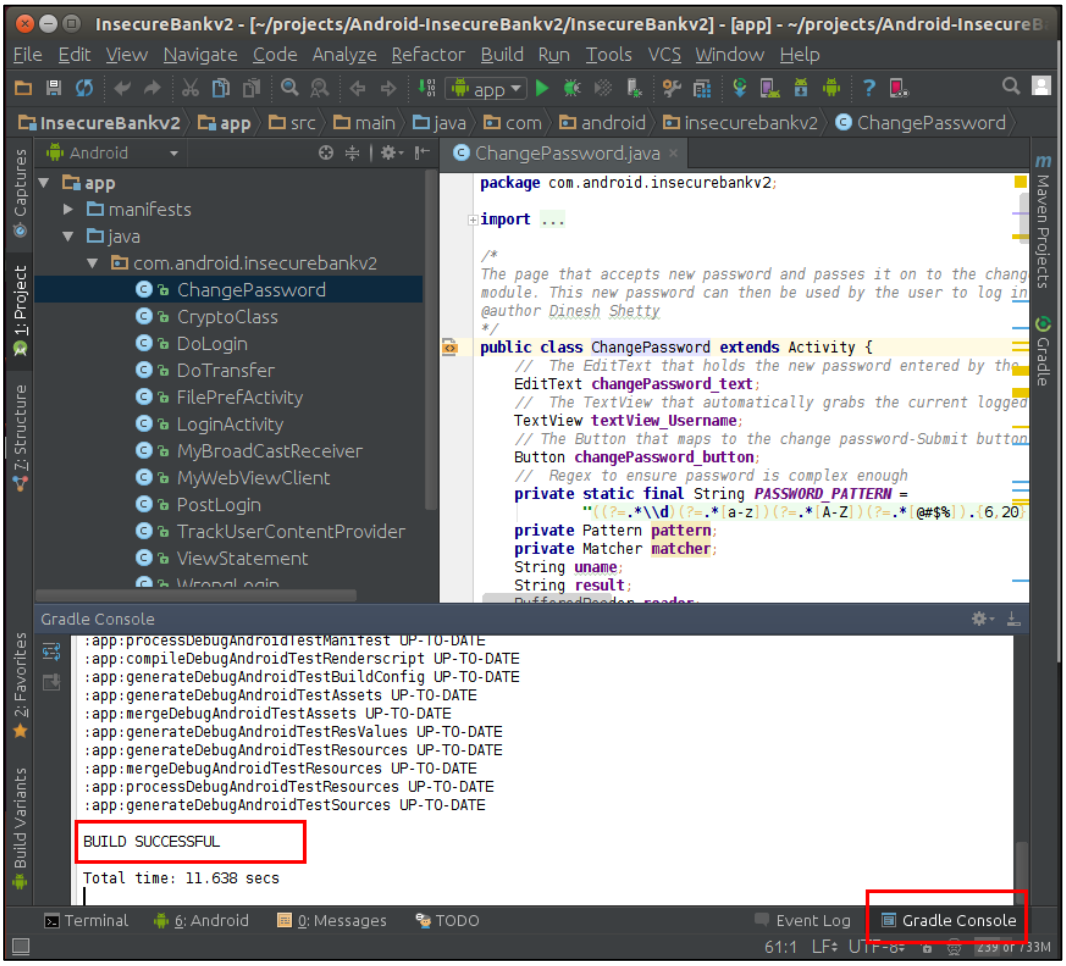
Step 3: Launch Android Studio and click on the *Open an existing Android Studio project* option.



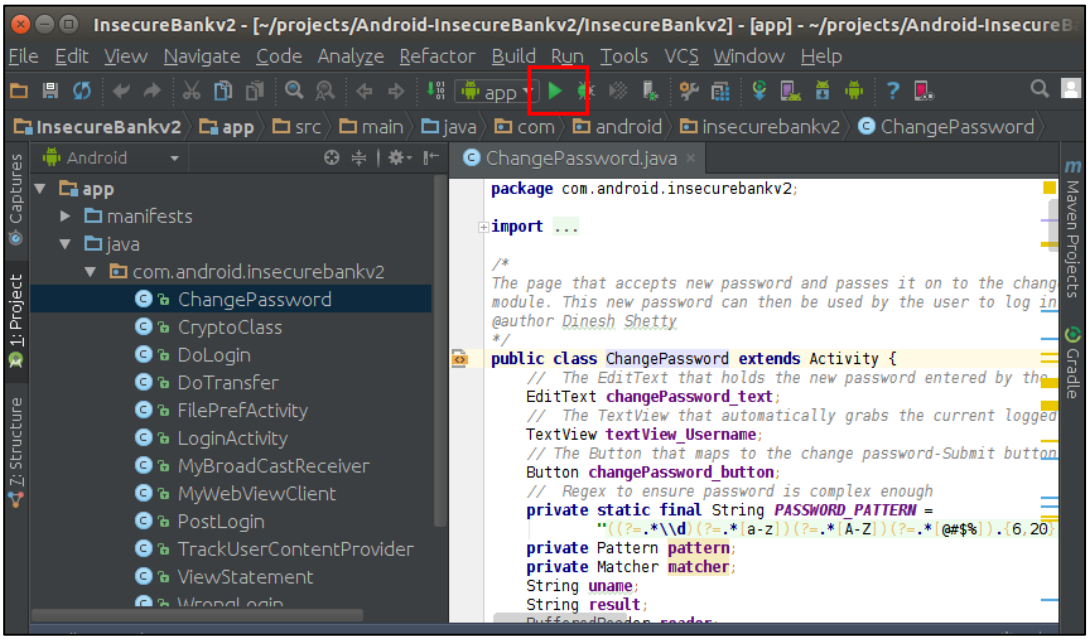
Step 4: Select the folder InsecureBankv2 from the downloaded project folder.



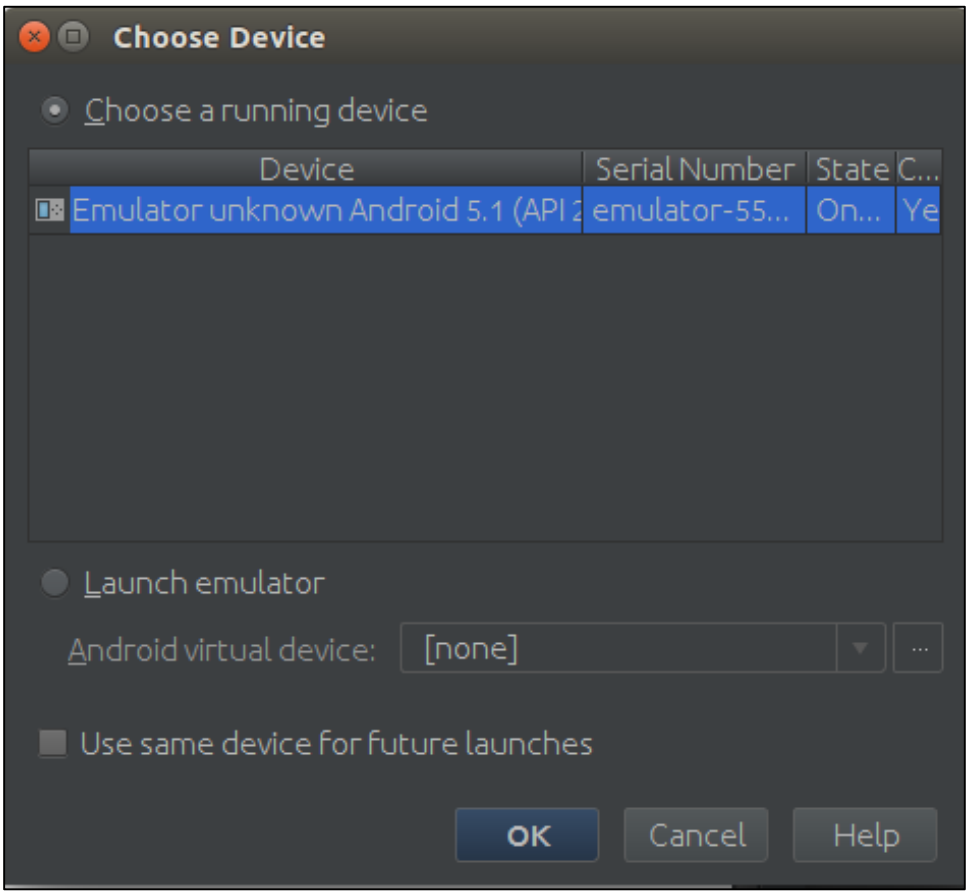
Step 5: Allow Grade to build the complete project and resolve all the dependencies. Verify that the build was successful.



Step 6: Click on the *Run* button highlighted in the following screenshot.



Step 7: Select the emulator or device for the InsecureBankv2 to be run on.



Note: In case you do not have any AVDs' by default on the SDK, use the information from the *Creating the Android Virtual Device (AVD)* section of this document to create new virtual devices to run the Android InsecureBankv2 application on.

The following screenshot shows the InsecureBankv2 application running on an Android emulator.