

Lab Assignment #2

Due Date: Mid-night (11.59 pm) Thursday, 7th Oct.

Marks/Weightage: 30/10%

End Date: Mid-night (11.59 pm) Sunday, 10th Oct. with 25% penalty. No Exceptions.

Purpose: The purpose of this lab assignment is to:

- Use Android UI controls to develop an interactive mobile application

References: Textbook, ppt slides, class examples, and Android tutorials (<http://developer.android.com/training/basics/firstapp/creating-project.html>). This material provides the necessary information that you need to complete the exercises.

Be sure to read the following general instructions carefully:

- This assignment must be completed individually by all the students.
- You will have to **demonstrate your solution in a scheduled lab session** and upload the solution on eCentennial through the **assignment link under Assessments**.

Android Workspace/Project Naming rules:

You must name your Android Studio workspace and project according to the following rule: **yourfullname_COMP304SectionNumber_Labnumber_ExerciseNumber**.

Example: JohnSmith_COMP304Sec003_Lab2_Ex1

New Project

Empty Activity

Creates a new empty activity

Name: yourfullname_COMP304Sec003_Lab02_Ex01

Package name: com.example.yourfullname_comp304sec003_lab02_ex01

Save location: D:\COMP304\Assignments\yourfullname_COMP304Sec003_Lab02_Ex01

Language: Java

Minimum SDK: API 29: Android 10.0 (Q)

i Your app will run on approximately 8.2% of devices.
Help me choose

Previous Next Cancel Finish

Submission rules:

Submit your projects as **zip files** that are named according to the following rule:

yourfullname_COMP304SectionNumber_Labnumber_ExerciseNumber.zip

Example: JohnSmith_COMP304Sec003_Lab2_Ex1.zip

Exercise 01:

LeaseOrRentHome Inc. helps its clients to find the best option for a home. Your team is assigned to develop an Android application based on the following specifications:

- a) The **main screen** will display the company logo and a button “**Enter**”. [2 marks]
- b) The **second screen** allows the potential customer to choose the **home types**: [6 marks]
 - apartment
 - detached home
 - semi-detached home
 - condominium
 - town house

Use an **options Menu control** to implement the selection of home types. Display a user-friendly screen with available **homes** whenever the user selects a home type from the menu. For example, if the user selects apartment home type, the next screen will display the available apartments (address, rent price, and image).

Use **check boxes** to select the apartments that you want to visit (virtually or physically).

The user may use the **menu control** to choose another home type, and so on.

- c) The check-out screen displays the selected homes and corresponding addresses, and prices. Use a radio group for listing selected homes. The user can now choose the home (assuming has visited all selected homes). [6 marks]
- d) The next screen prompts the user with **payment option** (cash, credit card, debit card). Use a group of **radio buttons** to select the payment method. [6 marks]
- e) The **last screen** asks the user to enter credit/debit card information if the user chooses either of these payment methods. Use *EditText* controls and other GUI elements to allow the user to enter **customer’ information**: *full name, credit/debit card number*. The rest of the fields will be **different for each student**. For example, you may create fields for *favorite sport, favorite team, favorite food*, etc. Create 2-3 fields named as mentioned above. Provide **validation** for these entries using the proper attributes/methods/constructor for each GUI control. [6 marks]

- f) Use **Application preferences** for storing user selections as the user navigates through the various screens of the application. [2 marks]

Use *TextView* objects to display information as needed. Use styles and themes to create a nice look and feel of your app. Use drawable objects to display the logo for the company, home types, homes, etc.

Evaluation:

Activities: Main activity, Home types menu, activities (one for each home type), check-out activity, payment activity, final order information activity (all working, proper naming of activities, variables, and methods. Provide comments). Provide an explanation when asked during the demonstration of the app.	50%
Event Handling (proper event handlers)	25%
UI friendliness (proper layout, controls, styles, and themes)	15%
Declaring resources in proper resource files	5%
Innovative features/ effective way of coding	5%
Total	100%