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Chapter 5:

Java classes:

fill_model.java

```
package com.example.chapter5;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
public class fill_model extends AppCompatActivity {
 @Override
 protected void onCreate(Bundle savedInstanceState) {
 super.onCreate(savedInstanceState);
 setContentView(R.layout.activity_fill_model);
 }
}
```

linearlayout.java

```
package com.example.chapter5;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.ListView;
import android.widget.TextView;
public class linearlayout extends AppCompatActivity {
 ListView listview = null;
 @Override
```

```
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_linear_layout);
listview = findViewById(R.id.listview2);
String[] items = {"orientation","fill model","weight",
"gravity","padding & margin"};
ArrayAdapter<String> adpt = new ArrayAdapter<String>(this,R.layout.list_view,items);
listview.setAdapter(adpt);
listview.setOnItemClickListener(new AdapterView.OnItemClickListener() {
@Override
public void onItemClick(AdapterView<?> adapterView, View view, int i, long l){
switch(i){
case 0:{
startActivity(new Intent(getApplicationContext(),ll_orientation.class));
break;
}
case 1:{
startActivity(new Intent(getApplicationContext(),fill_model.class));
break;
}
case 2:{
startActivity(new Intent(getApplicationContext(),ll_weight.class));
break;
}
case 3:{
startActivity(new Intent(getApplicationContext(),ll_gravity.class));
break;
}
case 4:{
startActivity(new Intent(getApplicationContext(),padding.class));
```

```
 break;
 }
 }
 }
 });
}
}
```

ll_gravity.java

```
package com.example.chapter5;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
public class ll_gravity extends AppCompatActivity {
 @Override
 protected void onCreate(Bundle savedInstanceState) {
 super.onCreate(savedInstanceState);
 setContentView(R.layout.activity_ll_gravity);
 }
}
```

ll_orientation.java

```
package com.example.chapter5;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.LinearLayout;
import android.widget.ListView;
import android.widget.TextView;
public class ll_orientation extends AppCompatActivity {
```

```
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_ll_orientation);
ListView listView = findViewById(R.id.listview3);
TextView textView = findViewById(R.id.textView3);
String[] items = {"horizontal","vertical"};
listView.setAdapter(new ArrayAdapter<String>(this,R.layout.list_view,items));
listView.setOnItemClickListener(new AdapterView.OnItemClickListener() {
@Override
public void onItemClick(AdapterView<?> adapterView, View view, int i, long l) {
Intent intent = new Intent(getApplicationContext(),orientation.class);
switch(i){
case 0:{
intent.putExtra("orientation",0);
startActivity(intent);
break;
}
case 1:{
intent.putExtra("orientation",1);
startActivity(intent);
break;
}
}
}
});
}
}
```

ll_weight.java

```
package com.example.chapter5;
```

```
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
public class ll_weight extends AppCompatActivity {
 @Override
 protected void onCreate(Bundle savedInstanceState) {
 super.onCreate(savedInstanceState);
 setContentView(R.layout.activity_ll_weight);
 }
}
```

MainActivity.java

```
package com.example.chapter5;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.ListView;
import android.widget.TextView;
public class MainActivity extends AppCompatActivity {
 ListView listview = null;
 TextView textView = null;
 Intent intent = null;
 @Override
 protected void onCreate(Bundle savedInstanceState) {
 super.onCreate(savedInstanceState);
 setContentView(R.layout.activity_main);
 listview = findViewById(R.id.listview1);
 String[] items = {"Linear Layout","RelativeLayout",
 "TableLayout","ScrollView"};
```

```
ArrayAdapter<String> adpt = new ArrayAdapter<String>(this,
R.layout.list_view,items);
listview.setAdapter(adpt);
listview.setOnItemClickListener(new AdapterView.OnItemClickListener() {
@Override
public void onItemClick(AdapterView<?> adapterView, View view, int i, long l) {
switch(i){
case 0:{
intent = new Intent(getApplicationContext(), linearlayout.class);
startActivity(intent);
break;
}
case 1:{
startActivity(new Intent(getApplicationContext(),relativelayout.class));
break;
}
case 2:{
startActivity(new Intent(getApplicationContext(),tablelayout.class));
break;
}
case 3:{
startActivity(new Intent(getApplicationContext(),scrollviewlayout.class));
break;
}
case 4:{
}
}
}
});
}
```

```
}
```

orientation.java

```
package com.example.chapter5;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.LinearLayout;
import android.widget.TextView;
public class orientation extends AppCompatActivity {
 @Override
 protected void onCreate(Bundle savedInstanceState) {
 super.onCreate(savedInstanceState);
 setContentView(R.layout.activity_orientation);
 Bundle b = getIntent().getExtras();
 LinearLayout temp = findViewById(R.id.orientation);
 if(b!=null){
 if(b.getInt("orientation")==1){
 temp.setOrientation(LinearLayout.VERTICAL);
 }else if(b.getInt("orientation")==0){
 temp.setOrientation(LinearLayout.HORIZONTAL);
 }
 }
}
}
```

padding.java

```
package com.example.chapter5;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
public class padding extends AppCompatActivity {
 @Override
 protected void onCreate(Bundle savedInstanceState) {
```

```
 super.onCreate(savedInstanceState);
 setContentView(R.layout.activity_padding);
 }
}
```

relativelayout.java

```
package com.example.chapter5;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
public class relativelayout extends AppCompatActivity {
 @Override
 protected void onCreate(Bundle savedInstanceState) {
 super.onCreate(savedInstanceState);
 setContentView(R.layout.activity_relativelayout);
 }
}
```

scrollviewlayout.java

```
package com.example.chapter5;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
public class scrollviewlayout extends AppCompatActivity {
 @Override
 protected void onCreate(Bundle savedInstanceState) {
 super.onCreate(savedInstanceState);
 setContentView(R.layout.activity_scrollviewlayout);
 }
}
```

tablelayout.java

```
package com.example.chapter5;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
```

```
public class tablelayout extends AppCompatActivity {
 @Override
 protected void onCreate(Bundle savedInstanceState) {
 super.onCreate(savedInstanceState);
 setContentView(R.layout.activity_tablelayout);
 }
}
```

Xml layouts:

activity_fill_model.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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:orientation="vertical"
 android:background="#ff0033cc"
 tools:context=".fill_model">
<TextView
 android:id="@+id/labelUserName"
 android:layout_width="match_parent"
 android:layout_height="wrap_content"
 android:background="#ffff0066"
 android:text="User Name"
 android:textSize="16sp"
 android:textStyle="bold"
 android:textColor="#ff000000"
 />
 <EditText
```

```
 android:layout_width="match_parent"
 android:layout_height="wrap_content"
 android:textSize="18sp"
 />
 <Button
 android:id="@+id/btnGo"
 android:layout_width="125dip"
 android:layout_height="wrap_content"
 android:text="Go"
 android:textStyle="bold"
 />
</LinearLayout>
```

activity_linear_layout.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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:orientation="vertical"
 tools:context=".linearlayout">
 <TextView
 android:id="@+id/textView"
 android:layout_width="match_parent"
 android:layout_height="wrap_content"
 android:text="Linear Layout"
 android:gravity="center"
 android:layout_marginTop="10dp"
 />
 <ListView
```

```
 android:id="@+id/listview2"
 android:layout_width="match_parent"
 android:layout_height="wrap_content"
 android:gravity="center"
 android:layout_marginTop="50dp"
 />
</LinearLayout>
```

activity_ll_gravity.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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:orientation="vertical"
 tools:context=".ll_gravity">
 <TextView
 android:id="@+id/labelUserName"
 android:layout_width="match_parent"
 android:layout_height="wrap_content"
 android:background="#ffff0066"
 android:text="User Name"
 android:textSize="16sp"
 android:textStyle="bold"
 android:textColor="#ff000000"
 android:gravity="center"
 />
 <EditText
 android:layout_width="match_parent"
 android:layout_height="wrap_content"
```

```
 android:textSize="18sp"
 />
 <Button
android:id="@+id/btnGo"
 android:layout_width="125dip"
 android:layout_height="wrap_content"
 android:text="Go"
 android:textStyle="bold"
 android:layout_gravity="right"
 />
</LinearLayout>
```

activity_ll_orientation.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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:id="@+id/ll_orientation"
 android:layout_width="match_parent"
 android:layout_height="match_parent"
 android:orientation="vertical"
 tools:context=".ll_orientation">
 <TextView
 android:id="@+id/textView3"
 android:layout_width="match_parent"
 android:layout_height="wrap_content"
 android:text="Vertical"
 android:gravity="center"
 android:layout_marginTop="10dp"
/>
 <ListView
```

```
 android:id="@+id/listview3"
 android:layout_width="match_parent"
 android:layout_height="wrap_content"
 android:gravity="center"
 android:layout_marginTop="50dp"
 />
</LinearLayout>
```

activity_ll_weight.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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:orientation="vertical"
 tools:context=".ll_weight">
 <TextView
 android:id="@+id/labelUserName"
 android:layout_width="match_parent"
 android:layout_height="wrap_content"
 android:background="#ffff0066"
 android:text="User Name"
 android:textSize="16sp"
 android:textStyle="bold"
 android:textColor="#ff000000"
android:layout_weight="1"
 />
 <EditText
 android:layout_width="match_parent"
 android:layout_height="wrap_content"
```

```
 android:textSize="18sp"
 android:layout_weight="2"
 />
 <Button
 android:id="@+id/btnGo"
 android:layout_width="125dip"
 android:layout_height="wrap_content"
 android:text="Go"
 android:textStyle="bold"
 android:layout_weight="1"
 />
</LinearLayout>
```

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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:orientation="vertical"
 tools:context=".MainActivity">
 <ListView
 android:id="@+id/listview1"
 android:layout_width="match_parent"
 android:layout_height="wrap_content"
 android:gravity="center"
 />
</LinearLayout>
```

activity_orientation.xml

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<LinearLayout 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:id="@+id/orientation"
 android:layout_width="match_parent"
 android:layout_height="match_parent"
 android:orientation="horizontal"
 android:background="#ff0033cc"
 tools:context=".orientation">
<TextView
 android:id="@+id/labelUserName"
 android:layout_width="wrap_content"
 android:layout_height="wrap_content"
 android:background="#ffff0066"
 android:text="User Name"
 android:textSize="16sp"
 android:textStyle="bold"
 android:textColor="#ff000000"
 />
 <EditText
 android:id="@+id/ediName"
 android:layout_width="wrap_content"
 android:layout_height="wrap_content"
 android:textSize="18sp"
 />
 <Button
 android:id="@+id/btnGo"
 android:layout_width="wrap_content"
 android:layout_height="wrap_content"
 android:text="Go"
```

```
 android:textStyle="bold"
 />
</LinearLayout>
```

activity_padding.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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:orientation="vertical"
 tools:context=".padding">
 <TextView
 android:id="@+id/labelUserName"
 android:layout_width="match_parent"
 android:layout_height="wrap_content"
 android:background="#ffff0066"
 android:text="User Name"
 android:textSize="16sp"
 android:textStyle="bold"
 android:textColor="#ff000000"
 />
 <EditText
 android:layout_width="match_parent"
 android:layout_height="wrap_content"
 android:textSize="18sp"
 android:padding="50dp"
 android:layout_margin="50dp"
 />
 <Button
```

```
 android:id="@+id/btnGo"
 android:layout_width="125dip"
android:layout_height="wrap_content"
 android:text="Go"
 android:textStyle="bold"
 />
</LinearLayout>
```

activity_relativelayout.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout 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:id="@+id/rl1"
 android:layout_width="match_parent"
 android:layout_height="match_parent"
 tools:context=".relativelayout">
 <TextView
 android:id="@+id/lblUserName"
 android:layout_width="match_parent"
 android:layout_height="wrap_content"
 android:background="#ffff0066"
 android:text="User Name"
 android:textStyle="bold"
 android:textColor="#ff000000"
 android:layout_alignParentTop="true"
 android:layout_alignParentLeft="true">
 </TextView>
<EditText
 android:id="@+id/ediUserName"
 android:layout_width="match_parent"
```

```
 android:layout_height="wrap_content"
 android:layout_below="@+id/lblUserName"
 android:layout_alignParentLeft="true"
 android:padding="20dip"
 android:layout_alignTop="@+id/rl1"
 tools:ignore="NotSibling" />
 <Button
 android:id="@+id/btnGo"
 android:layout_width="wrap_content"
 android:layout_height="wrap_content"
 android:layout_below="@+id/ediUserName"
 android:layout_alignRight="@+id/ediUserName"
 android:text="Go"
 android:textStyle="bold">
 </Button>
 <Button
 android:id="@+id/btnCancel"
 android:layout_width="wrap_content"
 android:layout_height="wrap_content"
 android:layout_toLeftOf="@+id/btnGo"
 android:layout_below="@+id/ediUserName"
 android:text="Cancel"
 android:textStyle="bold">
 </Button>
</RelativeLayout>
```

activity_scrollviewlayout.xml

```
<?xml version="1.0" encoding="utf-8"?>
<ScrollView 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:background="#ff009999"
 tools:context=".scrollviewlayout">
 <LinearLayout
 android:id="@+id/myLinearLayoutVertical"
 android:layout_width="match_parent"
 android:layout_height="match_parent"
 android:orientation="vertical"
 >
 <LinearLayout
 android:id="@+id/myLinearLayoutHorizontal1"
 android:layout_width="match_parent"
 android:layout_height="match_parent"
 android:orientation="horizontal"
 >
 <ImageView
 android:id="@+id/myPicture"
 android:layout_width="wrap_content"
 android:layout_height="wrap_content"
 android:src="@drawable/ic_launcher_background" />
 <TextView
 android:id="@+id/textView1"
 android:layout_width="match_parent"
android:layout_height="wrap_content"
 android:text="Line1"
 android:textSize="70dip" />
 </LinearLayout>
 <View
 android:layout_width="match_parent"
```

```
 android:layout_height="6dip"
 android:background="#ffccffcc" />
 <TextView
 android:id="@+id/textView2"
 android:layout_width="match_parent"
 android:layout_height="wrap_content"
 android:text="Line2"
 android:textSize="70dip" />
 <View
 android:layout_width="match_parent"
 android:layout_height="6dip"
 android:background="#ffccffcc" />
 <TextView
 android:id="@+id/textView3"
 android:layout_width="match_parent"
 android:layout_height="wrap_content"
 android:text="Line3"
 android:textSize="70dip" />
 <View
 android:layout_width="match_parent"
 android:layout_height="6dip"
 android:background="#ffccffcc" />
 <TextView
 android:id="@+id/textView4"
 android:layout_width="match_parent"
android:layout_height="wrap_content"
 android:text="Line4"
 android:textSize="70dip" />
 <View
 android:layout_width="match_parent"
```

```
 android:layout_height="6dip"
 android:background="#ffccffcc" />
 <TextView
 android:id="@+id/textView5"
 android:layout_width="match_parent"
 android:layout_height="wrap_content"
 android:text="Line5"
 android:textSize="70dip" />
 </LinearLayout>
</ScrollView>
```

activity_tablelayout.xml

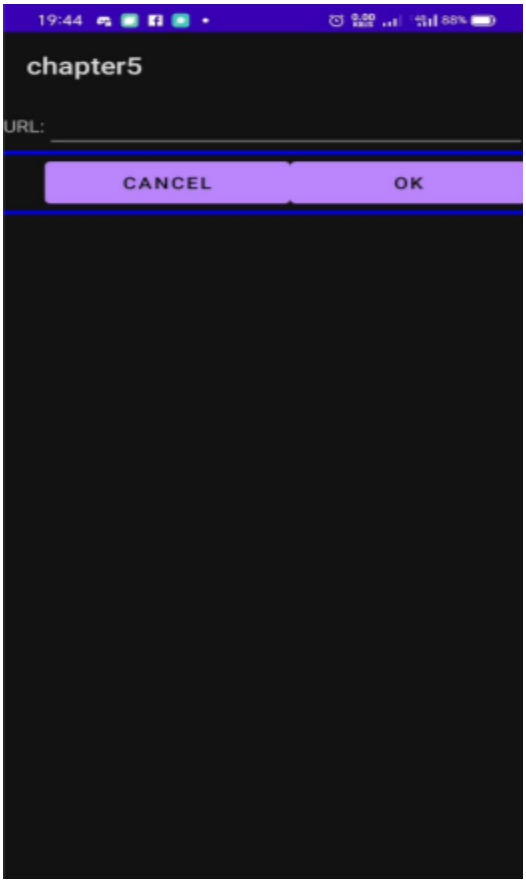
```
<?xml version="1.0" encoding="utf-8"?>
<TableLayout xmlns:android="http://schemas.android.com/apk/res/android"
 xmlns:app="http://schemas.android.com/apk/res-auto"
 xmlns:tools="http://schemas.android.com/tools"
 android:layout_width="match_parent"
 android:layout_height="match_parent"
 android:orientation="vertical"
 android:stretchColumns ="2,3,4"
 tools:context=".tablelayout">
 <TableRow>
<TextView
 android:text="URL:" />
 <EditText android:id="@+id/ediUrl"
 android:layout_span="3"/>
 </TableRow>
 <View
 android:layout_height="3dip"
 android:background="#0000FF" />
 <TableRow>
```

```
 <Button android:id="@+id/cancel"
 android:layout_column="2"
 android:text="Cancel" />
 <Button android:id="@+id/ok"
 android:text="OK" />
 </TableRow>
 <View
 android:layout_height="3dip"
 android:background="#0000FF" />
</TableLayout>
```

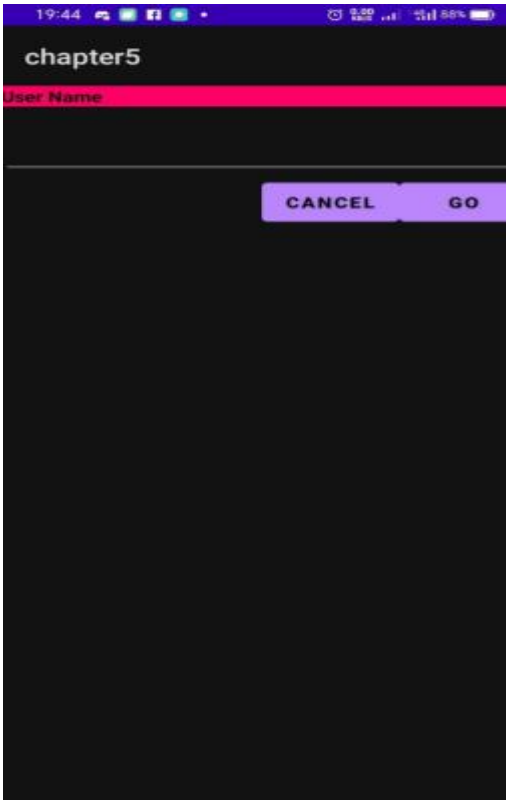
list_view.xml

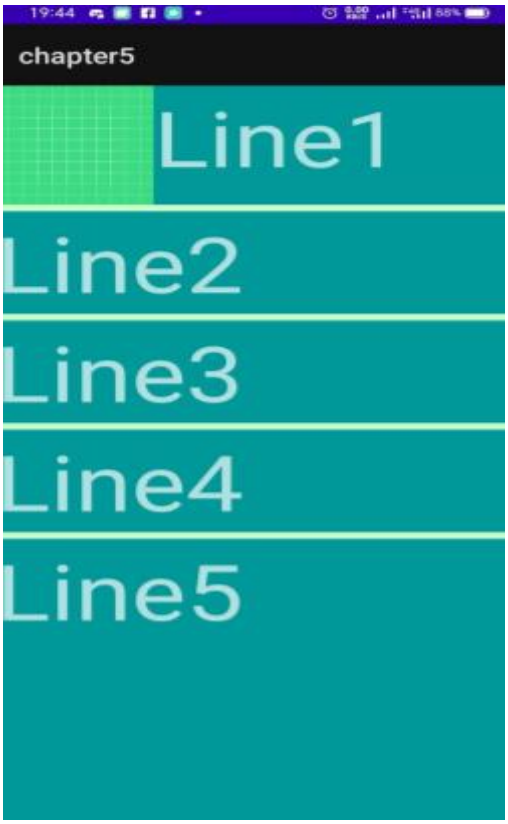
```
<?xml version="1.0" encoding="utf-8"?>
<TextView xmlns:android="http://schemas.android.com/apk/res/android"
 android:layout_width="match_parent"
 android:layout_height="match_parent"
 android:gravity="center"
 android:orientation="vertical"
android:textSize="20dp"
 >
</TextView>
```

Screenshots:


19:44
chapter5
URL:
CANCEL
OK

19:44
chapter5
User Name
GO


19:44
chapter5
User Name
CANCEL
GO


19:44
chapter5
Line1
Line2
Line3
Line4
Line5

19:44
chapter5
User Name
GO

19:43
chapter5
Linear Layout
orientation
fill model
weight
gravity
padding & margin

Chapter 6

Java classes:

ACTV.java

```
package com.example.chapter6;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.text.Editable;

import android.text.TextWatcher;

import android.widget.AdapterView;

import android.widget.ArrayAdapter;

import android.widget.AutoCompleteTextView;
```

```
import android.widget.TextView;
public class ACTV extends AppCompatActivity implements TextWatcher {
 AutoCompleteTextView _var1;
 TextView textView;
 String[] items= { "this", "is", "a",
 "really", "really2", "really3",
 "really4", "really5", "silly", "list"};
 @Override
 protected void onCreate(Bundle savedInstanceState) {
 super.onCreate(savedInstanceState);
 setContentView(R.layout.activity_actv);
 _var1 = findViewById(R.id.edit);
 textView = findViewById(R.id.txt2);
 ArrayAdapter<String> adp = new ArrayAdapter<String>(this,R.layout.textview,items);
 _var1.setAdapter(adp);
 _var1.addTextChangedListener(this);
 }
 @Override
 public void beforeTextChanged(CharSequence charSequence, int i, int i1, int i2) {
 }
 @Override
 public void onTextChanged(CharSequence charSequence, int i, int i1, int i2) {
 textView.setText(_var1.getText());
 }
 @Override
 public void afterTextChanged(Editable editable) {
 }
}
```

customlists.java

```
package com.example.chapter6;
```

```
import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;
import android.app.Activity;
import android.content.Context;
import android.os.Bundle;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.ArrayAdapter;
import android.widget.ImageView;
import android.widget.ListView;
import android.widget.TextView;
import org.w3c.dom.Text;
import java.util.ArrayList;
import java.util.Arrays;
import java.util.List;
public class customlists extends AppCompatActivity {
 private TextView txt5;
 ListView lv;
 @Override
 protected void onCreate(Bundle savedInstanceState) {
 super.onCreate(savedInstanceState);
 setContentView(R.layout.activity_customlists);
 txt5 = findViewById(R.id.txt5);
 lv = findViewById(R.id.list2);
 String[] items= { "this", "is", "a", "really", "really2",
 "really3", "really4", "really5", "silly", "list"};
 //List<String> al = Arrays.asList(items);
 lv.setAdapter(new IconicAdapter(this,items));
}
```

```
}
class IconicAdapter extends ArrayAdapter{
 Activity context;
 String[] items;
 IconicAdapter(Activity context,String[] items) {
 super(context, R.layout.customrow, items);
 this.context = context;
 this.items = new String[items.length];
 this.items = items;
 }
 public View getView(int position, View convertView, ViewGroup parent) {
 LayoutInflater inflater = context.getLayoutInflater();
 View c_row = inflater.inflate(R.layout.customrow,null);
 TextView t = c_row.findViewById(R.id.txt6);
 t.setText(items[position]);
 return c_row;
 //ImageView i = c_row.findViewById(R.id.icon);
 }
}
```

gallary.java

```
package com.example.chapter6;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Context;
import android.os.Bundle;
import android.view.View;
import android.view.ViewGroup;
import android.widget.AdapterView;
import android.widget.BaseAdapter;
import android.widget.Gallery;
import android.widget.TextView;
```

```
import android.widget.ImageView;
public class gallary extends AppCompatActivity{
 TextView txt3;
 Gallery gllry;
 @Override
 protected void onCreate(Bundle savedInstanceState) {
 super.onCreate(savedInstanceState);
 setContentView(R.layout.activity_gallary);
 txt3 = findViewById(R.id.txt3);
 gllry = findViewById(R.id.myGallery);
 int[] img_ids = { R.drawable.image1, R.drawable.image2,
 R.drawable.image3, R.drawable.image4,R.drawable.image1, R.drawable.image2,
 R.drawable.image3, R.drawable.image4,R.drawable.image1, R.drawable.image2,
 R.drawable.image3, R.drawable.image4 };
 gllry.setAdapter(new ImageAdapter(this,img_ids,12));
 gllry.setOnItemSelectedListener(new AdapterView.OnItemSelectedListener() {
 @Override
 public void onItemSelected(AdapterView<?> adapterView, View view, int i, long l) {
 txt3.setText(" selected option: " + i );
}
 @Override
 public void onNothingSelected(AdapterView<?> adapterView) {
 }
 });
 }
}
class ImageAdapter extends BaseAdapter{
 private Context myContext;
 // Put some images to project-folder: /res/drawable/
// format: jpg, gif, png, bmp, ...
```

```
private int[] myImageIds;
/** Simple Constructor saving the 'parent' context. */
public ImageAdapter(Context c) {
myImageIds = new int[]{ R.drawable.image1, R.drawable.image2,
R.drawable.image3, R.drawable.image4 };
this.myContext = c;
}
public ImageAdapter(Context c,int[] img_ids, int count)
{
this.myContext = c;
myImageIds = new int[count];
for(int k=0;k<count;k++){myImageIds[k] = img_ids[k];}
}
// inherited abstract methods - must be implemented
// Returns count of images, and individual IDs
@Override
public int getCount() {
return this.myImageIds.length;
}
@Override
public Object getItem(int i) {
return i;
}
@Override
public long getItemId(int i) {
return i;
}
@Override
public View getView(int i, View view, ViewGroup viewGroup) {
// Get a View to display image data
```

```
 ImageView iv = new ImageView(this.myContext);
 iv.setImageResource(this.myImageIds[i]);
 // Image should be scaled somehow
//iv.setScaleType(ImageView.ScaleType.CENTER);
//iv.setScaleType(ImageView.ScaleType.CENTER_CROP);
//iv.setScaleType(ImageView.ScaleType.CENTER_INSIDE);
//iv.setScaleType(ImageView.ScaleType.FIT_CENTER);
//iv.setScaleType(ImageView.ScaleType.FIT_XY);
 iv.setScaleType(ImageView.ScaleType.FIT_END);
 //iv.setScaleType(ImageView.ScaleType.FIT_START);
// Set the Width & Height of the individual images
 iv.setLayoutParams(new Gallery.LayoutParams(90, 75));
 return iv;
 }
}
```

gridview.java

```
package com.example.chapter6;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.GridView;
import android.widget.TextView;
public class gridview extends AppCompatActivity implements AdapterView.OnItemClickListener {
 GridView grdV;
 TextView textView;
 String[] items= { "this", "is", "a", "really", "really2", "really3","really4", "really5", "silly", "list"};
 @Override
 protected void onCreate(Bundle savedInstanceState) {
```

```
 super.onCreate(savedInstanceState);
 setContentView(R.layout.activity_gridview);
grdV = findViewById(R.id.grdv);
 textView = findViewById(R.id.txt1);
 ArrayAdapter<String> adp = new ArrayAdapter<String >(this,R.layout.textview,items);
 grdV.setAdapter(adp);
 grdV.setOnItemClickListener(this);
 }
 @Override
 public void onItemClick(AdapterView<?> adapterView, View view, int i, long l) {
 switch(adapterView.getId()){
 case R.id.grdv:{
 textView.setText(items[i]);
 break;
 }
 }
 }
}
```

imgGridView.java

```
package com.example.chapter6;
import androidx.appcompat.app.AppCompatActivity;
import android.annotation.SuppressLint;
import android.content.Context;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.view.ViewGroup;
import android.widget.Adapter;
import android.widget.AdapterView;
import android.widget.BaseAdapter;
```

```
import android.widget.Button;
import android.widget.GridView;
import android.widget.ImageView;
import android.widget.TextView;
import android.widget.Toast;
public class imgGridView extends AppCompatActivity implements AdapterView.OnItemClickListener
{
 TextView tvMsg;
 GridView gridview;
 TextView tvSoloMsg;
 int[] mThumbIds;
 ImageView ivSoloPicture;
 Button btnBack;
 Intent startintent;
 @Override
 protected void onCreate(Bundle savedInstanceState) {
 super.onCreate(savedInstanceState);
 setContentView(R.layout.activity_img_grid_view);
 startintent = getIntent();
 tvMsg = findViewById(R.id.tvMsg);
 gridview = findViewById(R.id.gridview2);
 mThumbIds = new int[]{R.drawable.image1,R.drawable.image2,
 R.drawable.image3,R.drawable.image4,R.drawable.image1,R.drawable.image2,
 R.drawable.image3,R.drawable.image4,R.drawable.image1,R.drawable.image2,
 R.drawable.image3,R.drawable.image4};
 gridview.setAdapter(new GridImageAdapter(this,mThumbIds));
gridview.setOnItemClickListener(this);
 }
 @Override
 public void onItemClick(AdapterView<?> adapterView, View view, int i, long l) {
```

```
 tvMsg.setText("Position: "+ i +
 " R.drawable.gallery_photo_"+ (i+1) );
// show selected picture in an individual view
 showScreen2(i);
 }
 private void showScreen2(int position){
// show the selected picture as a single frame
 setContentView(R.layout.solo_pic);
 tvSoloMsg= findViewById(R.id.tvSoloMsg);
 ivSoloPicture= findViewById(R.id.imgSoloPhoto);
 tvSoloMsg.setText("image "+ position);
 ivSoloPicture.setImageResource(mThumbIds[position]);
 btnBack= findViewById(R.id.btnBack);
 btnBack.setOnClickListener(new View.OnClickListener() {
 @Override
 public void onClick(View view) {
 startActivity(startintent);
 }
// redraw the main screen beginning the whole app.
 });
}
}
class GridImageAdapter extends BaseAdapter{
 private Context mContext;
 private int mThumbIds[];
 public GridImageAdapter(Context c,int[] ids){
 this.mContext = c;
 mThumbIds = new int[ids.length];
 for(int k=0;k<ids.length;k++){mThumbIds[k]=ids[k];}
 }
```

```
@Override
public int getCount() {
return mThumbIds.length;
}
@SuppressLint("WrongConstant")
@Override
public Object getItem(int i) {
Toast.makeText(mContext, "Pos: " + i, 1).show();
return null;
}
@Override
public long getItemId(int i) {
return 0;
}
@Override
public View getView(int i, View view, ViewGroup viewGroup) {
ImageView imageView;
if (view == null) {
// if it's not recycled, initialize some attributes
imageView = new ImageView(mContext);
imageView.setLayoutParams(new GridView.LayoutParams(85, 85));
imageView.setScaleType(ImageView.ScaleType.CENTER_CROP);
imageView.setPadding(8, 8, 8, 8); }
else {
imageView = (ImageView) view;
}
imageView.setImageResource(mThumbIds[i]);
return imageView;
}
}
```

MainActivity.java

```
package com.example.chapter6;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.graphics.ColorSpace;
import android.os.Bundle;
import android.view.View;
import android.widget.Adapter;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.Spinner;
import android.widget.TextView;
public class MainActivity extends AppCompatActivity implements
AdapterView.OnItemSelectedListener {
 private Spinner spinner;
 //private TextView textView;
 String[] spinner_items;
 @Override
 protected void onCreate(Bundle savedInstanceState) {
 super.onCreate(savedInstanceState);
 setContentView(R.layout.activity_main);
 spinner = findViewById(R.id.spinner);
 //textView = findViewById(R.id.textView);
 spinner_items = new String[]{"Select Option from
spinner","GridView","AutoCompleteTextView",
 "gallary widget","Image based GridView","Customized Lists"};
 ArrayAdapter<String> adp = new ArrayAdapter<String>(this,R.layout.textview,spinner_items);
 adp.setDropDownViewResource(R.layout.textview);
 spinner.setAdapter(adp);
 spinner.setOnItemSelectedListener(this);
```

```
}
@Override
public void onItemSelected(AdapterView<?> adapterView, View view, int i, long l) {
switch(adapterView.getId()){
case R.id.spinner:{
switch(i){
case 1:{
startActivity(new Intent(getApplicationContext(),gridview.class));
break;
}
case 2:{
startActivity(new Intent(getApplicationContext(),ACTV.class));
break;
}
case 3:{
startActivity(new Intent(getApplicationContext(),gallary.class));
break;
}
case 4:{
startActivity(new Intent(getApplicationContext(),imgGridView.class));
break;
}
case 5:{
startActivity(new Intent(getApplicationContext(),customlists.class));
break;
}
}
break;
}
}
```

```
 }
 @Override
 public void onNothingSelected(AdapterView<?> adapterView) {
 }
}
```

Xml layouts:

activity_actv.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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:orientation="vertical"
 tools:context=".ACTV">
 <TextView
 android:id="@+id/txt2"
 android:layout_width="fill_parent"
 android:layout_height="wrap_content"
 android:background="#ff0033cc"
 android:textSize="14pt"
 android:textStyle="bold"
 />
 <AutoCompleteTextView
 android:layout_width="match_parent"
 android:layout_height="wrap_content"
 android:completionThreshold="3"
 android:id="@+id/edit"
 />
```

```
</LinearLayout>
```

activity_customlists.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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:orientation="vertical"
 >
 <TextView
 android:id="@+id/txt5"
 android:layout_width="match_parent"
 android:layout_height="wrap_content"
 android:background="#ff0033cc"
 android:textSize="20px"
 android:textStyle="bold"
 android:textColor="#ffffffff"
 >
 </TextView>
 <ListView
 android:id="@+id/list2"
 android:layout_width="match_parent"
 android:layout_height="match_parent"
 >
</ListView>
</LinearLayout>
```

activity_gallary.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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:orientation="vertical"
 tools:context=".gallary">
 <TextView
 android:layout_width="match_parent"
 android:layout_height="wrap_content"
 android:text="SDK1.5 /samples/.../view/Gallery1.java"
 />
 <TextView
 android:id="@+id/txt3"
 android:layout_width="match_parent"
 android:layout_height="wrap_content"
 android:background="#ff0000ff"
/>
 <Gallery
 android:id="@+id/myGallery"
 android:layout_width="match_parent"
 android:layout_height="wrap_content"
 />
</LinearLayout>
```

activity_gridview.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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:orientation="vertical"
 tools:context=".gridview">
 <TextView
 android:id="@+id/txt1"
 android:layout_width="fill_parent"
 android:layout_height="wrap_content"
 android:background="#ff0033cc"
 android:textSize="14pt"
android:textStyle="bold"
 />
 <GridView
 android:id="@+id/grdv"
 android:background="#ff0000ff"
 android:layout_width="match_parent"
 android:layout_height="match_parent"
 android:verticalSpacing="35px"
 android:horizontalSpacing="5px"
 android:numColumns="auto_fit"
 android:columnWidth="100px"
 android:stretchMode="columnWidth"
 android:gravity="center"
 />
</LinearLayout>
```

activity_img_grid_view.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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:orientation="vertical"
 tools:context=".imgGridView">
<TextView
 android:id="@+id/tvMsg"
 android:layout_width="match_parent"
 android:layout_height="wrap_content"
 android:background="#ff0000ff"
 />
 <View
 android:layout_width="match_parent"
 android:layout_height="3px"
 android:background="#ffffffff"
 />
 <GridView
 android:id="@+id/gridview2"
 android:layout_width="match_parent"
 android:layout_height="match_parent"
 android:numColumns="auto_fit"
 android:verticalSpacing="10dp"
 android:horizontalSpacing="10dp"
 android:columnWidth="90dp"
 android:stretchMode="columnWidth"
 android:gravity="center"
 android:background="#ff777777" />
</LinearLayout>
```

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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:orientation="vertical"
 tools:context=".MainActivity">
 <TextView
 android:id="@+id/textView"
 android:layout_width="wrap_content"
 android:layout_height="wrap_content"
 android:layout_gravity="center"
 android:text="Chapter 6"
 />
 <Spinner
 android:id="@+id/spinner"
 android:layout_width="250dp"
 android:layout_height="wrap_content"
 android:layout_gravity="center"
 android:layout_marginTop="30dp"
 />
</LinearLayout>
```

customrow.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/icon"
 android:layout_width="40px"
 android:layout_height="20sp"
 android:src="@drawable/ok"/>
```

```
 <TextView
 android:id="@+id/txt6"
 android:layout_width="wrap_content"
 android:layout_height="wrap_content"
 android:textSize="20sp"/>
</LinearLayout>
```

solo_pic.xml

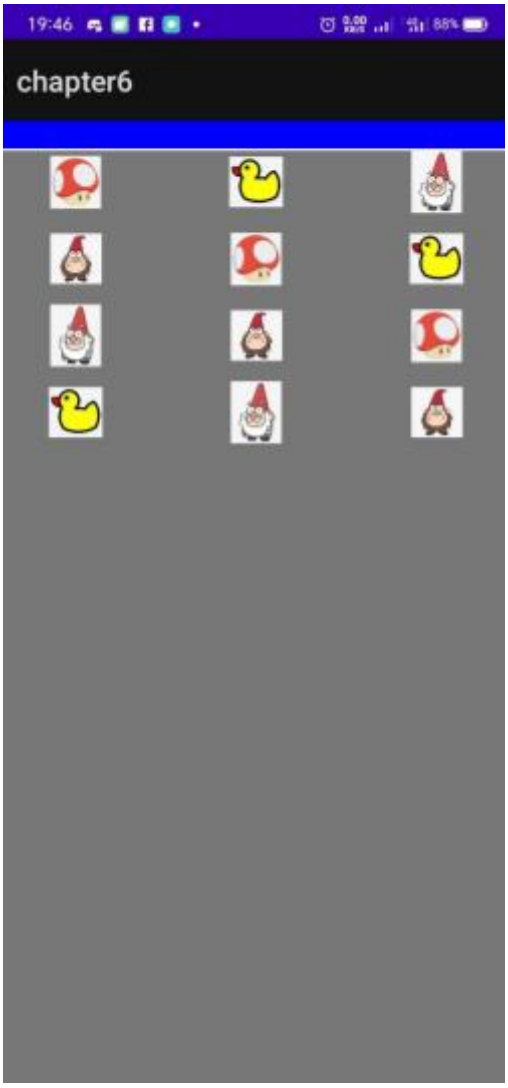
```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
 android:orientation="vertical"
 android:layout_width="match_parent"
 android:layout_height="match_parent"
 android:background="#ff005500"
 >
<TextView
 android:id="@+id/tvSoloMsg"
 android:layout_width="match_parent"
 android:layout_height="wrap_content"
 android:background="#ff0000ff" />
 <TextView
 android:layout_width="match_parent"
 android:layout_height="3px"
 android:background="#ffffffff" />
 <ImageView
 android:id="@+id/imgSoloPhoto"
 android:layout_width="match_parent"
 android:layout_height="fill_parent"
 android:layout_gravity="center|fill"
 android:layout_weight="2"
 />
```

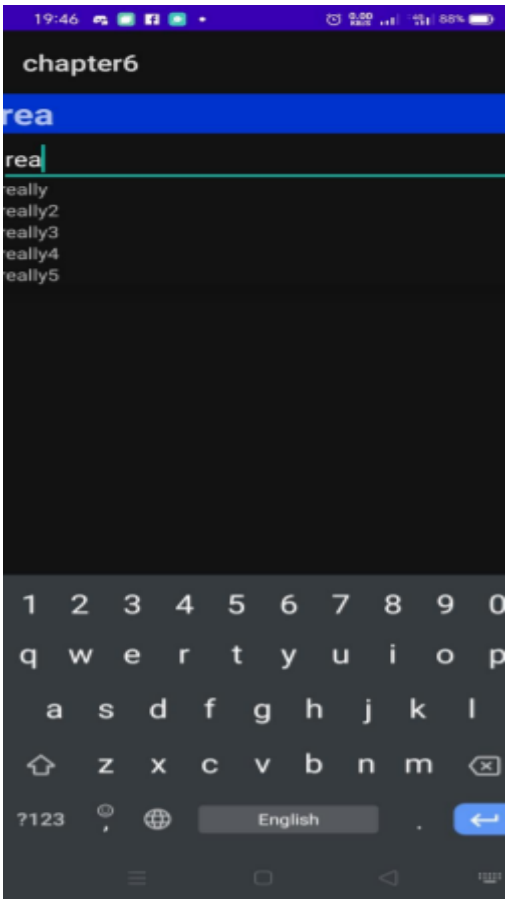
```
 <Button
 android:text="Back"
 android:id="@+id/btnBack"
 android:layout_width="wrap_content"
 android:layout_height="wrap_content"
 android:layout_gravity="center_horizontal" />
</LinearLayout>
```

textview.xml

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

Screenshots:




19:46
chapter6
rea
rea
eally
eally2
eally3
eally4
eally5
1 2 3 4 5 6 7 8 9 0
q w e r t y u i o p
a s d f g h j k l
z x c v b n m
?123
English

19:46
chapter6
this
is
a
really
really2
really3
really4
really5
silly
list

19:45
chapter6
this is a really really2 really3
really4 really5 silly list

19:46
chapter6
SDK1.5 /samples/.../view/Gallery1.java
selected option: 6

19:45
chapter6
Chapter 6
Select Option from spinner
GridView
AutoCompleteTextView
gallary widget
Image based GridView
Customized Lists