

# IT – Entrepreneurship

## Exploring Activities



# The MainActivity's UI



# Create a linear layout

```
<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    xmlns:tools="http://schemas.android.com/tools"  
    android:layout_width="match_parent"  
    android:layout_height="match_parent"  
    android:orientation="horizontal" >  
</LinearLayout>
```



# Add a text field

```
<EditText android:id="@+id/edit_message"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:hint="@string/edit_message" />
```



# Add String Resources

- By default, your Android project includes a string resource file at `app/res/values/strings.xml`
- Add a new string named "edit\_message" and set the value to "Enter a message."

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <string name="app_name">My First App</string>
    <string name="edit_message">Enter a message</string>
    <string name="button_send">Send</string>
    <string name="menu_settings">Settings</string>
    <string name="title_activity_main">MainActivity</string>
</resources>
```



# Add a button

```
<Button  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="@string/button_send" />
```



# Final XML

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="horizontal">
    <EditText android:id="@+id/edit_message"
        android:layout_weight="1"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:hint="@string/edit_message" />
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/button_send" />
</LinearLayout>
```



# Respond to the Send Button

```
<Button  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="@string/button_send"  
    android:onClick="sendMessage" />
```





# Building an Intent

- Open the MainActivity class
- and add the corresponding method

```
/** Called when the user clicks the Send button */
```

```
public void sendMessage(View view) {
```

```
    // Do something in response to button
```

```
    Intent intent = new Intent(this, DisplayMessageActivity.class);  
    EditText editText = (EditText) findViewById(R.id.edit_message);  
    String message = editText.getText().toString();  
    intent.putExtra(EXTRA_MESSAGE, message);  
}
```



# Starting another activity

- To start an activity, call `startActivity()` and pass it your Intent.
- The system receives this call and starts an instance of the Activity specified by the Intent.



# Starting another activity

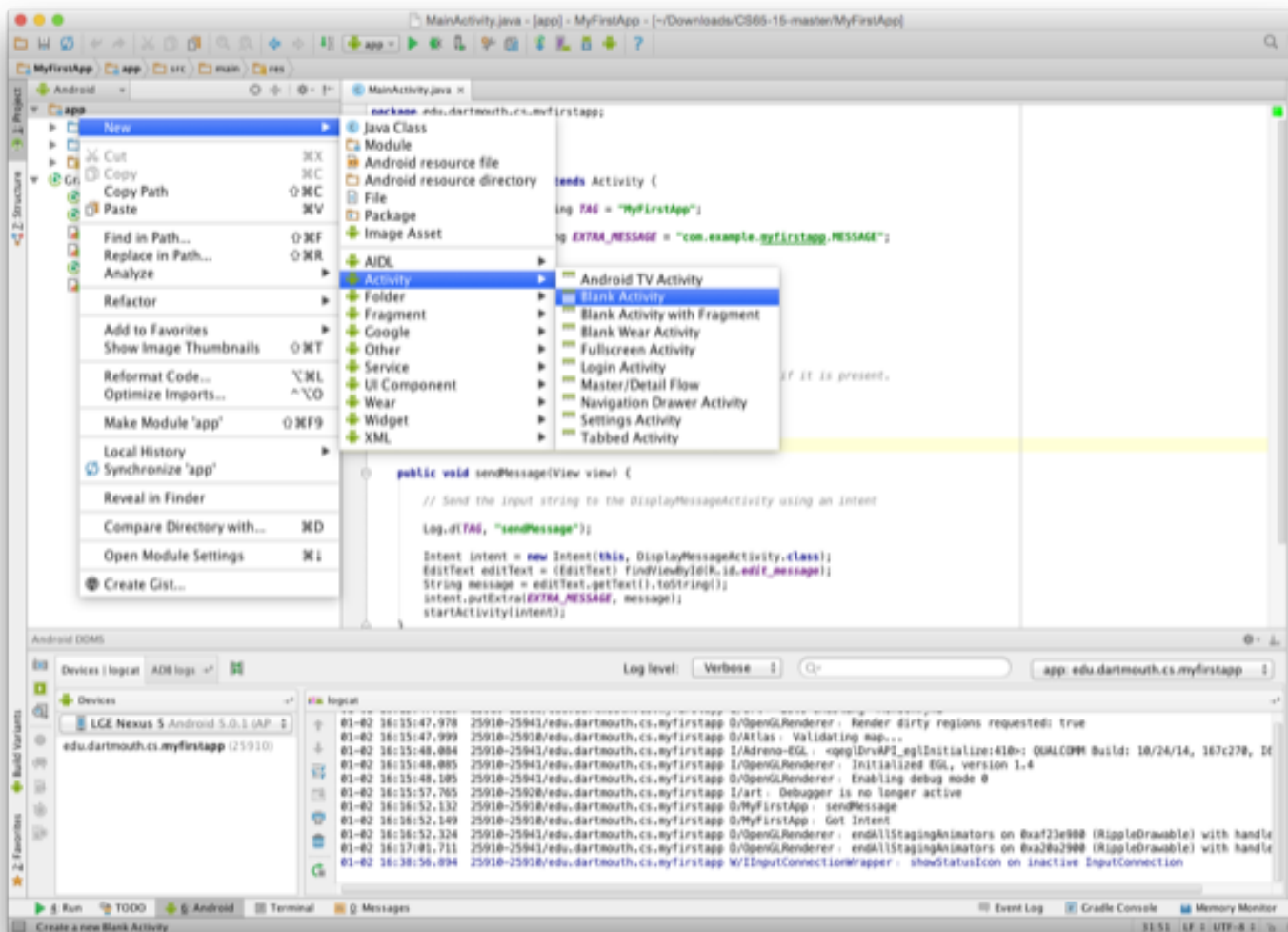
// Send the input string to the DisplayMessageActivity using an intent

```
Intent intent = new Intent(this, DisplayMessageActivity.class);  
EditText editText = (EditText) findViewById(R.id.edit_message);  
String message = editText.getText().toString();  
intent.putExtra(EXTRA_MESSAGE, message);  
startActivity(intent);
```



# DisplayMessageActivity

- create a new blank activity using Android Studio



# Add the title string

```
<resources>
```

```
...
```

```
  <string name="title_activity_display_message">My Message</string>  
</resources>
```



# Add it to the manifest

```
<application ... >  
  ...  
  <activity  
    android:name="edu.dartmouth.cs.myfirstapp.DisplayMessageActivity"  
    android:label="@string/title_activity_display_message"  
    android:parentActivityName="edu.dartmouth.cs.myfirstapp.MainActivity" >  
    <meta-data  
      android:name="android.support.PARENT_ACTIVITY"  
      android:value="edu.dartmouth.cs.myfirstapp.MainActivity" />  
    </activity>  
</application>
```



# Receive the Intent

- In the DisplayMessageActivity class's onCreate() method, get the intent and extract the message delivered by MainActivity

```
// Get the message from the intent
Intent intent = getIntent();
String message = intent.getStringExtra(MainActivity.EXTRA_MESSAGE);
```



# Display the Message

- To show the message on the screen, create a TextView widget and set the text using setText().
- `textView.setText(message);`





# Application Logging using Log.d()

- You can put print or log statements your code.
- You might want to confirm for example that an intent fired by one activity is received by another.
- We can use Log.d() to do this.
- We have to first create a TAG in our code and then call Log.d() with the tag.

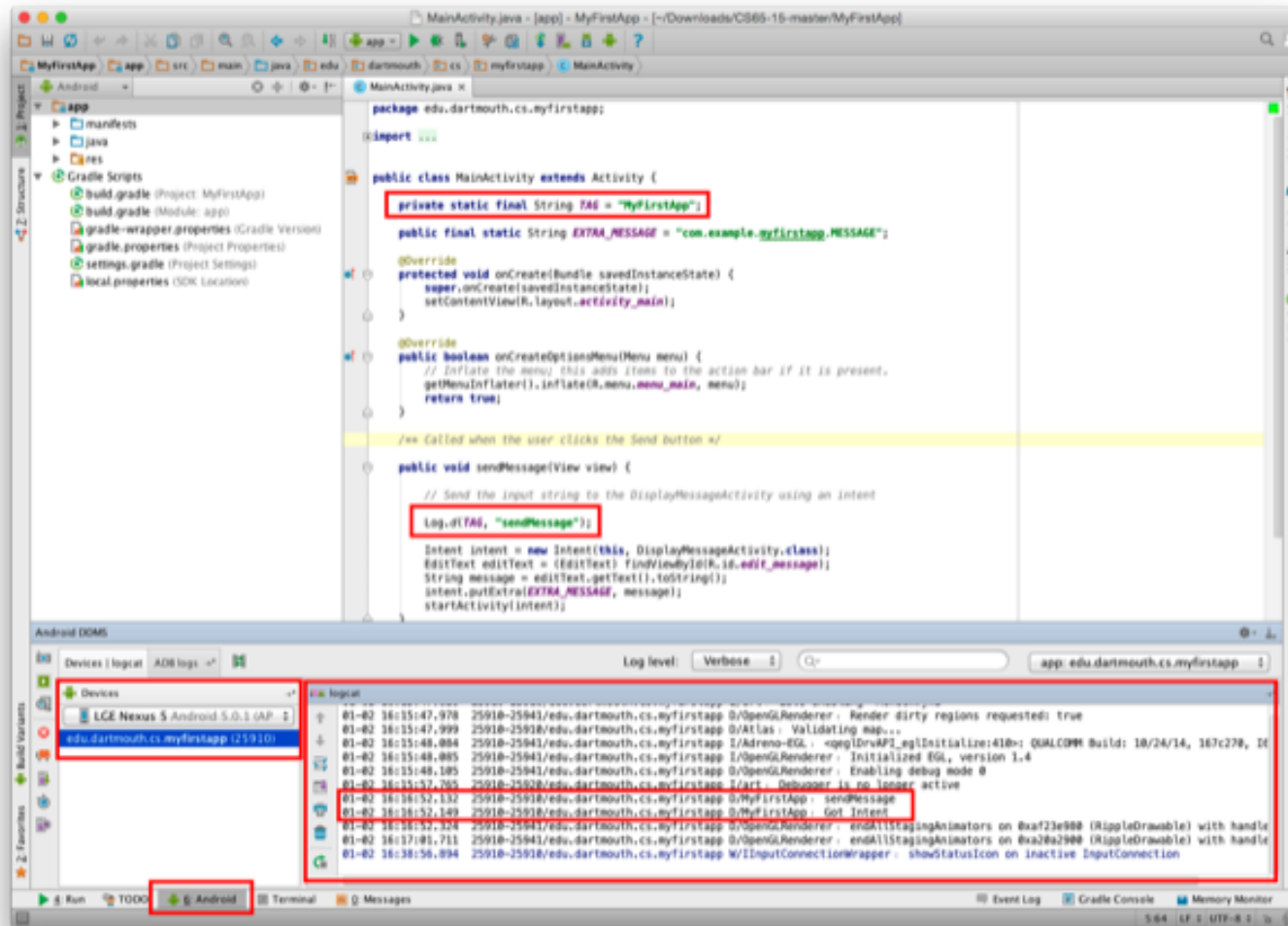


# Application Logging using Log.d()

- `import android.util.Log;`
- `private static final String TAG = "MyFirstApp";`
- `Log.d(TAG, "Got Intent");`



# Application Logging using Log.d()



# Reference

- <http://www.cs.dartmouth.edu/~campbell/cs65/lecture03/lecture03.html>

