

Android Programming

Designing UI Layout

Topics:

List View
Grid View



List View

1. Static ListView item from xml

1.1. Create new android project, name it with "List View Demo".

1.2. Create listview_layout.xml and write these code

```
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="vertical"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:background="#FFFFFF">
    <ListView
        android:id="@+id/listView1"
        android:layout_width="fill_parent"
        android:layout_height="fill_parent"
        android:entries="@array/data_list"/>
</LinearLayout>
```

1.3. Add string array at res/values/strings.xml

```
<string-array name="data_list">
    <item>Isi 1</item>
    <item>Isi 2</item>
    <item>Isi 3</item>
    <item>Isi 4</item>
    <item>Isi 5</item>
    <item>Isi 6</item>
    <item>Isi 7</item>
    <item>Isi 8</item>
    <item>Isi 9</item>
    <item>Isi 10</item>
    <item>Isi 11</item>
    <item>Isi 12</item>
    <item>Isi 13</item>
    <item>Isi 14</item>
    <item>Isi 15</item>
</string-array>
```

1.4. Use listview_layout.xml as layout for MainActivity

1.5. Run and see the result

2. Static ListView using array adapter

2.1. Create new activity ListArrayActivity.java, set as main activity, modify onCreate() method

```

@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.listarray_layout);
    ListView lv = (ListView) findViewById(R.id.listView1);
    List<String> data = new ArrayList<String>();
    data.add("satu");
    data.add("dua");
    data.add("tiga");
    data.add("empat");
    data.add("lima");
    ArrayAdapter<String> aa = new ArrayAdapter<String>(this,
        android.R.layout.simple_list_item_1, data);
    lv.setAdapter(aa);
}

```

2.2. Use layout listarray_layout.xml

```

<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="vertical"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:background="#FFFFFF">
    <ListView
        android:id="@+id/listView1"
        android:layout_width="fill_parent"
        android:layout_height="fill_parent"
        />
</LinearLayout>

```

2.3. Run and see the result

Grid View

1. Modify activity_main.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: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.example.gridviewdemo.MainActivity" >

    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="18dp"
        android:text="Demo GridView" />

    <GridView
        android:id="@+id/gridView1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_below="@+id/textView1"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="18dp"
        android:numColumns="3" >
    </GridView>

</RelativeLayout>
```

2. Add image to drawable folder (example:andro1.png,andro2.png,andro3.png, ...)

3. Create class ImageAdapter.java

4. Set adapter at MainActivity.java, change onCreate() method to:

```
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    GridView gv = (GridView) findViewById(R.id.gridView1);
    gv.setAdapter(new ImageAdapter(this));
}
```

```
import android.content.Context;
import android.view.View;
import android.view.ViewGroup;
import android.widget.BaseAdapter;
import android.widget.GridView;
import android.widget.ImageView;

public class ImageAdapter extends BaseAdapter {
    private Context mContext;

    public Integer[] gambar = {
        R.drawable.andro1,R.drawable.andro2,R.drawable.andro3,
        R.drawable.andro3,R.drawable.andro1,R.drawable.andro2
    };

    public ImageAdapter(Context c){
        mContext = c;
    }

    @Override
    public int getCount() {
        return gambar.length;
    }

    @Override
    public Object getItem(int position) {
        return gambar[position];
    }

    @Override
    public long getItemId(int position) {
        return 0;
    }

    @Override
    public View getView(int position, View convertView, ViewGroup parent) {
        ImageView imageView = new ImageView(mContext);
        imageView.setImageResource(gambar[position]);
        imageView.setScaleType(ImageView.ScaleType.CENTER_CROP);
        imageView.setLayoutParams(new GridView.LayoutParams(160, 160));
        return imageView;
    }

}
```