

Statistics

<http://www.statista.com/topics/840/smartphones/>

<http://www.statista.com/topics/876/android/>

<http://www.statista.com/statistics/271774/share-of-android-platforms-on-mobile-devices-with-android-os/>

Resources

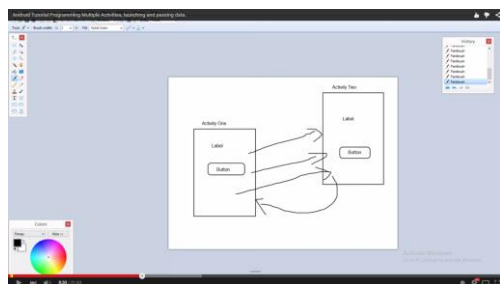
- Google
- MOOCs (eg Udacity, Coursera)
- <https://www.thenewboston.com/forum/> (eg <https://www.youtube.com/watch?v=QAbQgLGKd3Y>)
- <https://www.youtube.com/channel/UCfQkNueQenRQQ1NnCB6e6eQQ> PRABEESH R K Youtube Channel
- SQLite <https://www.youtube.com/watch?v=LZ8kJg4Pg4Y> PRABEESH R K Youtube Channel
- <http://www.vogella.com/tutorials/AndroidIntent/article.html>
- <https://parse.com/>
- [Multiple Activities https://www.youtube.com/watch?v=ViwazAAR-vE](https://www.youtube.com/watch?v=ViwazAAR-vE)
- <https://www.youtube.com/watch?v=xO15vJfaRIU> Login – Register – Main activities

Free eBooks and Additional Resources

- http://www.techotopia.com/index.php/Android_Studio_Development_Essentials
- <http://www.onlineprogrammingbooks.com/android/>

Getting started

- Download Java Development Kit – JDK (Android uses Java)
- Set your system variable to point to path containing JDK (Start - Control Panel – Advanced Settings)
- Download and install Android Studio



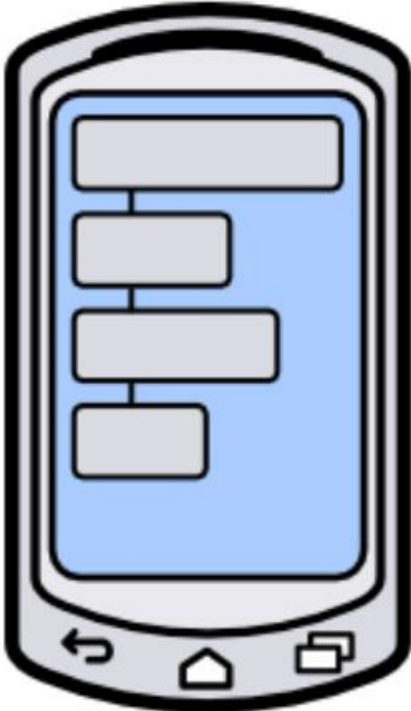
Beginning New Project

- Sketch your app (planning and design phase is important)
- Begin Android Studio
- Think of an activity as a screen

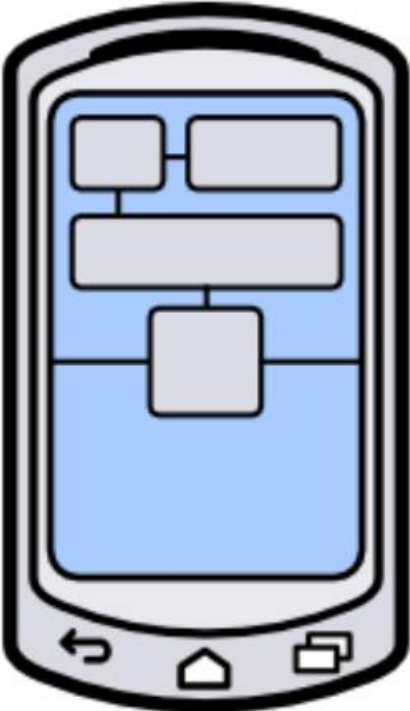
Press Tab to select predictive commands offered by IDE

Press Alt and Enter to add the relevant Import Commands to your source code to import the necessary classes

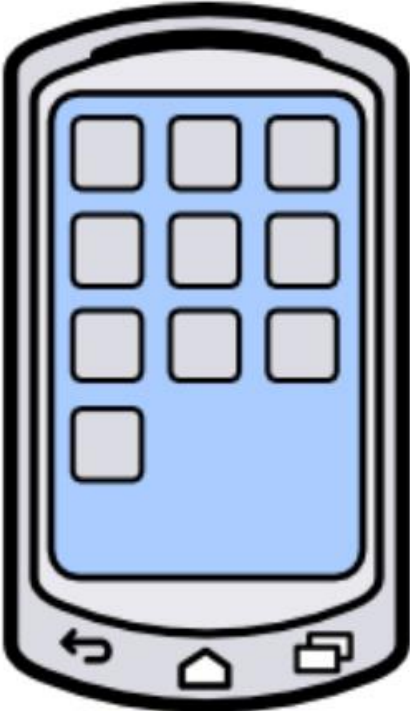
Different layout types



Linear Layout

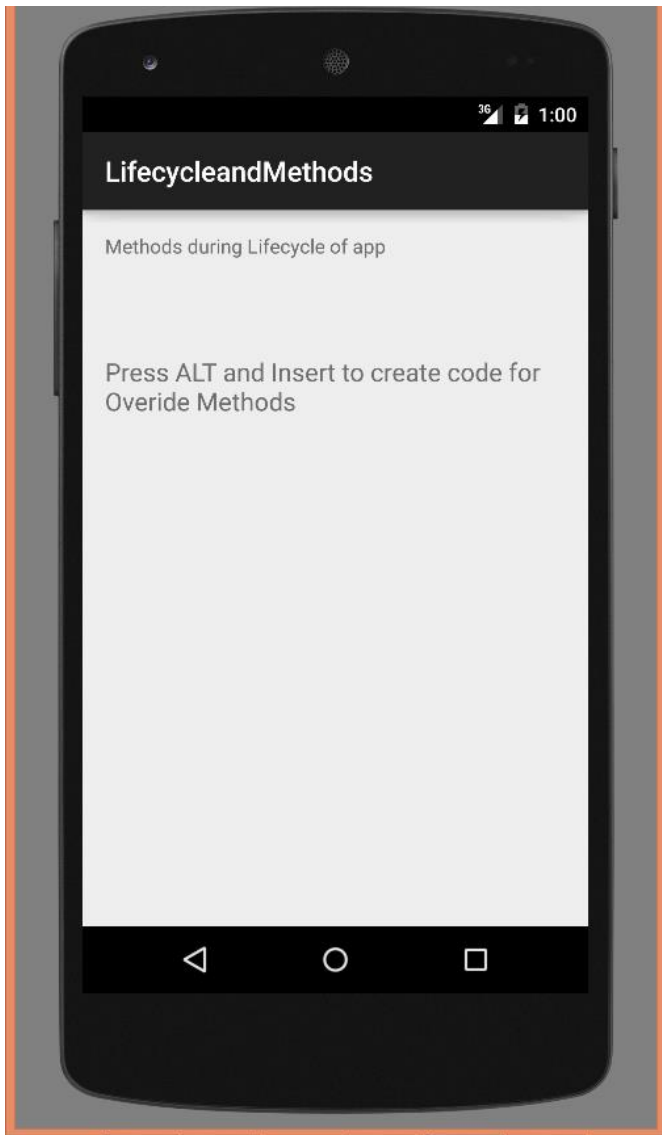


Relative Layout



List/Grid Layout

Lifecycle and Override Methods

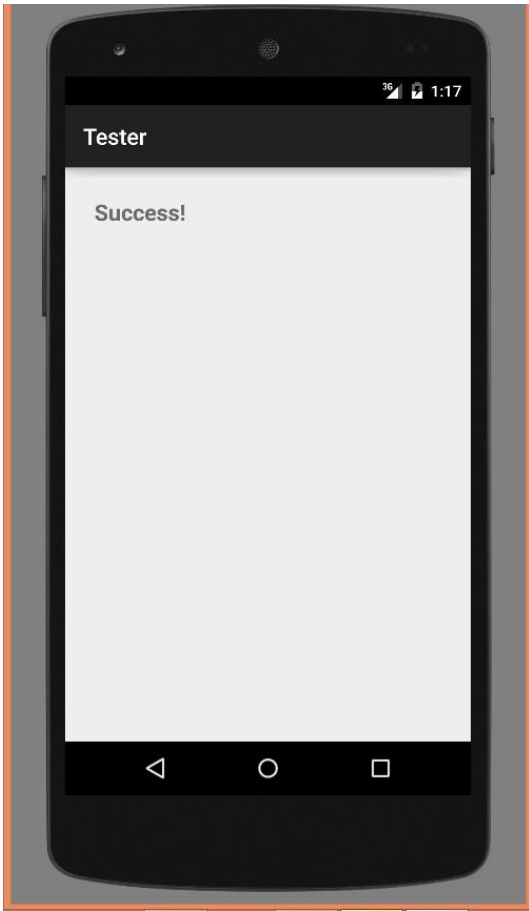


```
public class MainActivity extends ActionBarActivity {  
    // Press ALT + INSERT key and select Override Methods to construct Method code  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_main);  
    }  
  
    @Override  
    protected void onStart() {  
        super.onStart();  
    }  
  
    @Override  
    protected void onPause() {  
        super.onPause();  
    }  
}
```

Exporting your APP – *.apk files

Download the apk files and use the following password to open source code in Android Studio

KeyStore and Key Passwords respectively for apk files : ***csn1234*** and ***csn12345***



activity_test.xml

```
<RelativeLayout 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:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    android:paddingBottom="@dimen/activity_vertical_margin" tools:context=".TestActivity">
    <TextView
        android:id="@+id/messageTextView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/hello_world"
        android:padding="10dp"
        android:textSize="20sp"
        android:textStyle="bold"
        tools:context=".TestActivity" />
```

</RelativeLayout>

TestActivity.java

```
package com.raymundoconnor.tester;

import android.support.v7.app.ActionBarActivity;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;
import android.widget.TextView;

public class TestActivity extends ActionBarActivity {

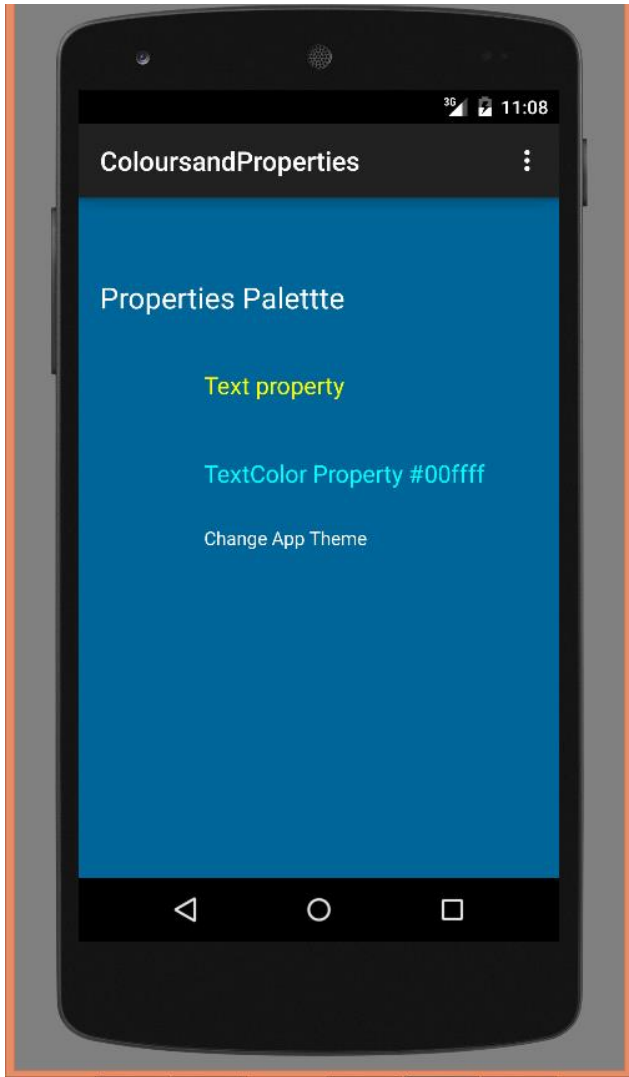
    @Override
    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_test);

        TextView message = (TextView)findViewById(R.id.messageTextView);
        message.setText("Success!");

    }
}
```

Drag widgets onto Layout and change properties (eg ID, Text, TextColor, ..) in the properties palette as shown.



```
<RelativeLayout 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:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    android:paddingBottom="@dimen/activity_vertical_margin" tools:context=".MainActivity"
    android:background="#006699"
    >
```

```
<TextView
    android:layout_width="wrap_content"
```

```
android:layout_height="wrap_content"
android:textAppearance="?android:attr/textAppearanceLarge"
android:text="Properties Palettte"
android:id="@+id/textView"
android:layout_alignParentTop="true"
android:layout_alignParentLeft="true"
android:layout_alignParentStart="true"
android:layout_marginTop="44dp"
android:textColor="#ffffff" />
```

<TextView

```
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:textAppearance="?android:attr/textAppearanceMedium"
android:text="Text property"
android:id="@+id/textView2"
android:textColor="#ffff00"
android:layout_below="@+id/textView"
android:layout_alignRight="@+id/textView"
android:layout_alignEnd="@+id/textView"
android:layout_marginTop="39dp" />
```

<TextView

```
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:textAppearance="?android:attr/textAppearanceMedium"
android:text="TextColor Property #00ffff"
android:id="@+id/textView3"
android:layout_below="@+id/textView2"
android:layout_alignLeft="@+id/textView2"
android:layout_alignStart="@+id/textView2"
```



```
android:layout_marginTop="42dp"
```

```
android:textColor="#00ffff" />
```

```
<TextView
```

```
    android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"
```

```
    android:textAppearance="?android:attr/textAppearanceSmall"
```

```
    android:text="Change App Theme"
```

```
    android:id="@+id/textView4"
```

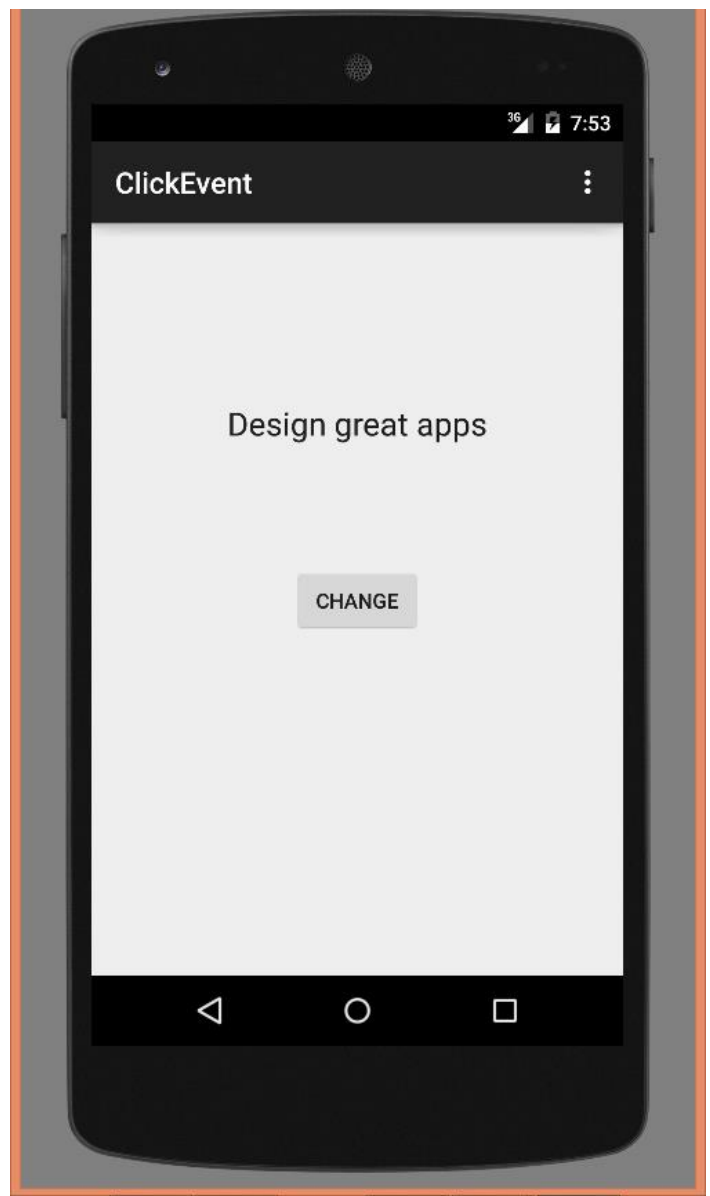
```
    android:layout_centerVertical="true"
```

```
    android:layout_alignLeft="@+id/textView3"
```

```
    android:layout_alignStart="@+id/textView3"
```

```
    android:textColor="#ffffff" />
```

```
</RelativeLayout>
```



```

public class MainActivity extends ActionBarActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        Button buttonLabel = (Button)findViewById(R.id.buttonLabel);

        buttonLabel.setOnClickListener(
            new Button.OnClickListener(){
                public void onClick(View v){
                    TextView TextviewLabel = (TextView) findViewById(R.id.TextviewLabel);
                    TextviewLabel.setText("Design great apps");
                }
            }
        );
    }
}

```