

# **Oracle FLEXCUBE Direct Banking**

Android Workspace Configuration  
Release 12.0.3.0.0

**Part No. E52543-01**

April 2014

Android workspace Configuration

April 2014

Oracle Financial Services Software Limited

Oracle Park

Off Western Express Highway

Goregaon (East)

Mumbai, Maharashtra 400 063

India

Worldwide Inquiries:

Phone: +91 22 6718 3000

Fax: +91 22 6718 3001

[www.oracle.com/financialservices/](http://www.oracle.com/financialservices/)

Copyright © 2008, 2014, Oracle and/or its affiliates. All rights reserved.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

U.S. GOVERNMENT END USERS: Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are “commercial computer software” pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate failsafe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

This software or hardware and documentation may provide access to or information on content, products and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.

---

# Contents

1. Preface.....	1
1.1 Intended Audience.....	1
1.2 Documentation Accessibility .....	1
1.3 Access to OFSS Support .....	1
1.4 Structure.....	1
1.5 Related Information Sources .....	2
2. Introduction.....	3
3. Acronyms and Abbreviations.....	4
4. Prerequisites .....	5
5. Configuring Workspace for Android Phone.....	6
6. Configuring Workspace for Android Tablet .....	13

## 1.1 Intended Audience

Any interested party working on the delivery of Oracle FLEXCUBE Direct Banking may read this document. The following profile of users would find this document useful:

- Application Architects
- End to End Designers
- Business Service Detailed Designers and Developers
- Implementation Partners

Specifically, however, this document is targeted at:

- **Implementation Partners, Customization Development Teams or Vendors** providing customization, configuration and implementation services around the Oracle FLEXCUBE Direct Banking product.

## 1.2 Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

## 1.3 Access to OFSS Support

<https://support.us.oracle.com>

## 1.4 Structure

This manual is organized into the following chapters:

**Section 1** *Preface* gives information on the intended audience. It also lists the various chapters covered in this User Manual.

**Section 2-4** *Provides introduction and abbreviations details along with prerequisites.*

**Section 5** *Provides information for creating workspace for Android Phone.*

**Section 6** *Provides information for creating workspace for Android Tablet.*

## 1.5 Related Information Sources

For more information please, refer to the following documents:

- *Oracle\_FLEXCUBE\_Direct\_Banking\_Mobile\_iPhone\_Client\_Developer\_Guide*
- *Oracle\_FLEXCUBE\_Direct\_Banking\_Mobile\_J2ME\_Clients\_Developer\_Guide*
- *Oracle\_FLEXCUBE\_Direct\_Banking\_Mobile\_Banking\_User\_Interface\_Guide*

---

## 2. Introduction

This document provides the guidance to create and configure workspace for Android phones for FLEXCUBE Direct Banking 12.0.3.

Mobile banking is a secure channel to access the banking accounts & financial transactions similar to the Internet banking channel.

FLEXCUBE Direct Banking provides various client applications that can be distributed by the Bank to their end customers. These client applications are to be installed on the mobile device of end customer and enable the customers to access banking facilities over the mobile device.

The mobile client communicates with FLEXCUBE Direct Banking application server in order to execute the Inquiry or payment transaction. The user has to enter his/her login credentials in order to access the functionalities.

The request is in the form of a HTTP request to the FLEXCUBE Direct Banking application server. And the response from the server is in the form of XML over HTTP. This XML is parsed on the client and rendered into appropriate screen display.

The client applications use network to communicate with FLEXCUBE Direct Banking application server. Hence network data charges may be applicable to the end user based on his/her network provider. In order to reduce the payload on the mobile, application is designed to transfer minimum data over the network. The response XML contains single character node and attribute names. These names are taken from the real HTML tags, e.g. H for hidden fields, T for table etc. This XML is in a pre-defined format which is produced by the mLEAP framework of FLEXCUBE Direct Banking.

The details of mLEAP Framework are available in [Oracle FLEXCUBE Direct Banking mLEAP Framework DeveloperGuide.docx.](#)

For details on the supported XML tags please refer to document [Oracle FLEXCUBE Direct Banking Mobile App API.docx.](#)

FLEXCUBE Direct Banking mobile clients are designed to understand the XML generated by mLEAP and convert it to appropriate screen definition to be rendered on mobile device screen.

---

### 3. Acronyms and Abbreviations

FCDB	FLEXCUBE Direct Banking
AVD	Android Virtual Device
IDE	Integrated Development Environment
SDK	Software Development Kit
ADT	Android Development Tools
UI	User Interface
APK	Android Package

---

## 4. Prerequisites

For successful completion of this project the prerequisites are:

- Eclipse (3.7 or higher)
- Android ADT plugin (revision 22 or above)
- Android SDK with platforms for Android-8(Froyo), Android 11(Honeycomb) and Android 17(JellyBean latest version).
- For more details on how to setup the Eclipse plugin, refer: <http://developer.android.com/sdk/installing/installing-adt.html>

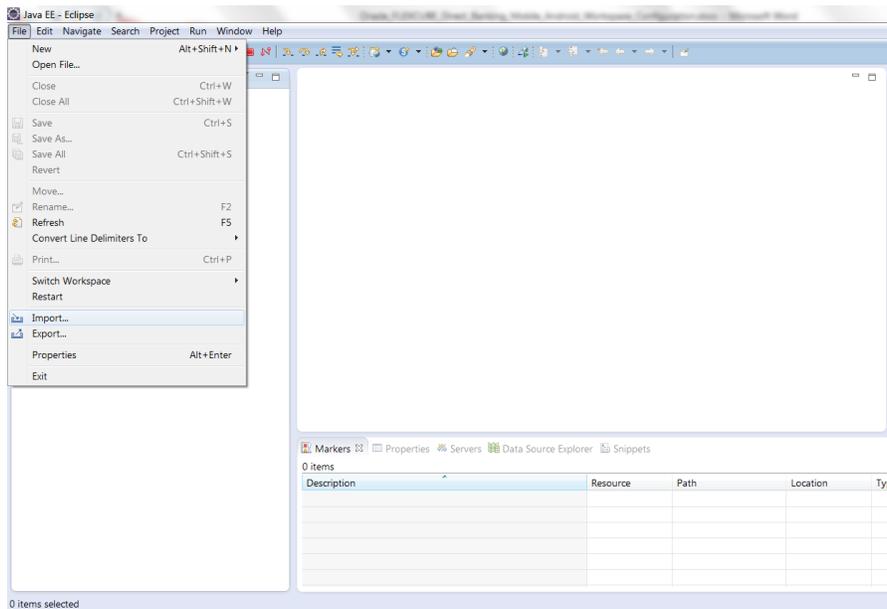
## 5. Configuring Workspace for Android Phone

1. Checkout the Android Workspace from the svn onto your local machine, the files that must be checked out are:

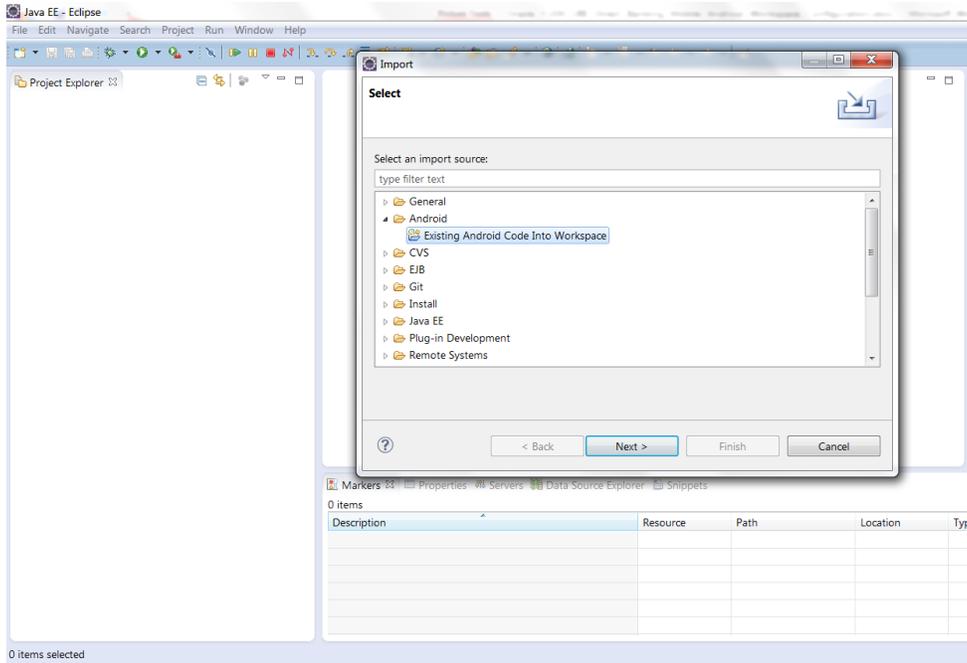
- FCDB\_12.0.3\_Libraries.zip
- FCDB\_ANDROID\_PHONE\_12.0.3.zip

The location of files in the svn is: workspace\mobile\android

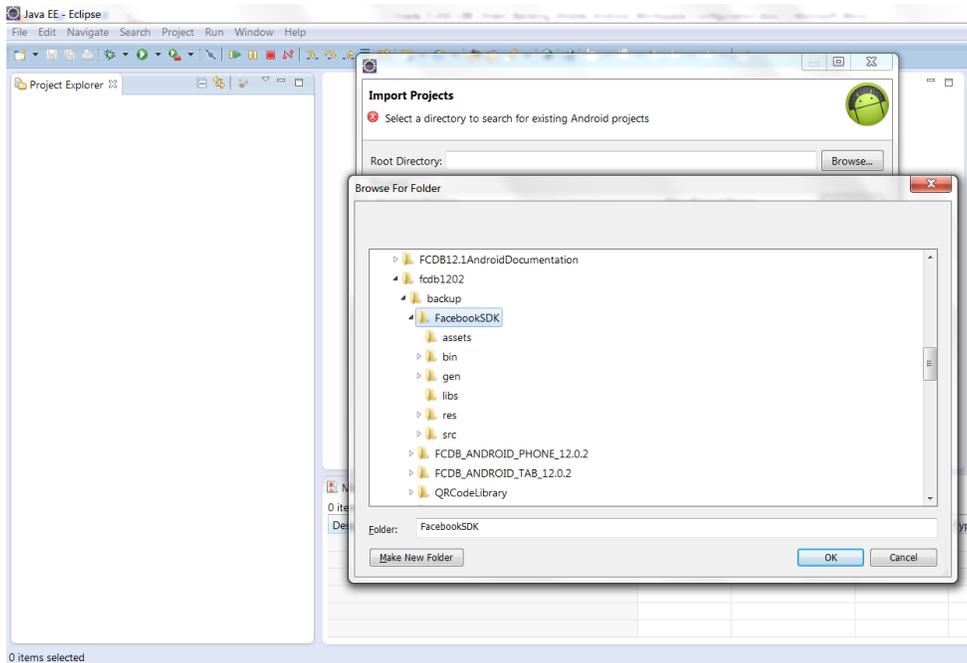
2. Extract the zip files into a folder onto the local machine.
3. Open Eclipse with ADT plugin. For more information on how to setup Eclipse with ADT plugin, please refer: <http://developer.android.com/sdk/installing/installing-adt.html>
4. Go to File->Import



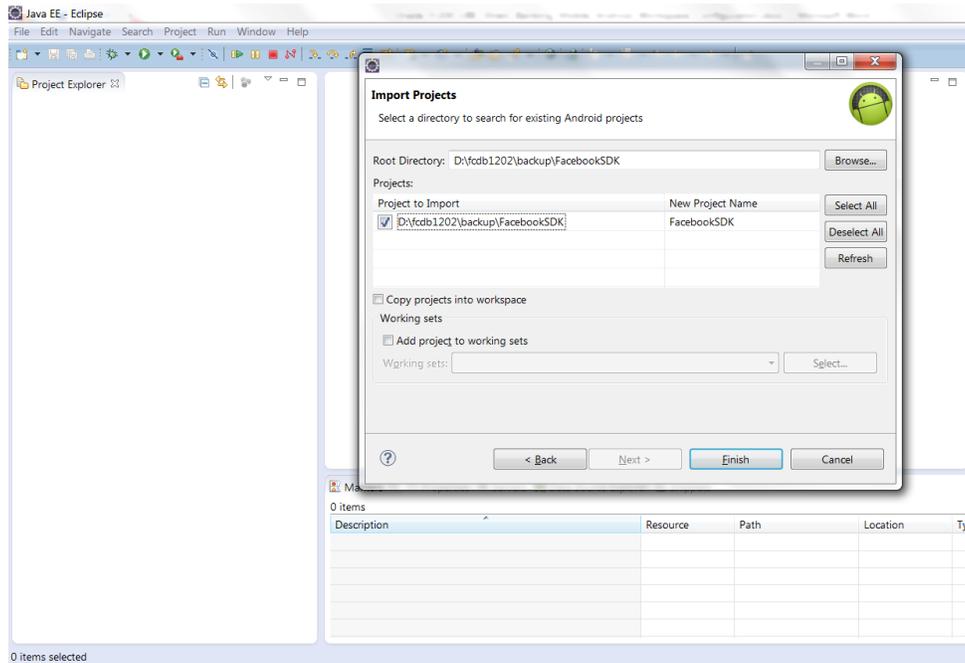
5. Select Android->Existing Project into workspace



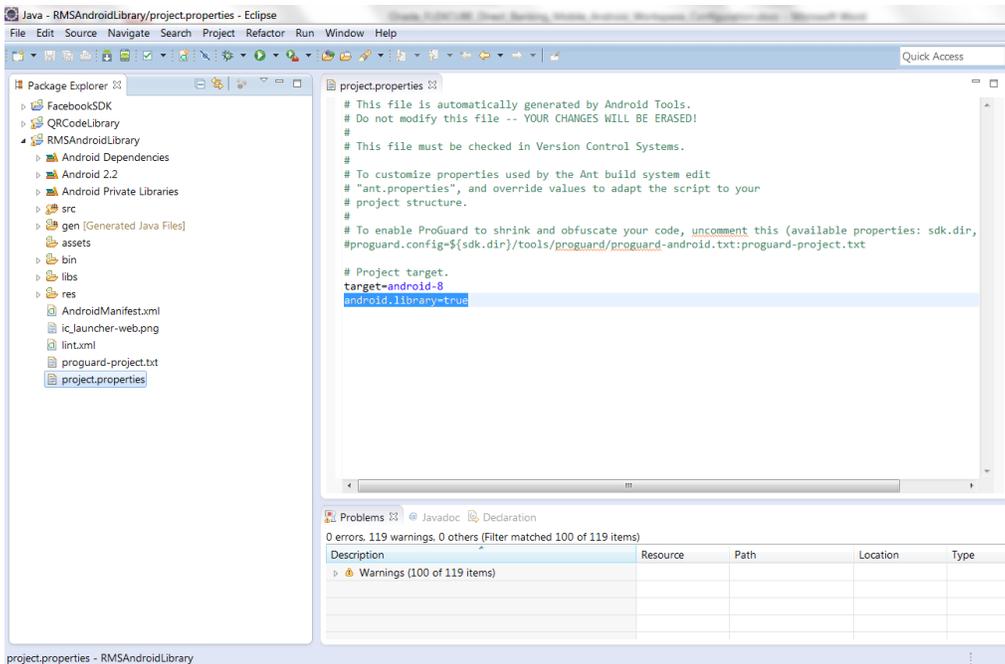
6. Browse and select the **FacebookSDK** folder from the location where the extracted files from the FCDB\_12.0.3\_Libraries.zip have been placed and click OK.



7. Press Finish.



8. Repeat steps 5 – 7 and add four more projects from the Library, namely: **AndroidAugReality**, **google-play-services\_lib**, **RMSAndroidLibrary** and **QRCodeLibrary**. If the projects are imported into the workspace and have a different name, refactor the project and keep their names as highlighted above in bold.
9. To verify the successful import of the projects, expand all the projects. Open the file with the name “project.properties”, it should contain a property “android.library=true”.



10. Repeat steps 5-7 and import the project FCDB\_ANDROID\_PHONE\_12.0.3.
11. Verify the successful import of the project by expanding it in the project explorer. Open the project.properties file, it should contain three properties namely:

android.library.reference.1=..\RMSAndroidLibrary

android.library.reference.2=..\QRCodeLibrary

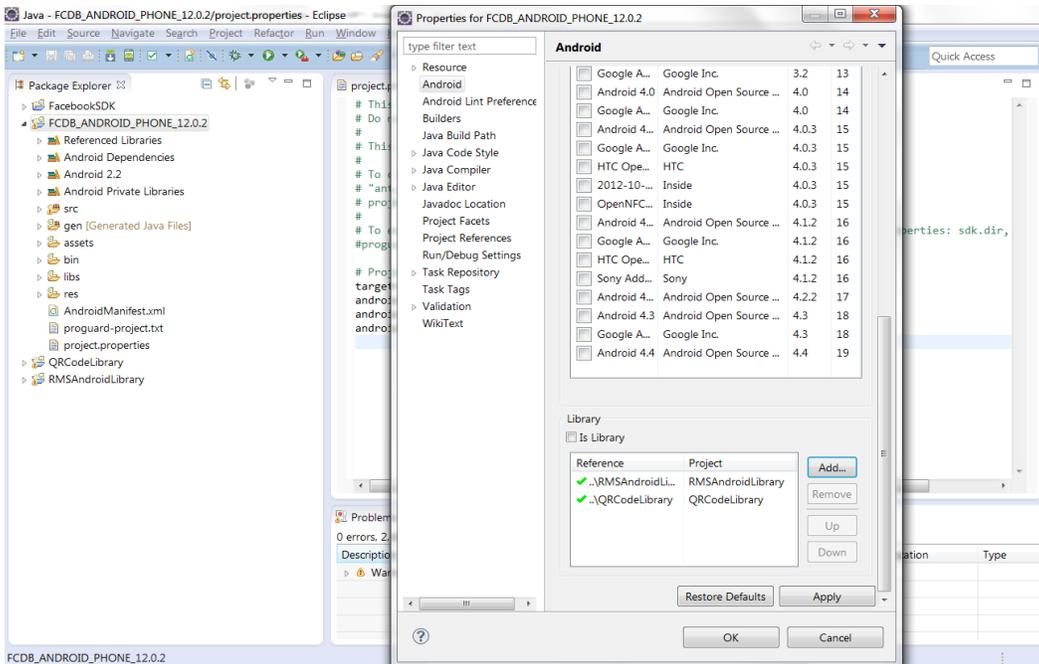
android.library.reference.3=../FacebookSDK

android.library.reference.4=..\google-play-services\_lib

android.library.reference.5=../AndroidAugReality

The sequencing may differ based on the Library project that was imported first. In case any of the three Libraries does not appear in the project.properties file:

- right-click the FCDB\_ANDROID\_PHONE\_12.0.3 in the project explorer
- Goto -> Properties.
- Select Android from the left panel and scroll the right-panel to the bottom.
- Click the “Add” button in the library section



- Select the library project from the displayed options and press Ok. Click Apply and press Ok to apply the changes.

12. Android framework uniquely identifies different applications based on their package names. The default package name shipped with FCDB\_ANDROID\_PHONE\_12.0.3 happens to be “com.ofss.fcdb.mobile.android.kernel.launcher”. Refactor the package name and change the part “kernel” to the name of the bank i.e. “com.ofss.fcdb.mobile.android.bankname.launcher”.

13. Open the AndroidManifest.xml from project explorer. The root tag <manifest> has an attribute “package”, update the package name to the respective bankname and save the file.

14. After making the changes, certain number of files will show error in the <root>/res/layout, layout-large, layout-normal, layout-xlarge folders. The refactoring changes done above in step 12 need to be done here as well. In all the files showing error, the root xml node has an attribute:  
 xmlns:app=<http://schemas.android.com/apk/res/com.ofss.fcdb.mobile.android.phone.kernel.launcher>. Update the attribute and replace the term “kernel” with the “bankname”.

Below is the list of files that will show error and will need to be validated:

(Layout folder):

- activity\_edit\_favorites.xml
- branch\_locator.xml
- editfavorites\_listitems.xml
- footerpopuplistitems.xml
- foreground\_dispatch\_success.xml
- list\_row.xml
- loginactivity.xml
- menu\_footer\_popup.xml
- options\_popup.xml
- optionspopuplistitems.xml
- seekbar.xml
- sending\_funds.xml
- simple\_spinner\_dropdown\_item.xml
- simple\_spinner\_item.xml
- topmenu\_layout.xml
- userdetail\_layout.xml
- userwelcome\_layout.xml

(Layout-large):

- foreground\_dispatch\_success.xml
- sending\_funds.xml

(Layout-normal)

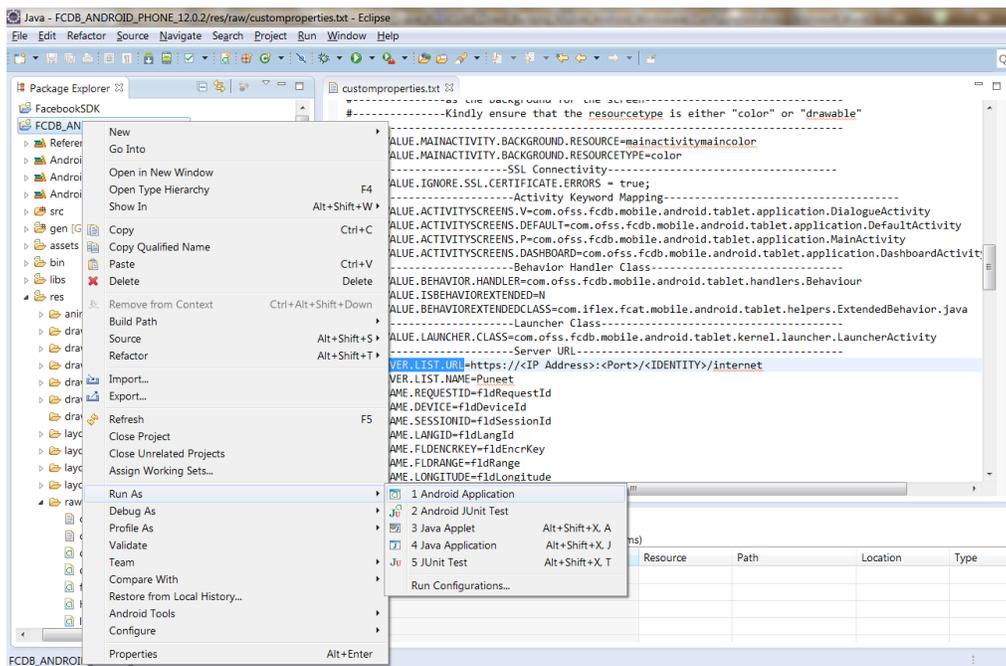
- foreground\_dispatch\_success.xml
- sending\_funds.xml

(Layout-xlarge)

- foreground\_dispatch\_success.xml

- sending\_funds.xml

15. Open the AppUrl.java file. It contains a variable by the name “APP\_SERVER\_LIST\_URL”. Enter the server url against this variable.
16. Create a relevant Emulator using the AVD Manager with Target Android 2.2 or above. The detailed method of creating an AVD can be found at the url: <http://developer.android.com/tools/devices/managing-avds.html>
17. Right-click the FCDB\_ANDROID\_PHONE\_12.0.3 project, goto Run As-> Android Application to run it onto the AVD created.



---

## 6. Configuring Workspace for Android Tablet

1. Setting up the project for Android Tablet is similar to setting up the project for Android Phone Project (See Section 5 of this document for more information).
2. Download the project FCDB\_ANDROID\_TAB\_12.0.3.zip from svn workspace and proceed as mentioned for Phones.
3. If you have already setup the project for Android Phone, *you need not setup the Library projects again as they are common to both phone and tablets.*