

CSC207 Lab 8 — Android Software Development

1 Getting credit for this lab

Due date: Monday 16 March by 9:00pm

To earn the lab mark, complete the lab *with your team* on your own time and submit as specified below. There will be office hours during the lab timeslots, so go to BA3185 if you have questions or would like help.

2 Overview

This week, you are going to implement an Android application.

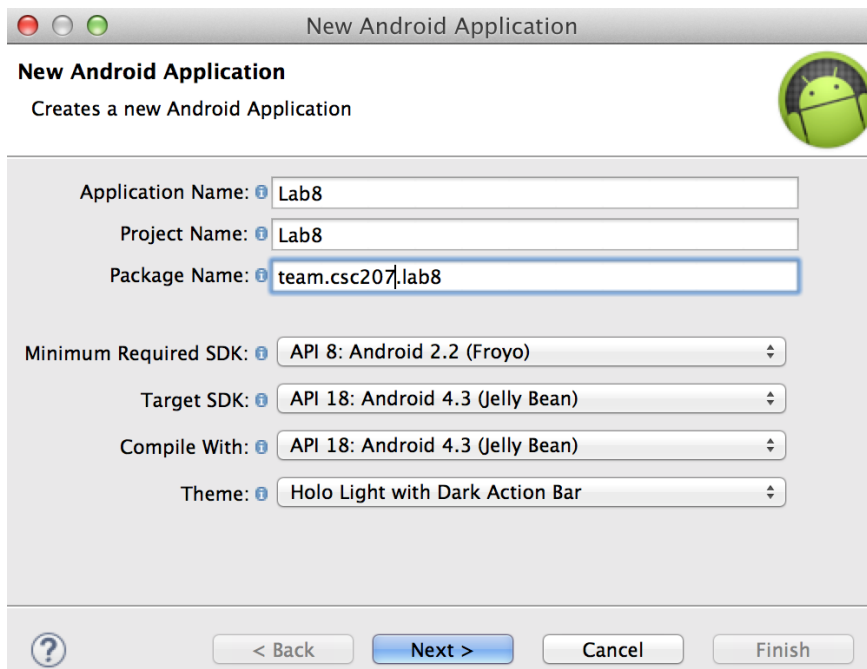
If you plan to use your own computer for Phase III, then you may want to use your computer to complete this lab as well. On the Software webpage, there are instructions for installing Android.

It is very important to check regularly to make sure your Android application runs on CDF. See the “Android on CDF” and “Android on Your Computer” slides for information on creating an Android project and for details on the project settings.

In the following lab instructions, we refer to the four members of your team as Teammates A, B, C, and D. Although it is possible to complete these four tasks in sequence independently, it is best to sit together while you complete the lab (using different computers), so that you are all familiar with the four tasks and so that you can help each other.

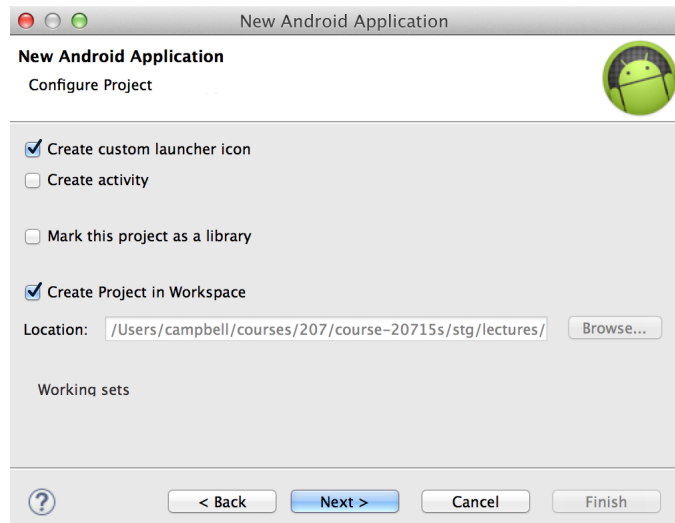
3 Teammate A: Create an Android project

With the Eclipse workspace set to the team’s lab8 directory, Teammate A should create a new Android project with *exactly* these settings ¹:



¹If you are working on your own computer and you don’t see API 18 as an option, then you may need to install it. See the “Android on Your Computer” slides on the Lectures webpage.

Unselect “Create activity”, click **Next**, and then click **Finish**:



Commit the Android project (everything except for the contents of the `bin` directory, the `gen` directory, and hidden files).

4 Teammate B: Adding two Activitys, an EditText, and a Button

- In directory `lab8` in your local copy of your team’s repository, run `svn update`.
- Add two new activities to your project named `EntryActivity` (select the launch activity option) and `DisplayActivity` (on CDF choose the activity type Blank, and on your own laptop choose activity type Empty).
- In `res -> layout -> activity_entry.xml`, using the Graphical Layout, add a new `EditText` (text entry field) and a new `Button`.

Commit the Android project (everything except for the contents of the `bin` directory, the `gen` directory, and hidden files).

5 Teammate C: Update the xml

- In directory `lab8` in your local copy of your team’s repository, run `svn update`.
- In `res -> values -> strings.xml`, add a new string named `submit` with the value `Submit`.
- In `activity_entry.xml`, change the ID of the `EditText` as follows:
`android:id="@+id/data_field"`
- In `activity_entry.xml`, update the XML for the button by changing the button’s text to:
`android:text="@string/submit"`
- In `activity_entry.xml`, update the XML for the button by adding:
`android:onClick="submitData" />`

(Note: the code won’t compile, since method `submitData` doesn’t exist yet.)

Commit the Android project (everything except for the contents of the `bin` directory, the `gen` directory, and hidden files).

6 Teammate D: Add the method for the button action

- In directory lab8 in your local copy of your team's repository, run `svn update`.
- In `EntryActivity.java`, add this method:

```
public void submitData(View view) {  
  
    // Specifies the next Activity to move to: DisplayActivity.  
    Intent intent = new Intent(this, DisplayActivity.class);  
  
    // Gets the data from the EditText field.  
    EditText dataField = (EditText) findViewById(R.id.data_field);  
    String data = dataField.getText().toString();  
  
    // Passes the String, data, to DisplayActivity.  
    intent.putExtra("dataKey", data);  
    startActivity(intent); // Starts DisplayActivity.  
}
```

- In `res -> layout -> activity_display.xml`, set the `id` attribute of the `TextView` to:
`android:id="@+id/submitted_data"`
- In `res -> layout -> activity_display.xml`, change the `text` attribute of the `TextView` to:
`android:text="@string/submitted_data" />`
- In `DisplayActivity.java`, add this code to the end of method `onCreate`:

```
Intent intent = getIntent();  
String data = (String) intent.getSerializableExtra("dataKey");  
TextView newlySubmitted = (TextView) findViewById(R.id.submitted_data);  
newlySubmitted.setText(data);
```

- Run the application (using the emulator). Test the app to make sure it runs without error and works as expected.

Commit the Android project (everything except for the contents of the `bin` directory, the `gen` directory, and hidden files).

7 Teammates A, B, C: Run the app

Run `svn update` and launch the application.