

CS 525M Mobile and Ubiquitous Computing

Tutorial 8: Basic Overview of an App
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Tutorial 8: Basic Overview of an App

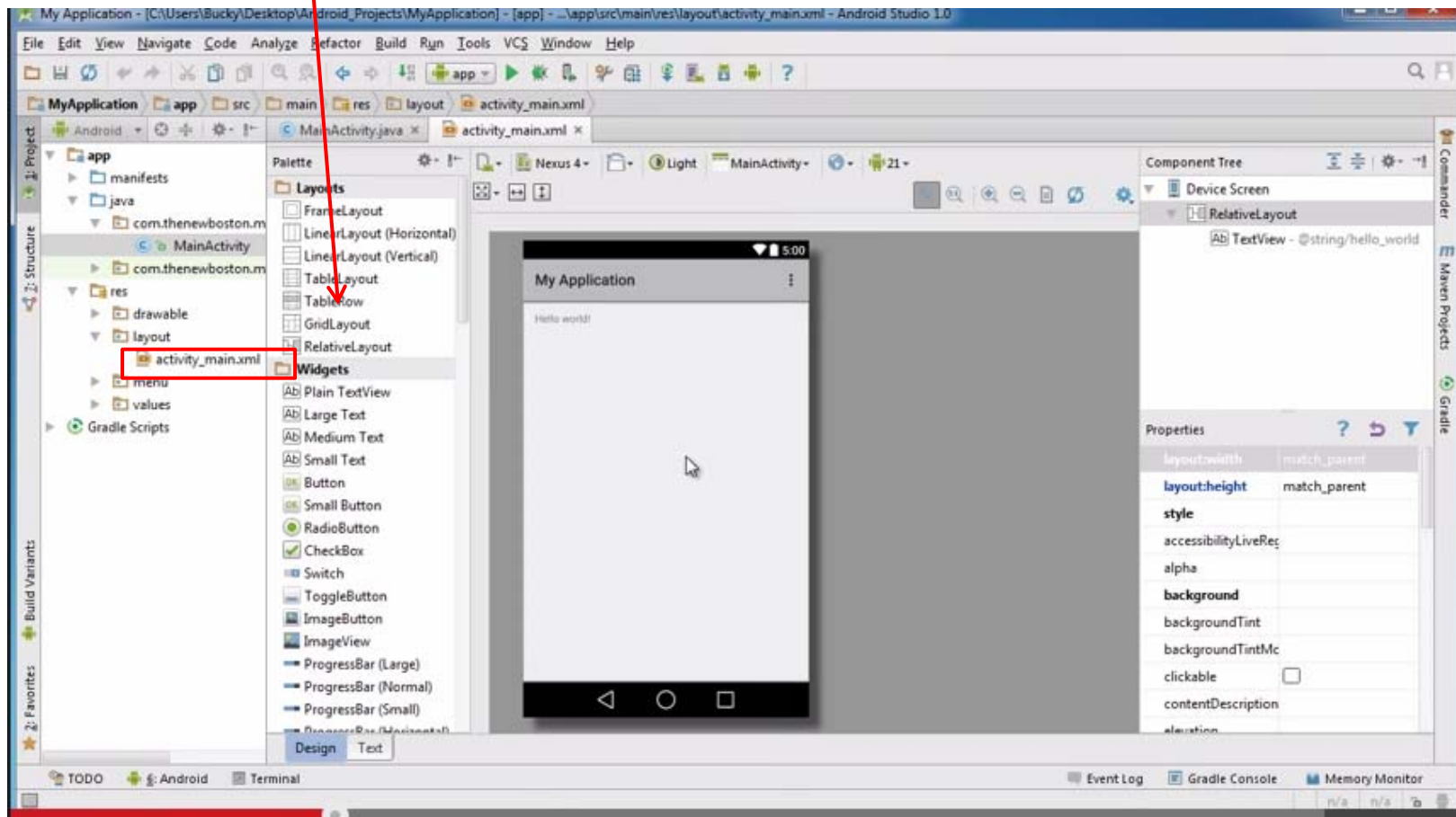
- Tutorial 8: Basic Overview of an App [11:36 mins]
 - <https://www.youtube.com/watch?v=9l1lfWaiHPg>

- Main topics
 - Introduces main files of Android App
 - Activity_main.xml
 - MainActivity.java
 - AndroidManifest.xml
 - How to work with these files within Android Studio
 - Editing files using either drag-and-drop interface or XML
 - Flow of basic app

Activity_main.xml



- XML file used to design screen layout, buttons, etc
- **Widgets:** elements that can be dragged onto activity (screen)



MainActivity.java



- Used to define actions taken when button clicked (intelligence)

```
package com.thenewboston.myapplication;

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

public class MainActivity extends ActionBarActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        // Inflate the menu; this adds items to the action bar if it is present.
        getMenuInflater().inflate(R.menu.menu_main, menu);
        return true;
    }

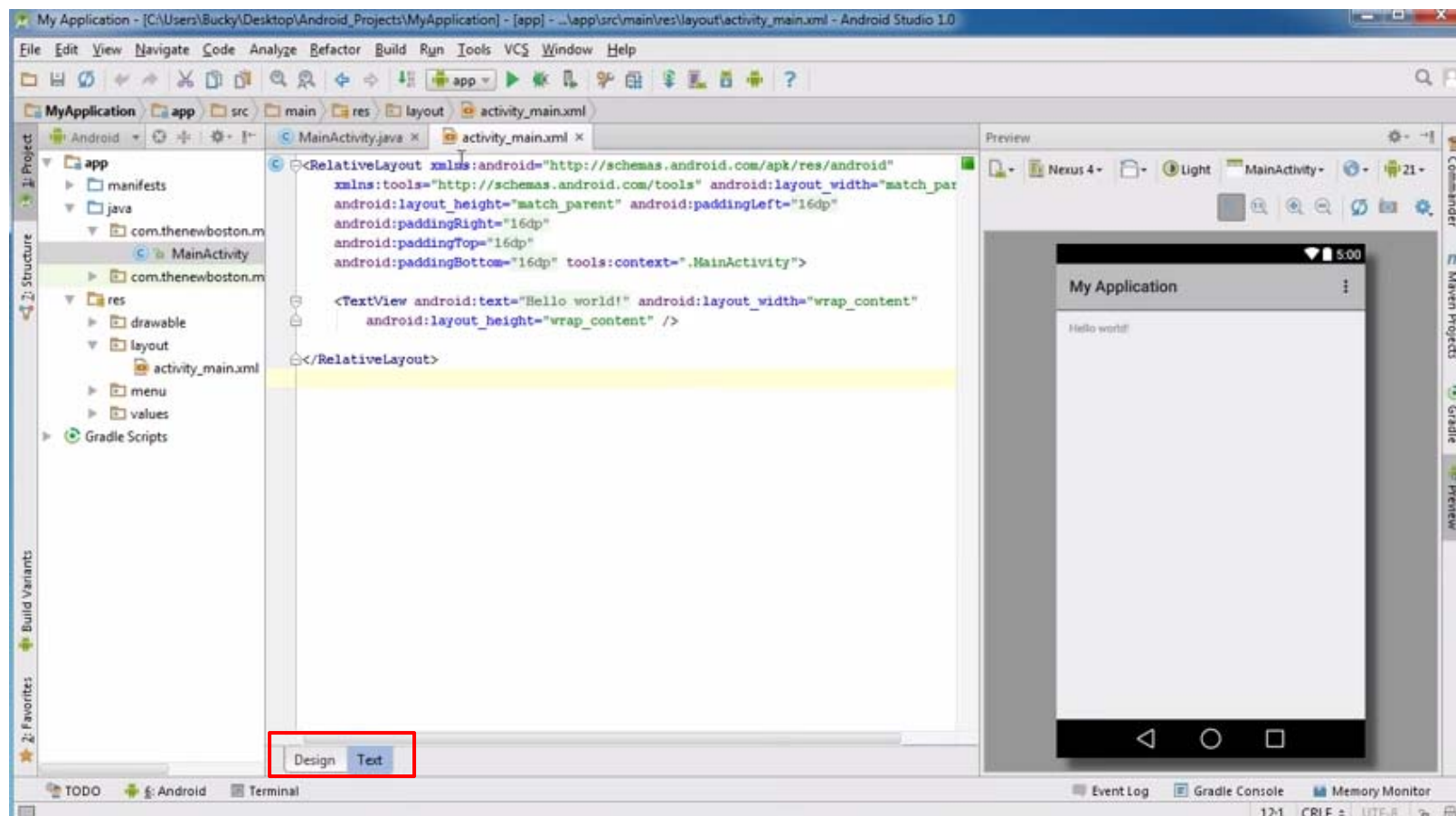
    @Override
    public boolean onOptionsItemSelected(MenuItem item) {
        // Handle action bar item clicks here. The action bar will
        // automatically handle clicks on the Home/Up button, so long
        // as you specify a parent activity in AndroidManifest.xml.
        int id = item.getItemId();

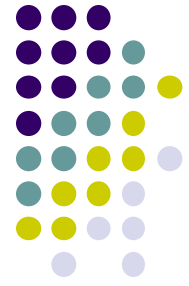
        //noinspection SimplifiableIfStatement
    }
}
```



Activity_main.xml: Text View

- **Design View:** Drag-and-drop screen (Activity) design
- **Text view:** Directly edit XML file defining screen





AndroidManifest.xml

- App's starting point (a bit like main() in C)
- All activities (screens) are listed in AndroidManifest.xml
- Activity with tag "LAUNCHER" is launched first (starting point)

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.thenewboston.myapplication" >

    <application
        android:allowBackup="true"
        android:icon="@drawable/ic_launcher"
        android:label="My Application"
        android:theme="@style/AppTheme" >
        <activity
            android:name=".MainActivity"
            android:label="My Application" >
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>
</manifest>
```