Laboratorio de Ventana de Dialogo

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"</pre>
   package="com.example.rhaynes.messagebox">
    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic launcher"
        android:label="@string/app name"
        android:roundIcon="@mipmap/ic launcher round"
        android:supportsRtl="true"
        android: theme="@style/AppTheme">
        <activity android:name=".MainActivity">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>
</manifest>
Código del MainActivity
package com.example.rhaynes.messagebox;
import android.content.DialogInterface;
import android.support.v7.app.AlertDialog;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.util.Log;
import android.view.View;
import android.widget.Button;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
    Button btnmessagebox;
   AlertDialog.Builder alert;
    @Override
   protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity main);
        btnmessagebox = (Button) findViewById(R.id.btnmessage);
        alert = new AlertDialog.Builder(this);
        _alert.setTitle("Mensaje del Sistema");
        _alert.setMessage("Bienvenidos al Mundo Android");
        _alert.setPositiveButton("Confirmar", new DialogInterface.OnClickListener() {
            public void onClick(DialogInterface dialog, int which) {
                Log. d("Confirmación:", "Positiva");
        });
        _alert.setNegativeButton("Salir", new DialogInterface.OnClickListener() {
            @Override
```

```
public void onClick(DialogInterface dialog, int which) {
                finish();
        });
        btnmessagebox.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                _alert.show();
       });
    }
}
Archivo de Layout
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayout</pre>
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout width="match parent"
    android: layout height="match parent"
    tools:context=".MainActivity">
    <Button
        android:id="@+id/btnmessage"
        android:layout width="wrap content"
        android:layout height="wrap content"
        android:layout marginBottom="8dp"
        android:layout marginEnd="8dp"
        android:layout_marginStart="8dp"
        android:layout marginTop="8dp"
        android:text="Message Box"
        app:layout constraintBottom toBottomOf="parent"
        app:layout constraintEnd toEndOf="parent"
        app:layout constraintStart toStartOf="parent"
        app:layout constraintTop toTopOf="parent" />
```

</android.support.constraint.ConstraintLayout>

Listar Directorio

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"</pre>
    package="com.example.rhaynes.listdir">
    <uses-permission android:name="android.permission.READ EXTERNAL STORAGE" />
    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic launcher"
        android:label="@string/app name"
        android:roundIcon="@mipmap/ic launcher round"
        android:supportsRtl="true"
        android: theme="@style/AppTheme">
        <activity android:name=".MainActivity">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>
</manifest>
Código del MainActivity
package com.example.rhaynes.listdir;
import android.os.Environment;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.util.Log;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.ListView;
import java.io.File;
import java.util.ArrayList;
import java.util.List;
public class MainActivity extends AppCompatActivity {
   ListView _lista;
ListView _lstFile;
   File _f;
   File[] fs;
    String raiz;
   private List<String> _fileList = new ArrayList<String>();
   private List<String> _pathList = new ArrayList<String>();
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity main);
        lista = (ListView) findViewById(R.id.lstvdir);
```

```
_lista.setOnItemClickListener(new AdapterView.OnItemClickListener() {
            public void onItemClick(AdapterView<?> parent, View view, int position,
long id) {
                 Log.d("New Path",_pathList.get(position).toString());
                 //File selected = new File(_pathList.get(position));
                 getFileList( pathList.get(position));
        });
        _raiz = Environment.getExternalStorageDirectory().toString();
        Log.d("Directorio: ",_raiz.toString());
       _getFileList(_raiz);
    }
    void getFileList(String path) {
        _fileList.clear();
        _pathList.clear();
        _f = new File(_path);
        _{\mathbf{fs}} = _{\mathbf{f}.listFiles()};
        for(int _i = 0; _i < _fs.length; _i++) {
    File _fl = _fs[_i];</pre>
            if( fl.isDirectory()){
                 _pathList.add(_fl.getPath());
             }else if( fl.isFile()){
                _pathList.add("File "+_fl.getName());
                 _fileList.add(_fl.getName());
        }
        ArrayAdapter<String> directoryList
                 = new ArrayAdapter<String>(this,
                 android.R.layout.simple list item 1, pathList);
        _lista.setAdapter(directoryList);
    }
}
```

Archivo de Layout

Laboratorio de Splash Screen

```
Archivo de Manifiesto
Android
                                                                                                                                                                                        <?xml version="1.0" encoding="utf-8"?>
   app
                                                                                                                                                                                       <manifest
   manifests
                                                                                                                                                                                      xmlns:android="http://schemas.android.com/apk/res/
                          🙀 AndroidManifest.xml
                                                                                                                                                                                       android"
    java
                                                                                                                                                                                                            package="com.example.rhaynes.splashscreen">

    com.example.rhaynes.splashscreen

                                                                                                                                                                                                            <application
                                   SplashActivity
                                                                                                                                                                                                                                 android:allowBackup="true"
              > com.example.rhaynes.splashscreen (androidTest)
                                                                                                                                                                                                                                 android:icon="@mipmap/ic launcher"
             > com.example.rhaynes.splashscreen (test)
                                                                                                                                                                                                                                 android:label="@string/app name"

✓ Image: res

              > 🛅 anim
                                                                                                                                                                                      android:roundIcon="@mipmap/ic launcher round"
              > a drawable
                                                                                                                                                                                                                                 android: supportsRtl="true"

✓ Image: Value of the large of the larg
                                                                                                                                                                                                                                 android: theme="@style/AppTheme">
                                   activity_main.xml
                                                                                                                                                                                                                                 <activity android:name=".SplashActivity">
                                    activity_splash.xml
                                                                                                                                                                                                                                                      <intent-filter>
              🗸 🖿 mipmap
                                                                                                                                                                                                                                                                             <action
                                                                                                                                                                                      android:name="android.intent.action.MAIN" />
                                   hdpi480x800.png (hdpi)
                                   hdpi800x480.png (hdpi)
                                                                                                                                                                                                                                                                            <category</pre>
                        > ic_launcher (6)
                                                                                                                                                                                       android:name="android.intent.category.LAUNCHER" />
                         > ic_launcher_round (6)
                                                                                                                                                                                                                                                       </intent-filter>
                                    mdpi320x480.png (mdpi)
                                                                                                                                                                                                                                 </activity>
                                   mdpi480x320.png (mdpi)
                                                                                                                                                                                                                                 <activity
                                   and xhdpi1280x720.png (xhdpi)
                                                                                                                                                                                      android:name=".MainActivity"></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity></activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activity><activ
                                   xhdpi720x1280.png (xhdpi)
                                                                                                                                                                                                            </application>
              > I values
    Gradle Scripts
                                                                                                                                                                                       </manifest>
```

Archivo SplashActiviy

```
package com.example.rhaynes.splashscreen;
import android.content.Intent;
import android.os.Handler;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
public class SplashActivity extends AppCompatActivity {
    @Override
   protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity splash);
        Handler handler = new Handler();
        handler.postDelayed(new Runnable() {
            @Override
            public void run() {
                Intent _intent = new Intent(SplashActivity.this, MainActivity.class);
                startActivity(intent);
                finish();
        },3000);
    }
}
```

Archivo MainActivity

```
package com.example.rhaynes.splashscreen;
import android.app.Activity;
import android.os.Bundle;
import android.support.annotation.Nullable;
import android.support.v7.app.AppCompatActivity;
public class MainActivity extends AppCompatActivity {
    @Override
   protected void onCreate(@Nullable Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity main);
Layout activity main
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayout</pre>
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout width="match parent"
    android:layout height="match parent">
    <TextView
        android:id="@+id/textView"
        android:layout width="wrap content"
        android:layout_height="wrap_content"
        android:layout marginBottom="8dp"
        android:layout marginEnd="8dp"
        android:layout marginStart="8dp"
        android:layout marginTop="8dp"
        android:text="Hola Mundo Android"
        app:layout constraintBottom toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</android.support.constraint.ConstraintLayout>
Layout activity splash
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayout</pre>
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout width="match parent"
    android:layout height="match parent"
    android:layout gravity="center"
    tools:context=".SplashActivity">
    <LinearLayout</pre>
        android:layout width="fill parent"
        android:layout height="fill parent"
        android:background="@mipmap/xhdpi720x1280"
        android:gravity="center"
```

	Imagenes de Splash
Android Studio	

Laboratorio de Sensores

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"</pre>
   package="com.example.rhaynes.myapplication">
    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic launcher"
        android:label="@string/app name"
        android:roundIcon="@mipmap/ic launcher round"
        android:supportsRtl="true"
        android: theme="@style/AppTheme">
        <activity android:name=".MainActivity">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>
    <uses-permission android:name="android.hardware.sensor.gyroscope"/>
    <uses-permission android:name="android.hardware.sensor.accelerometer"/>
    <uses-permission android:name="android.hardware.sensor.proximity"/>
</manifest>
Archivo de MainActivity
package com.example.rhaynes.myapplication;
import android.graphics.Color;
import android.hardware.Sensor;
import android.hardware.SensorEvent;
import android.hardware.SensorManager;
import android.hardware.SensorEventListener;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.util.Log;
import android.widget.TextView;
import java.util.List;
public class MainActivity extends AppCompatActivity {
    SensorManager sensormanager;
    TextView txtview;
    Sensor gyroscope;
    @Override
   protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity main);
        _txtview = (TextView) findViewById(R.id.txtview);
        _txtview.setBackgroundColor(Color.RED);
        _sensormanager = (SensorManager) getSystemService(SENSOR SERVICE);
        _gyroscope = _sensormanager.getDefaultSensor(Sensor.TYPE_GYROSCOPE);
```

```
if(_gyroscope == null){
            Log.d("Sensor:"," No esta activo");
        List<Sensor> _sensorList = _sensormanager.getSensorList(Sensor.TYPE_ALL);
        StringBuilder _sensorText = new StringBuilder();
        for (Sensor currentSensor : sensorList ) {
sensorText.append( currentSensor.getName()).append(System.getProperty("line.separator
<u>"</u>));
        _txtview.setText(_sensorText);
    }
    @Override
    protected void onResume() {
        super.onResume();
        SensorEventListener _gyroscopeListener = new SensorEventListener() {
            @Override
            public void onSensorChanged(SensorEvent sensorEvent) {
                Log.d("Sencor", String.valueOf(sensorEvent.sensor.getType()));
                if(sensorEvent.values[2] > 0.5f) {
                    Log.d("Movimiento", String.valueOf(sensorEvent.values[2]));
                    _txtview.setBackgroundColor(Color.BLUE);
                }else if (sensorEvent.values[2] < -0.5f) {</pre>
                    Log.d("Movimiento", " Nulo");
                    _txtview.setBackgroundColor(Color.RED);
            }
            @Override
            public void onAccuracyChanged(Sensor sensor, int i) {
        };
_sensormanager.registerListener(_gyroscopeListener,_gyroscope,SensorManager.SENSOR_DEL
AY NORMAL);
    }
```

Archivo de Layout

Laboratorio de Contador

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"</pre>
   package="com.example.rhaynes.myapplication">
    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic launcher"
        android: label="@string/app_name"
        android:roundIcon="@mipmap/ic launcher round"
        android:supportsRtl="true"
        android: theme="@style/AppTheme">
        <activity android:name=".MainActivity">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>
</manifest>
Archivo MainActivity
package com.example.rhaynes.myapplication;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;
public class MainActivity extends AppCompatActivity {
   TextView _txtview;
    Button btnclick;
    int _contador = 0;
    @Override
   protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        txtview = (TextView) findViewById(R.id.txtview);
        btnclick = (Button) findViewById(R.id.btnclick);
        txtview.setText("Bienvenidos al Mundo Android");
        btnclick.setOnClickListener(new View.OnClickListener() {
            @Override
           public void onClick(View view) {
             _contador++;
              txtview.setText("Bienvenidos al Mundo Android ("+ contador+")");
        });
```

```
}
```

Archivo de Layout

```
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayout</pre>
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout width="match parent"
    android:layout height="match parent"
    tools:context=".MainActivity">
    <LinearLayout</pre>
        android:layout width="368dp"
        android:layout height="495dp"
        android:gravity="center"
        android:orientation="vertical"
        tools:layout_editor_absoluteX="8dp"
tools:layout_editor_absoluteY="8dp">
        <TextView
            android:id="@+id/txtview"
            android:layout width="match parent"
            android: layout height="wrap content"
            android:text="TextView"
            android:textAlignment="center" />
        <Button
            android:id="@+id/btnclick"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Haz Click" />
    </LinearLayout>
</android.support.constraint.ConstraintLayout>
```

Laboratorio de Eventos

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"</pre>
   package="com.example.rhaynes.myapptextview">
    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic launcher"
        android:label="@string/app name"
        android:roundIcon="@mipmap/ic launcher round"
        android:supportsRtl="true"
        android: theme="@style/AppTheme">
        <activity android:name=".MainActivity">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>
</manifest>
Archivo de MainActivity
package com.example.rhaynes.myapptextview;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.util.Log;
import android.widget.TextView;
public class MainActivity extends AppCompatActivity {
    TextView _txtview;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity main);
        txtview = (TextView) findViewById(R.id.txtview);
        _txtview.setText("Bienvenidos al Mundo Android");
    @Override
    protected void onStart() {
        super.onStart();
        Log.d("Evento Start", "onStart");
    }
    @Override
    protected void onStop() {
        super.onStop();
```

```
_txtview.setText("Se detuvo el programa");
    }
   @Override
   protected void onDestroy() {
       super.onDestroy();
       Log.d("Evento by", "onDestroy");
    }
Archivo de Layout
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayout</pre>
xmlns:android="http://schemas.android.com/apk/res/android"
   xmlns:app="http://schemas.android.com/apk/res-auto"
   xmlns:tools="http://schemas.android.com/tools"
    android:layout width="match parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <TextView
        android:layout width="wrap content"
        android:layout_height="wrap_content"
        android:text="Hello World!"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout constraintLeft toLeftOf="parent"
        app:layout constraintRight toRightOf="parent"
        app:layout constraintTop toTopOf="parent"
        android:id="@+id/txtview"/>
</android.support.constraint.ConstraintLayout>
```