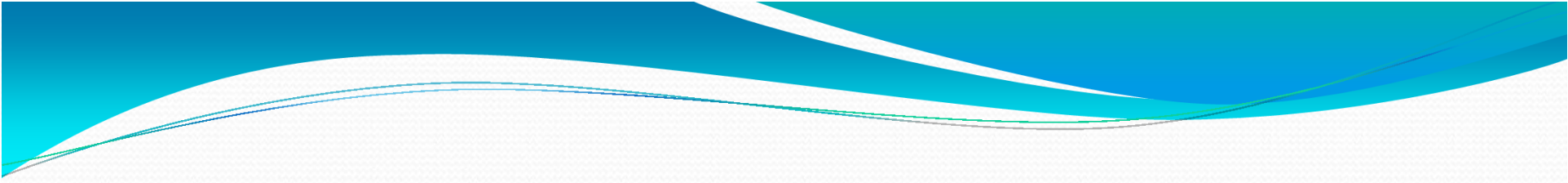


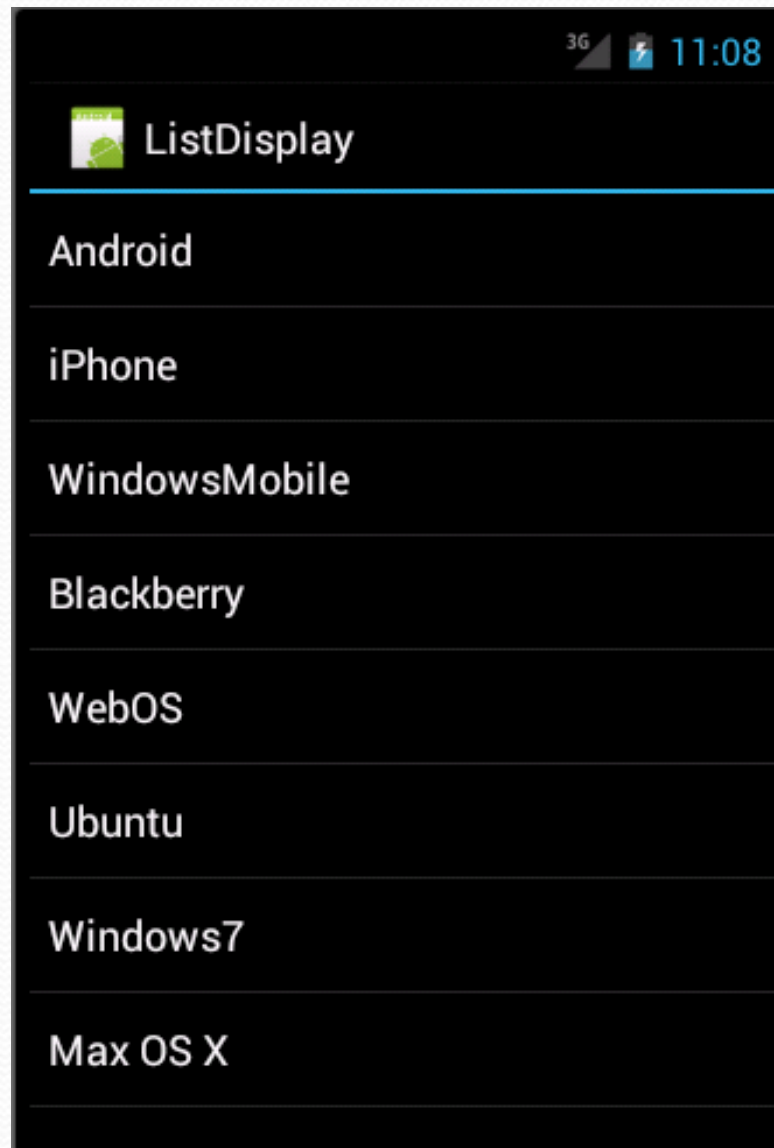
Controles de lista



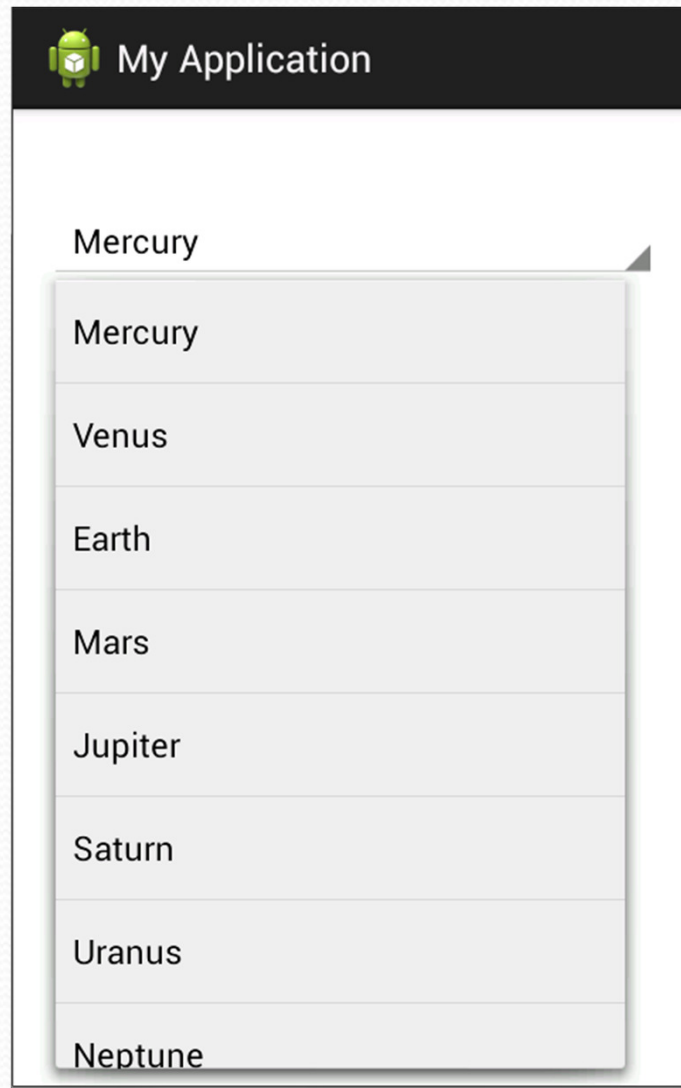
Controles de lista

- Presentan información en forma de lista.
 1. ListView
 2. Spinner
 3. GridView

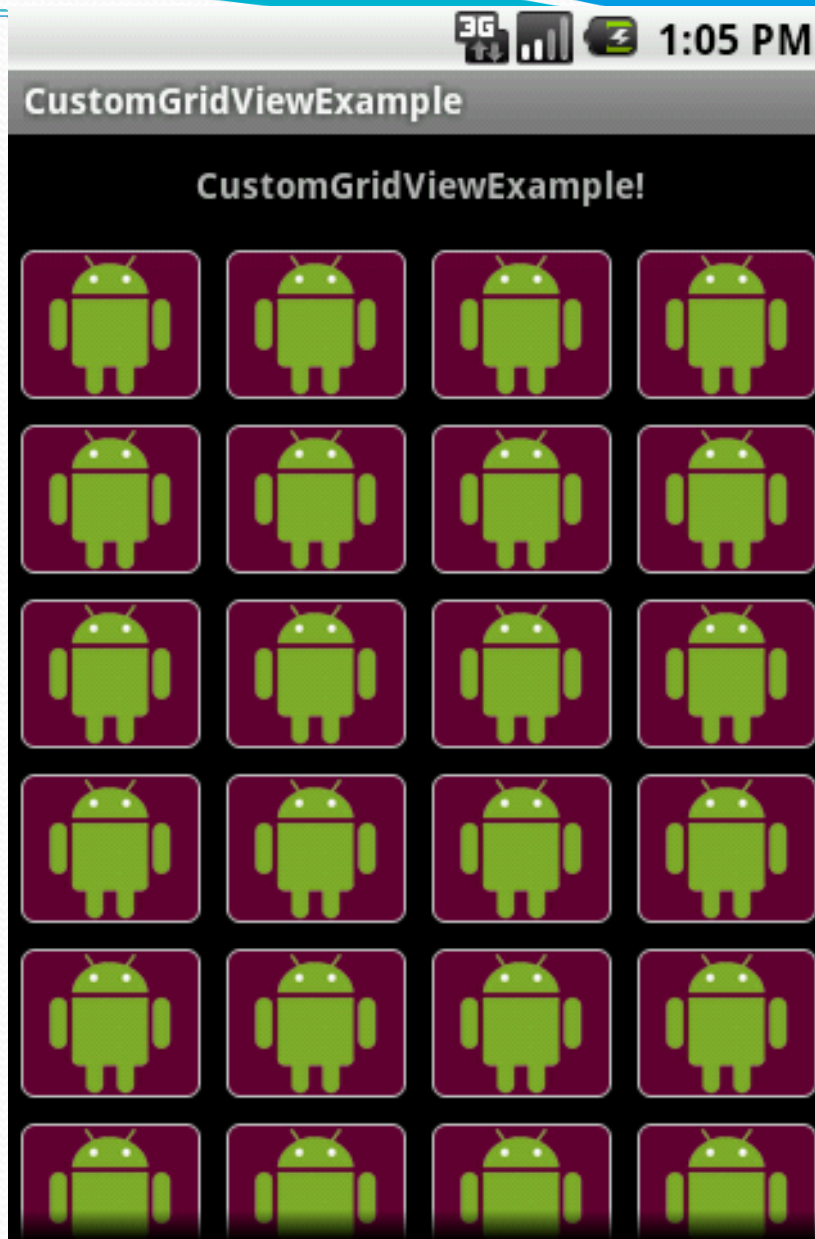
Listview

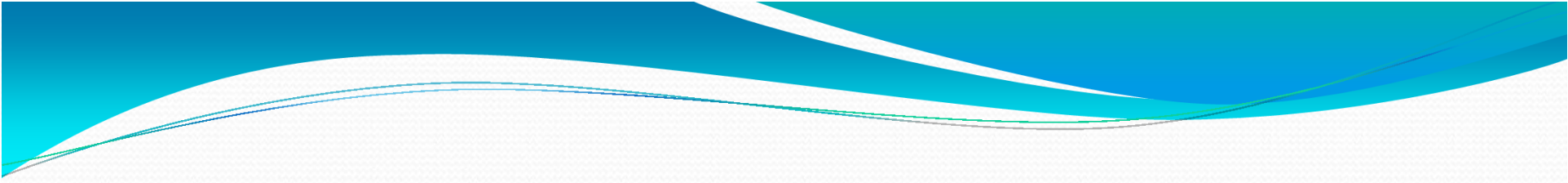


Spinner



GridView





ListView

- ListView estático: los datos están codificados dentro de la aplicación.
- ListView dinámico: los datos son externos, por ejemplo, provienen de un archivo o de una base de datos.

Layout ListView estático

```
<?xml version="1.0" encoding="utf-8"?>
<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:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    tools:context="com.tesi.listview1.MainActivity">

    <ListView
        android:id="@+id/lista"
        android:entries="@array/lista_datos"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"></ListView>
</RelativeLayout>
```


Strings.xml

```
<resources>
    <string name="app_name">ListView1</string>
    <string-array name="lista_datos">
        <item>Mercurio</item>
        <item>Venus</item>
        <item>Tierra</item>
        <item>Marte</item>
        <item>Júpiter</item>
        <item>Saturno</item>
        <item>Urano</item>
        <item>Neptuno</item>
    </string-array>
</resources>
```


Actividad

```
public class MainActivity extends AppCompatActivity {

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

        ListView lista = (ListView) findViewById(R.id.lista);

        // Click normal
        lista.setOnItemClickListener(
            new AdapterView.OnItemClickListener() {
                public void onItemClick(AdapterView<?> parent, View view, int position, long id)
                {
                    Log.d("tag", "xyz click normal posicion: " + position);
                }
            }
        );

        // Click largo
        lista.setOnItemLongClickListener(
            new AdapterView.OnItemLongClickListener() {
                public boolean onItemLongClick(AdapterView<?> parent, View view, int position, long id)
                {
                    Log.d("tag", "xyz click largo posicion: " + position);
                    return true;
                }
            }
        );
    }
}
```

Layout ListView dinámico

```
<?xml version="1.0" encoding="utf-8" ?>
<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:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    tools:context="com.tesi.listview2.MainActivity">

    <ListView
        android:id="@+id/lista"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"></ListView>
</RelativeLayout>
```

Actividad

```
public class MainActivity extends AppCompatActivity {

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

        ArrayList<String> datos = leeDatos();
        ListView lista = (ListView) findViewById(R.id.lista);
        ArrayAdapter<String> adapter = new ArrayAdapter<String>(this,
            android.R.layout.simple_expandable_list_item_1,
            datos);
        lista.setAdapter(adapter);
    }
}
```

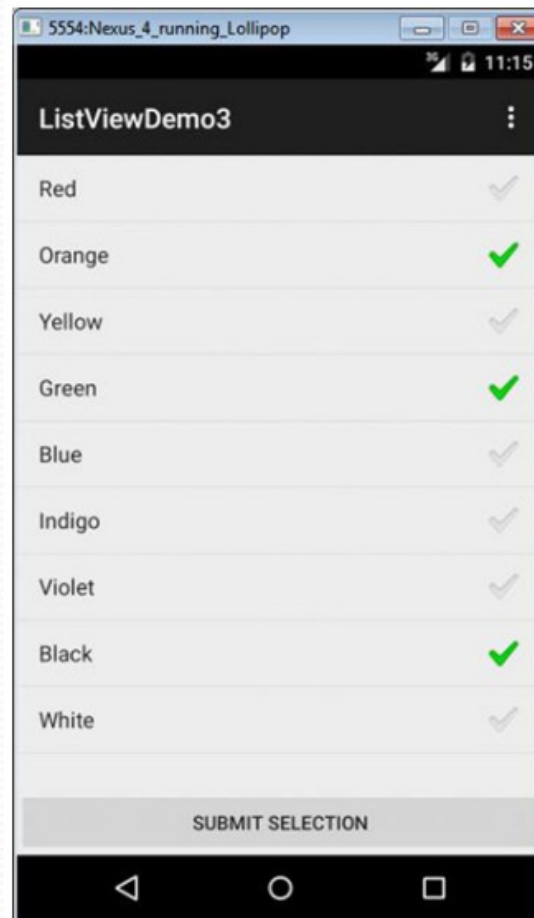

Actividad

```
private ArrayList<String> leeDatos()
{
    ArrayList<String> d = new ArrayList<>();

    try {
        File sdcard = Environment.getExternalStorageDirectory();
        File archivo = new File(sdcard, "planetas.txt");
        Log.d("tag", "xyz sdcard: " + sdcard);
        Log.d("tag", "xyz archivo: " + archivo);
        BufferedReader handle = new BufferedReader(new FileReader(archivo));
        String linea;
        while ((linea = handle.readLine()) != null) {
            d.add(linea);
            Log.d("tag", "xyz linea: " + linea);
        }
        handle.close();
    }
    catch(Exception e) {
        Toast.makeText(this, "Error: " + e, Toast.LENGTH_LONG).show();
    }

    return d;
}
```

Checked ListView



Layout

```
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:orientation="vertical"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context="com.artifexdigital.android.listviewdemo3.MainActivity" >

    <ListView
        android:id="@+id/listView1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_weight="1" />

    <Button
        android:id="@+id/button1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:onClick="doClick"
        android:text="Submit selection" />

</LinearLayout>
```


Actividad

```
public class MainActivity extends Activity {  
  
    private ListView listView1;  
    private ArrayAdapter<String> listAdapter1;  
  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_main);  
  
        listView1 = (ListView) findViewById(R.id.listView1);  
  
        String[] someColors = new String[] { "Red", "Orange", "Yellow",  
            "Green", "Blue", "Indigo", "Violet", "Black", "White"};  
        ArrayList<String> colorArrayList = new ArrayList<String>();  
        colorArrayList.addAll( Arrays.asList(someColors) );  
    }  
}
```


Actividad

```
listAdapter1 = new ArrayAdapter<String>(this, android.R.layout.simple_list_item_checked,
    colorArrayList);

listView1.setAdapter( listView1 );

listView1.setChoiceMode(listView1.CHOICE_MODE_MULTIPLE);

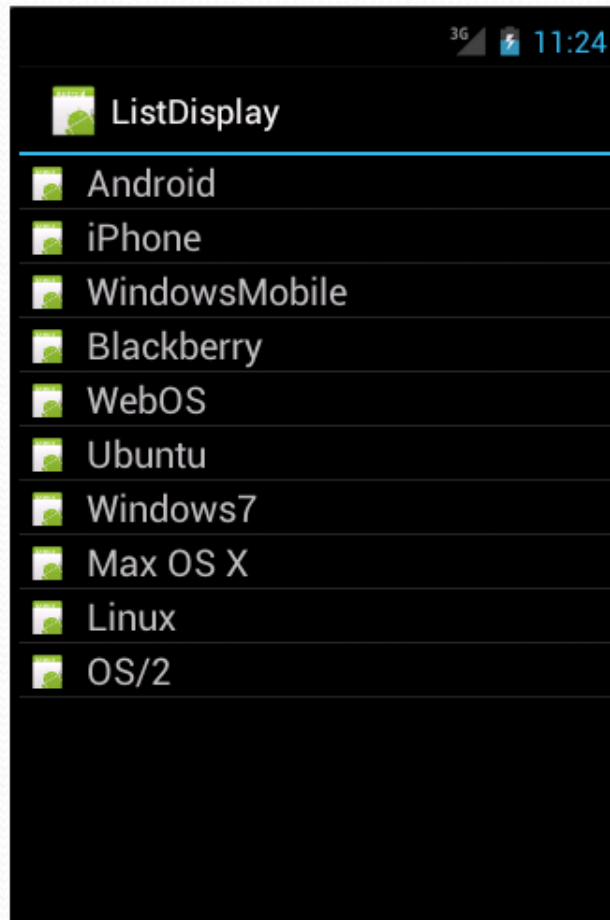
listView1.setOnItemClickListener(new OnItemClickListener() {

    @Override
    public void onItemClick(AdapterView<?> parent, View view, int position
        , long id) {
        String itemValue = (String) listView1.getItemAtPosition(position);
        Toast.makeText(getApplicationContext(), itemValue,
            Toast.LENGTH_LONG).show();
    }
});
}
```

Actividad

```
public void doClick(View view) {  
    int count=listView1.getCount();  
    SparseBooleanArray viewItems = listView1.getCheckedItemPositions();  
    for(int i=0; i<count; i++) {  
        if(viewItems.get(i)) {  
            String selectedColor = (String) listView1.getItemAtPosition(i);  
            Log.v("ListViewDemo", selectedColor + " is checked at position " + i);  
        }  
    }  
}
```

ListView con layout propio



row_layout.xml en res/layout

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

    <ImageView
        android:id="@+id/icon"
        android:layout_width="22px"
        android:layout_height="22px"
        android:layout_marginLeft="4px"
        android:layout_marginRight="10px"
        android:layout_marginTop="4px"
        android:src="@drawable/ic_launcher" >
    </ImageView>

    <TextView
        android:id="@+id/label"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@+id/label"
        android:textSize="20px" >
    </TextView>

</LinearLayout>
```


Actividad

```
String[] values = new String[] { "Android", "iPhone", "WindowsMobile",  
    "Blackberry", "WebOS", "Ubuntu", "Windows7", "Max OS X",  
    "Linux", "OS/2" };  
// use your custom layout  
ArrayAdapter<String> adapter = new ArrayAdapter<String>(this,  
    R.layout.rowlayout, R.id.label, values);  
setListAdapter(adapter);
```

ListView con adaptador propio



Layout de la actividad

```
<?xml version="1.0" encoding="utf-8"?>
<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:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    tools:context="com.tesi.listviewadapterpropio.MainActivity">

    <ListView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:choiceMode="singleChoice"
        android:divider="@android:color/transparent"
        android:dividerHeight="0dp"
        android:background="#ffffff"
        android:id="@+id/menuList" />

</RelativeLayout>
```


res/layout/row.xml

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

    <ImageView android:id="@+id/imgIcon"
        android:layout_width="wrap_content"
        android:layout_height="fill_parent"
        android:gravity="center_vertical"
        android:layout_alignParentTop="true"
        android:layout_alignParentBottom="true"
        android:layout_marginRight="15dp"
        android:layout_marginTop="5dp"
        android:layout_marginBottom="5dp" />

    <TextView android:id="@+id/txtTitle"
        android:layout_width="fill_parent"
        android:layout_height="fill_parent"
        android:gravity="center_vertical"
        android:layout_alignParentTop="true"
        android:layout_alignParentBottom="true"
        android:textStyle="bold"
        android:textSize="22dp"
        android:textColor="#000000"
        android:layout_marginTop="5dp"
        android:layout_marginBottom="5dp" />

</LinearLayout>
```


Actividad

```
/**
 * Iconos de http://www.mena.com.mx/gonzalo/iconos/index.html
 */
public class MainActivity extends AppCompatActivity {
    private ListView listView1;

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

        String[] textString = {"Brasil", "Canada", "Chile", "Cuba", "Deutschland", "España",
            "France", "Japan", "Mexico", "United Kingdom", "United States", "Vaticano"};
        int[] drawableIds = {R.drawable.br, R.drawable.ca, R.drawable.cl, R.drawable.cu,
            R.drawable.de, R.drawable.es, R.drawable.fr, R.drawable.jp, R.drawable.mx,
            R.drawable.uk, R.drawable.us, R.drawable.va};

        CustomAdapter adapter = new CustomAdapter(this, textString, drawableIds);

        listView1 = (ListView) findViewById(R.id.menuList);
        listView1.setAdapter(adapter);
    }
}
```

Adaptador

```
public class CustomAdapter extends BaseAdapter {
    private Context mContext;
    private String[] Title;
    private int[] imge;
    //private View row = null;

    public CustomAdapter(Context context, String[] text1, int[] imageIds)
    {
        mContext = context;
        Title = text1;
        imge = imageIds;
    }

    public int getCount()
    {
        // TODO Auto-generated method stub
        return Title.length;
    }

    public Object getItem(int arg0)
    {
        // TODO Auto-generated method stub
        return null;
    }

    public long getItemId(int position)
    {
        // TODO Auto-generated method stub
        return position;
    }
}
```

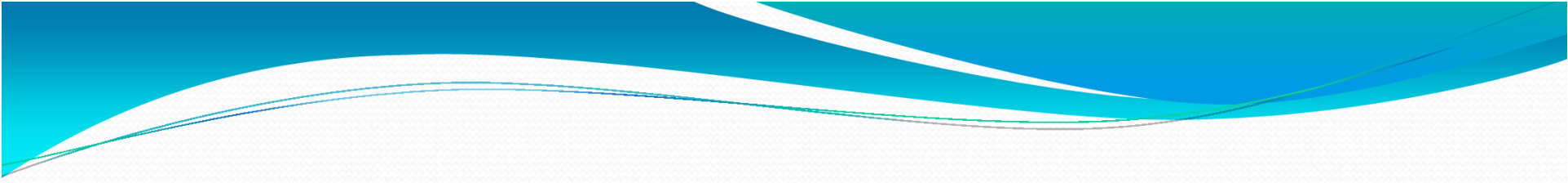
Adaptador

```
public View getView(int position, View row, ViewGroup parent)
{
    if (row == null) {
        LayoutInflater inflater = LayoutInflater.from(mContext);
        row = inflater.inflate(R.layout.row, parent, false);
    }
    TextView title;
    ImageView i1;
    i1 = (ImageView) row.findViewById(R.id.imgIcon);
    title = (TextView) row.findViewById(R.id.txtTitle);
    title.setText(Title[position]);
    i1.setImageResource(imgs[position]);

    return row;
}
```

Conclusión ListView

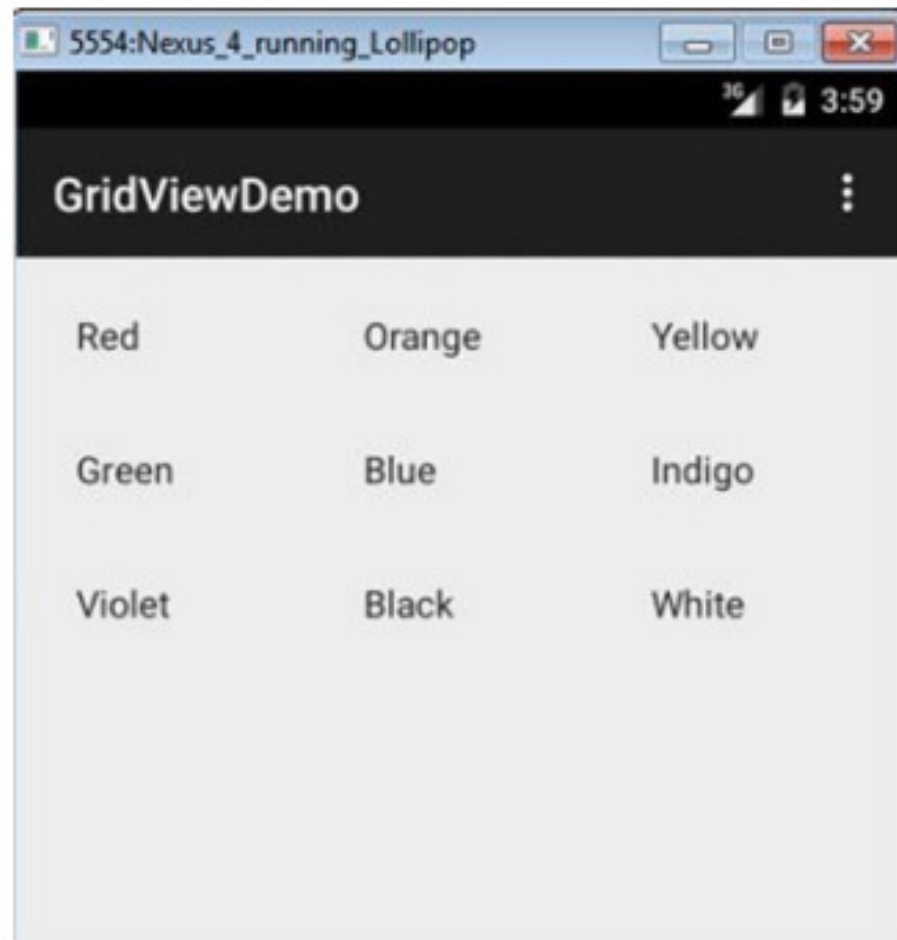
- Usar un layout por default para el diseño de cada renglón y un adaptador por default.
- Usar un layout propio para el diseño de cada renglón y un adaptador por default.
- Usar un layout propio para el diseño de cada renglón y un adaptador propio.



Tutorial de ListView

- <http://www.vogella.com/tutorials/AndroidListView/article.html>

GridView



Layout

```
<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"
    tools:context="com.artifexdigital.android.gridviewdemo.MainActivity" >

    <GridView
        android:id="@+id/gridView1"
        android:layout_width="fill_parent"
        android:layout_height="fill_parent"
        android:padding="10dp"
        android:verticalSpacing="10dp"
        android:horizontalSpacing="10dp"
        android:numColumns="auto_fit"
        android:columnWidth="100dp"
        android:stretchMode="columnWidth"
        android:gravity="center" />

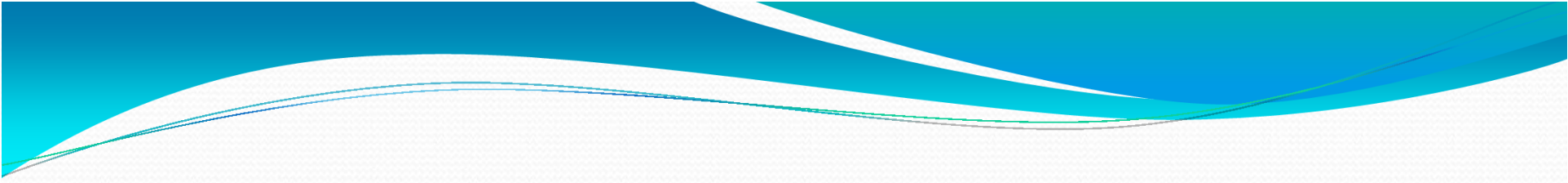
</RelativeLayout>
```


Actividad

```
public class MainActivity extends Activity {  
  
    private GridView gridView1;  
    private ArrayAdapter<String> listAdapter1;  
  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_main);  
  
        gridView1 = (GridView) findViewById(R.id.gridView1);  
  
        String[] someColors = new String[] { "Red", "Orange", "Yellow",  
                                              "Green", "Blue", "Indigo", "Violet", "Black", "White"};  
  
        ArrayList<String> colorArrayList = new ArrayList<String>();  
        colorArrayList.addAll( Arrays.asList(someColors) );  
    }  
}
```


Actividad

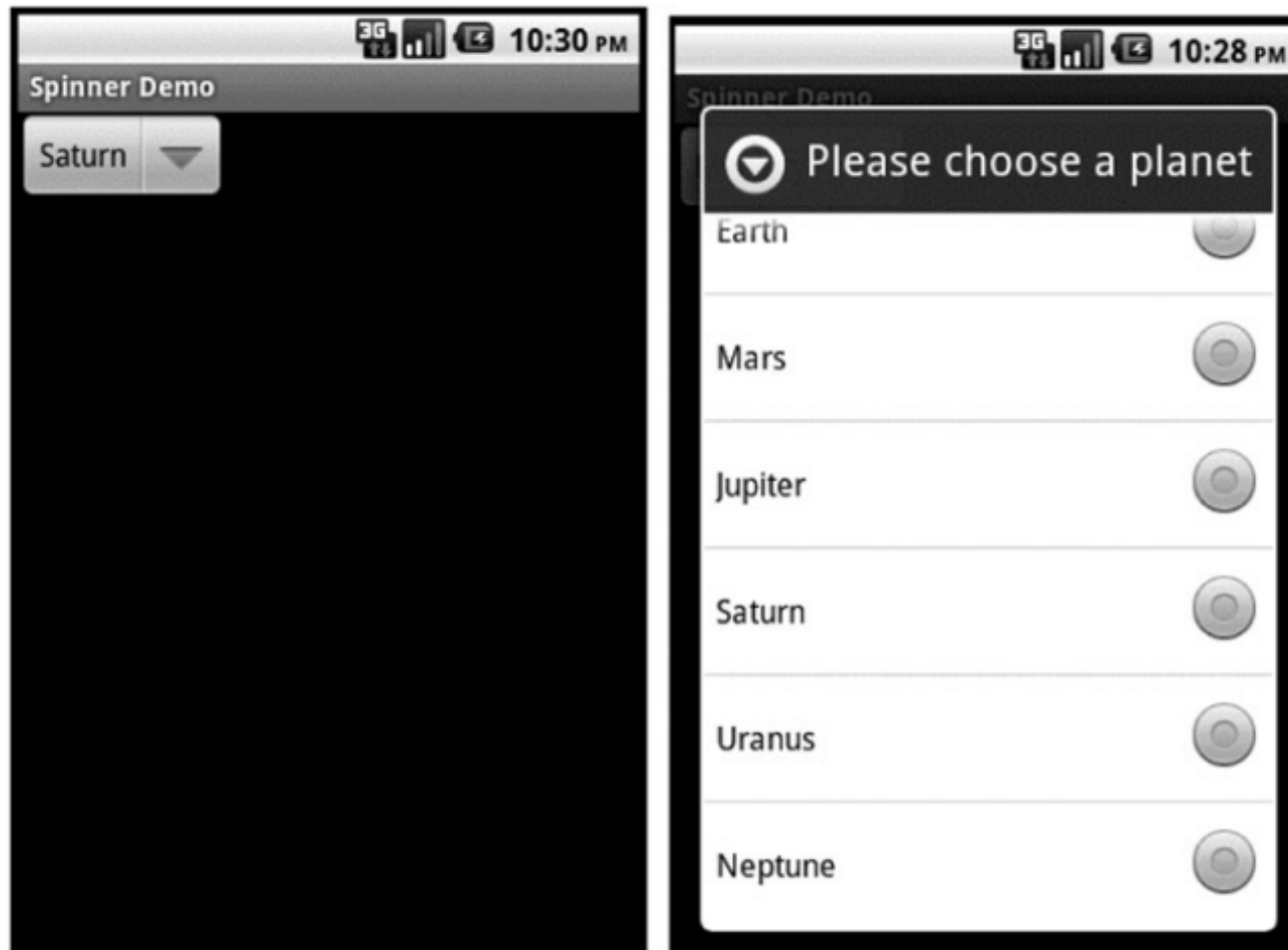
```
listAdapter1 = new ArrayAdapter<String>(this,  
    android.R.layout.simple_list_item_1, colorArrayList);  
  
gridView1.setAdapter( listAdapter1 );  
  
}  
  
}
```



Tutorial de GridView

- <https://developer.android.com/guide/topics/ui/layout/gridview.html>

Spinner



Spinner

- En el layout de la actividad:

```
<Spinner
    android:id="@+id/planets_spinner"
    android:layout_width="fill_parent"
    android:layout_height="wrap_content" />
```

- Opciones en los recursos de strings:

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <string-array name="planets_array">
        <item>Mercury</item>
        <item>Venus</item>
        <item>Earth</item>
        <item>Mars</item>
        <item>Jupiter</item>
        <item>Saturn</item>
        <item>Uranus</item>
        <item>Neptune</item>
    </string-array>
</resources>
```

Actividad

```
Spinner spinner = (Spinner) findViewById(R.id.spinner);  
// Create an ArrayAdapter using the string array and a default spinner layout  
ArrayAdapter<CharSequence> adapter = ArrayAdapter.createFromResource(this,  
    R.array.planets_array, android.R.layout.simple_spinner_item);  
// Specify the layout to use when the list of choices appears  
adapter.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);  
// Apply the adapter to the spinner  
spinner.setAdapter(adapter);
```

Para responder acciones

```
public class SpinnerActivity extends Activity implements OnItemSelectedListener {
    ...

    public void onItemSelected(AdapterView<?> parent, View view,
        int pos, long id) {
        // An item was selected. You can retrieve the selected item using
        // parent.getItemAtPosition(pos)
    }

    public void onNothingSelected(AdapterView<?> parent) {
        // Another interface callback
    }
}
```

```
Spinner spinner = (Spinner) findViewById(R.id.spinner);
spinner.setOnItemSelectedListener(this);
```


Tutorial de Spinner

- <https://developer.android.com/guide/topics/ui/controls/spinner.html>