

Android programming

- **Explore Android studio**
- **Write Android applications**


Android Virtual Device (AVD) manager













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HelloWorld app src main res layout activity_main.xml

Android Virtual Device Manager

Your Virtual Devices
Android Studio

Type	Name	Resolution	API	Target	CPU/ABI	Size on Disk	Actions
	Nexus 4 API17	768 × 1280: xhdpi	17	Google APIs	arm	321 MB	  
	Nexus 4 API19	768 × 1280: xhdpi	19	Google APIs (x86 System Image)	x86	1 GB	  
	Nexus 5 API 22	1080 × 1920: xxhdpi	22	Android 5.1.1	arm	1 GB	  

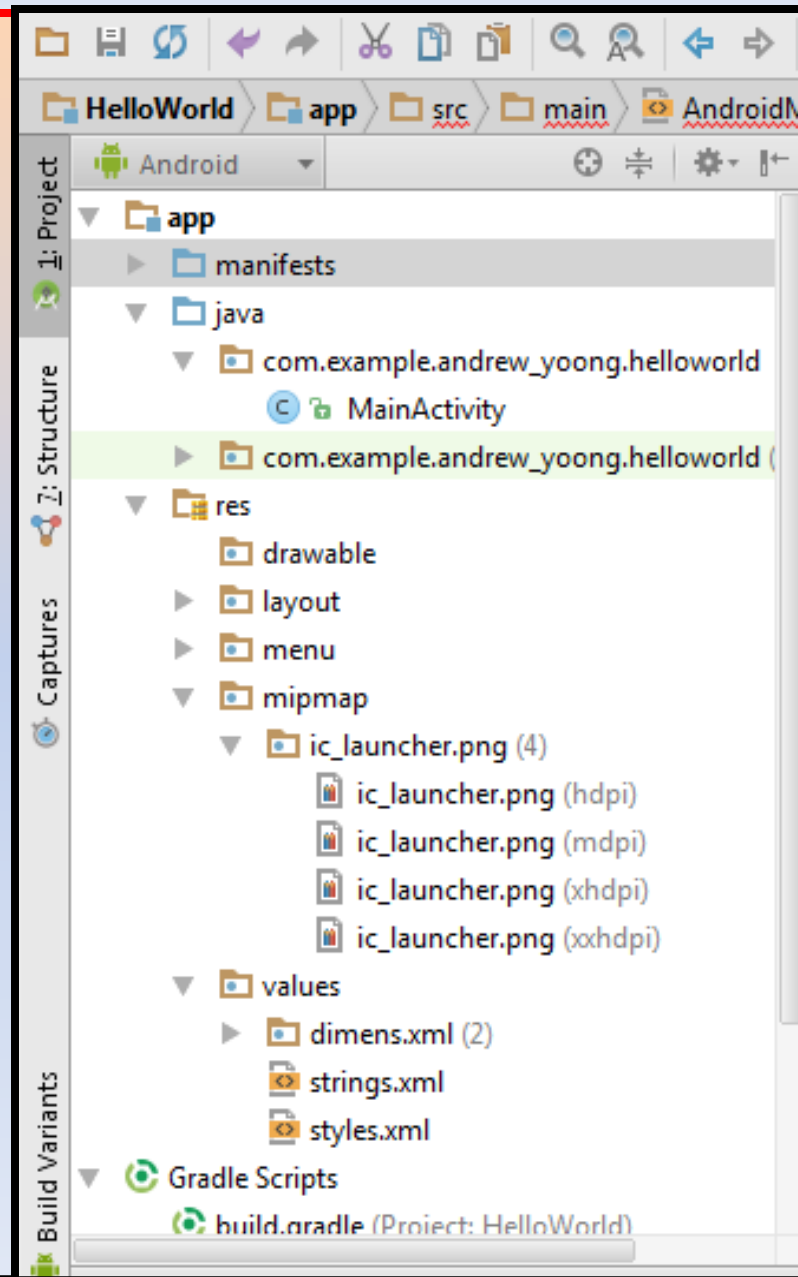
 Create Virtual Device...



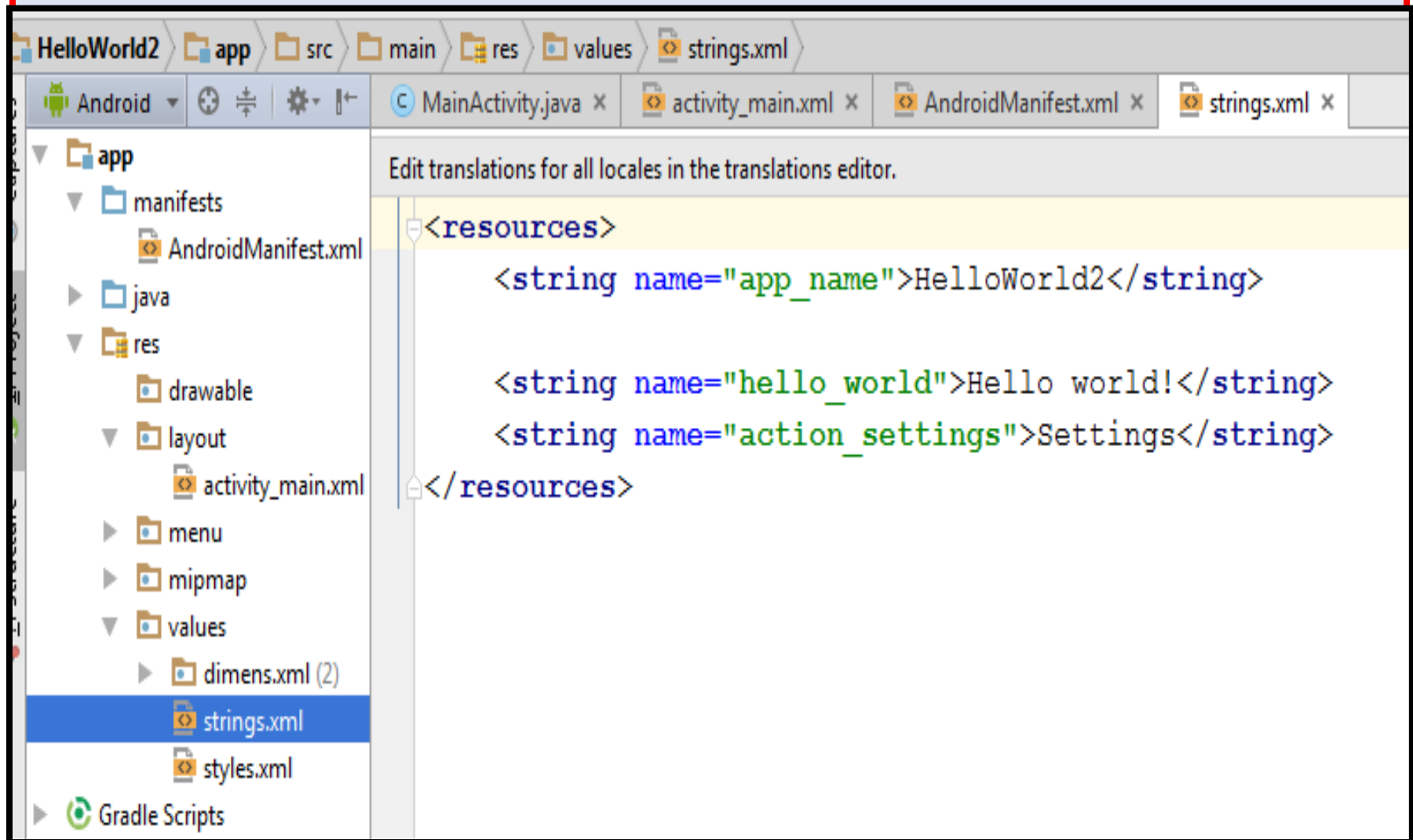
Manifest.xml

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.andrew_yoong.helloworld" >
    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="HelloWorld2"
        android:theme="@style/AppTheme" >
        <activity
            android:name=".MainActivity"
            android:label="@string/app_name" >
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>
</manifest>
```

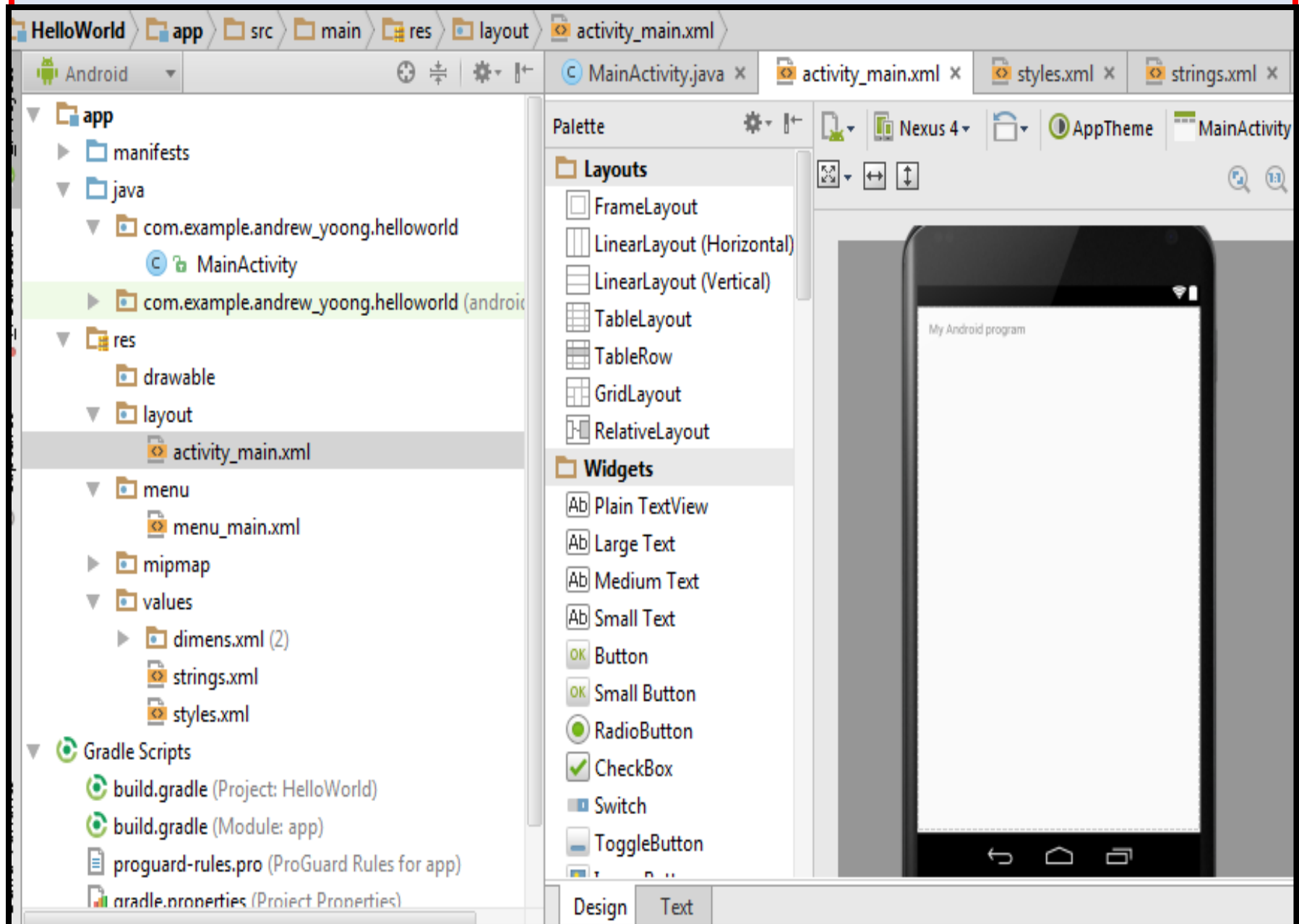
Manifest.xml

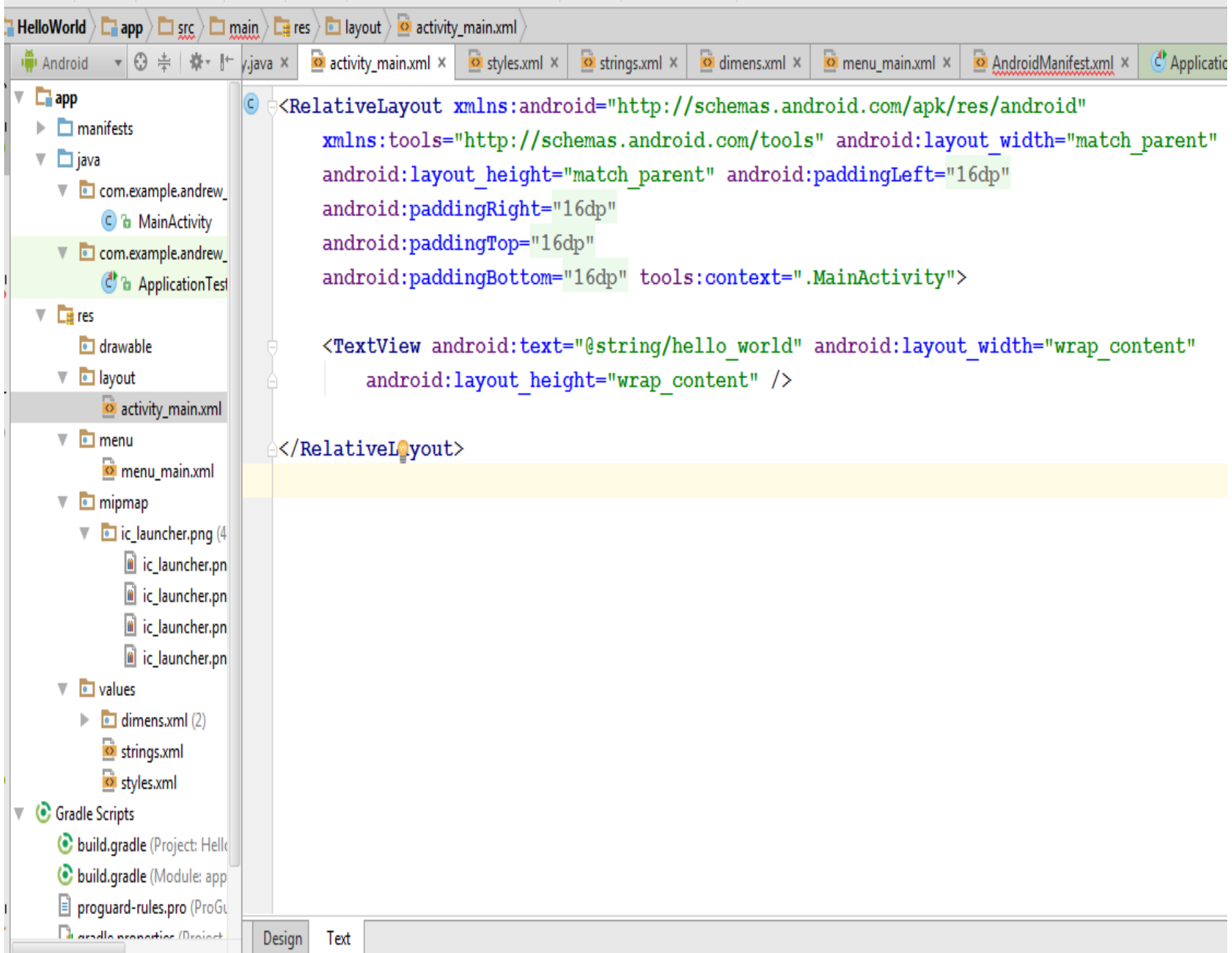


res/values/strings.xml



res\layout\activity_main.xml





```
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();
```

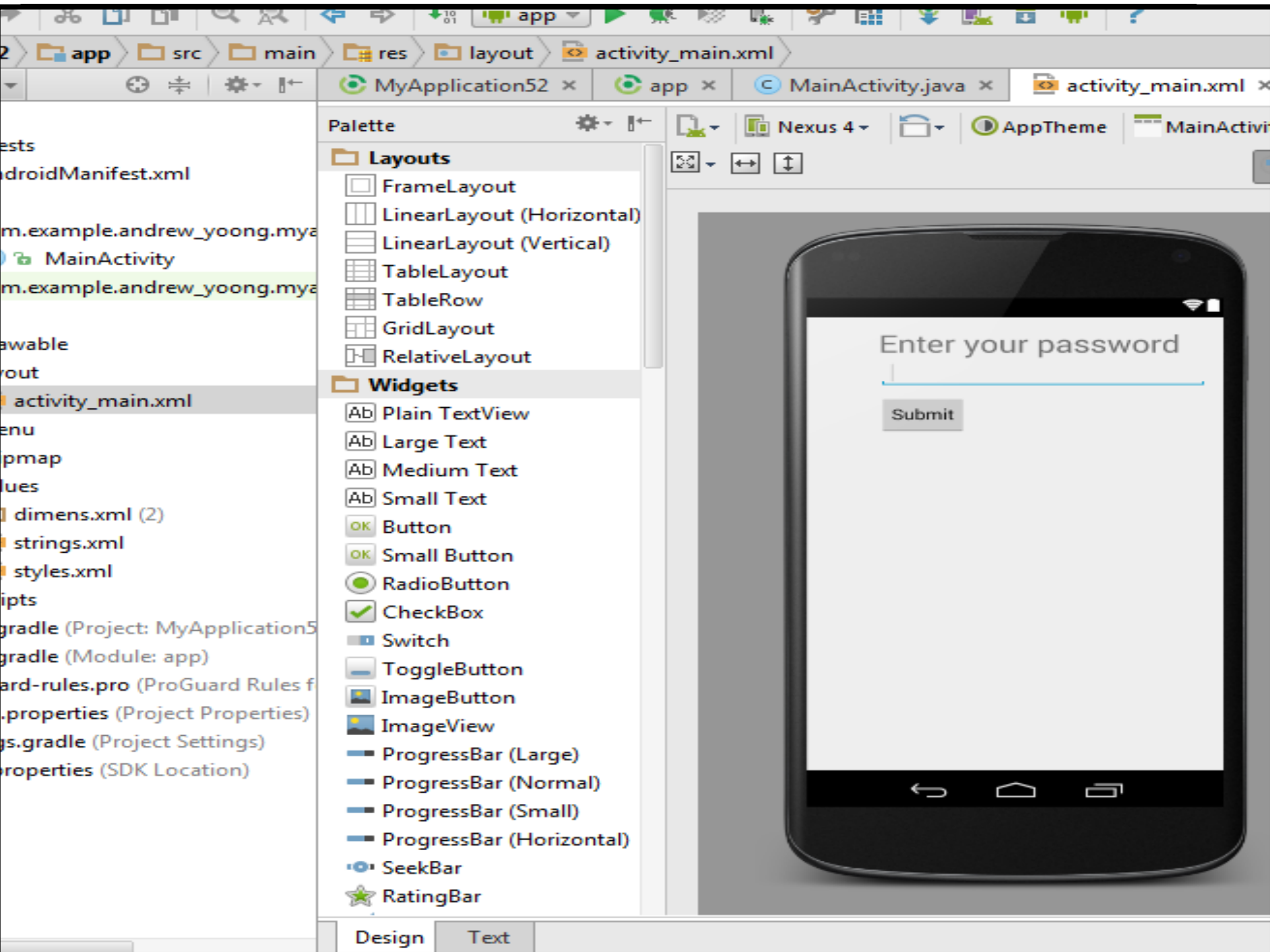
```
        //noinspection SimplifiableIfStatement
```

```
        if (id == R.id.action_settings) {
```

```
            return true;
```

```
        }
```

```
        return super.onOptionsItemSelected(item); } }
```

<EditText

```
    android:id="@+id/txtPassword"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:inputType="textPassword"
    android:layout_below="@+id/textView"
    android:layout_alignParentStart="true"
    android:layout_marginStart="50dp">
    <requestFocus />
```

</EditText>

<Button

```
    android:id="@+id/btnSubmit"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Submit"
    android:layout_below="@+id/txtPassword" android:layout_alignLeft="@+id/txtPassword"
    android:layout_marginTop="10dp"
    android:onClick="checkPassword"/>
```

<TextView

Gradle project sync failed. Basic functionality (e.g. editing, debugging) will not work properly.

[Try Again](#)

```
public void checkPassword(View v) {  
    password = (EditText) findViewById(R.id.txtPassword);  
    // Toast toast = new Toast(getApplicationContext());  
    //     toast.setGravity(Gravity.TOP | Gravity.LEFT, 0, 0);  
    // Toast toast = Toast.makeText(context, text, duration);  
    //     toast.makeText(MainActivity.this, password.getText(), toast.LENGTH_SHORT).show();  
    Toast.makeText(getApplicationContext(), password.getText(), Toast.LENGTH_SHORT).show();  
    if (password.getText().toString().equals("1234")) {  
        Toast.makeText(getApplicationContext(), "Guess me", Toast.LENGTH_SHORT).show();  
    }  
}
```

```
private EditText password;  
private Button btnSubmit;  
public void addListenerOnButton() {  
  
    password = (EditText) findViewById(R.id.txtPassword);  
    btnSubmit = (Button) findViewById(R.id.btnSubmit);  
  
    btnSubmit.setOnClickListener((v) -> {  
        // Toast toast = new Toast(getApplicationContext());  
        // toast.setGravity(Gravity.TOP | Gravity.LEFT, 0, 0);  
        // Toast toast = Toast.makeText(context, text, duration);  
        // toast.makeText(MainActivity.this, password.getText(), toast.LENGTH_SHORT).show();  
        Toast.makeText(getApplicationContext(), password.getText(), Toast.LENGTH_SHORT).show();  
        if (password.getText().toString().equals("1234")) {  
            Toast.makeText(getApplicationContext(), "Guess me", Toast.LENGTH_SHORT).show();  
        }  
    }  
}
```