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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.AdapterView.OnItemClickListener;
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.AdapterView;
```

```
import android.widget.AdapterView;
```

```
import android.widget.AdapterView;
```

```
import android.widget.AdapterView;
```

```
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.AdapterView.OnItemClickListener;
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/r11"
    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/r11"
        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"
```

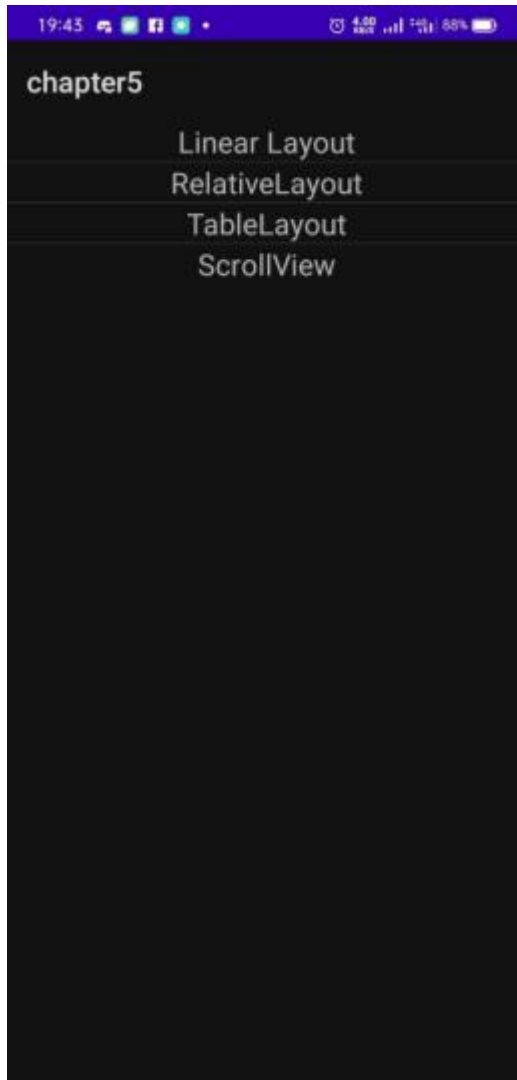
```
    android:orientation="vertical"
```

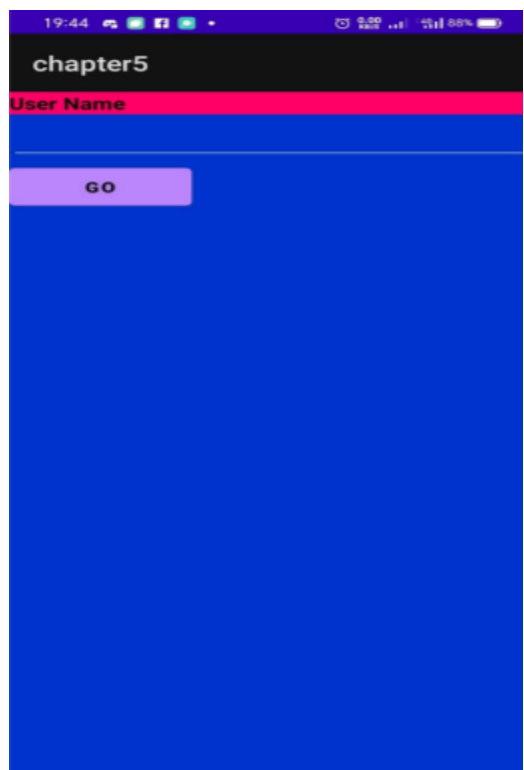
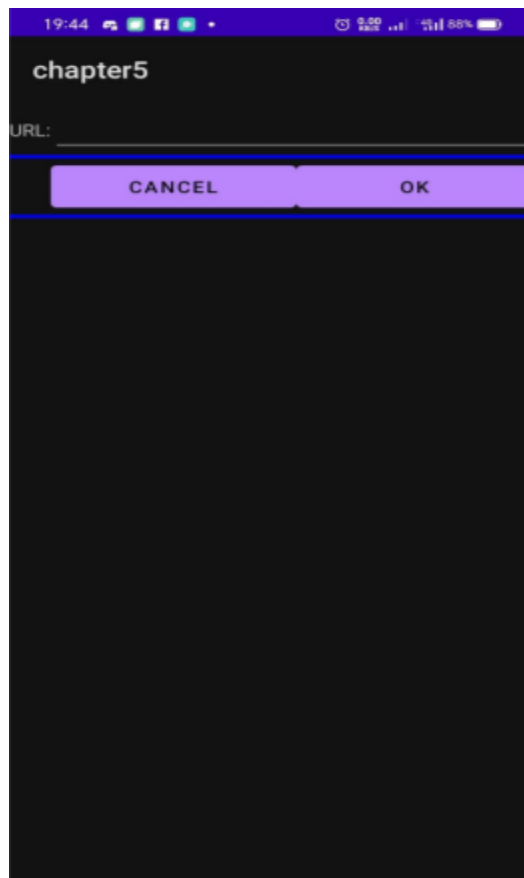
```
    android:textSize="20dp"
```

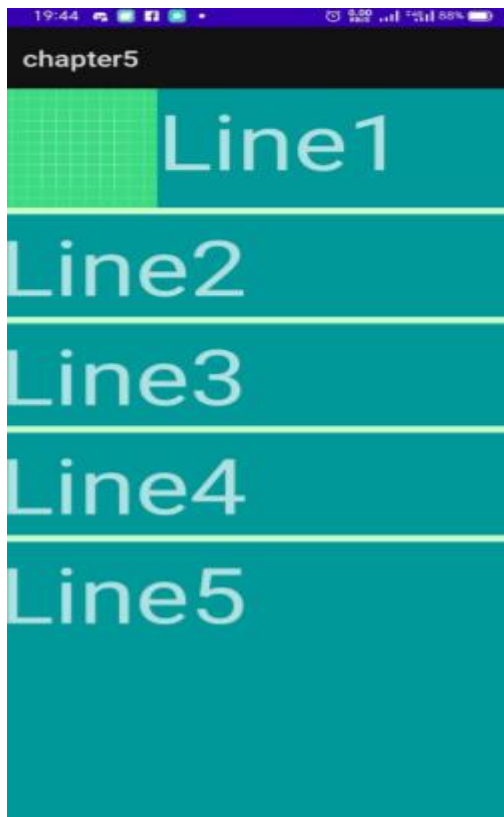
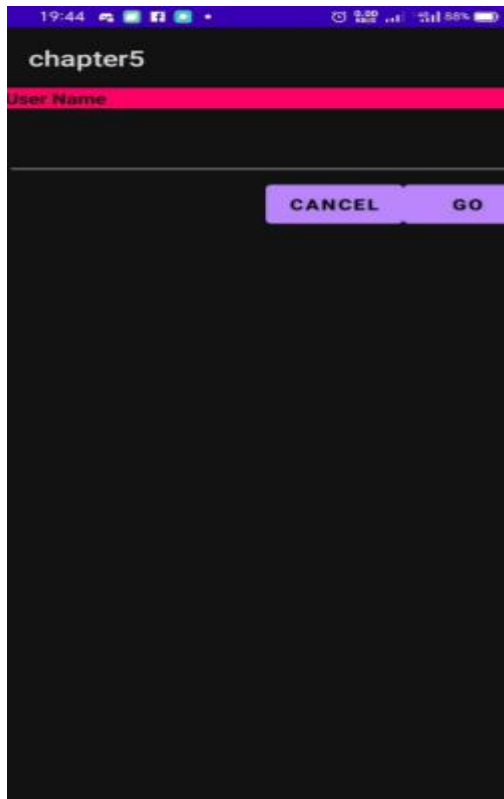
```
>
```

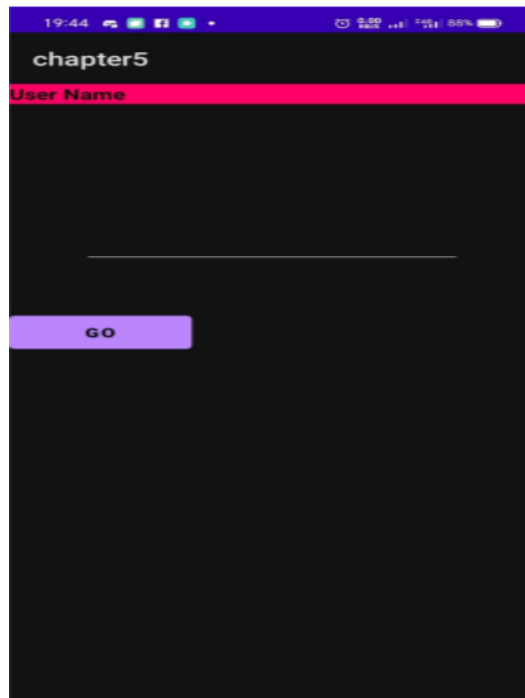
```
</TextView>
```

Screenshots:











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.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.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.AdapterView.OnItemSelectedListener;
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);
    }
}

```

gallery.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 gallery extends AppCompatActivity{

    TextView txt3;

    Gallery gllry;

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_gallery);

        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.setOnItemClickListener(new AdapterView.OnItemClickListener() {

            @Override

            public void onItemClick(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.AdapterView.OnItemClickListener;
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.AdapterView;
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;
}

@SuppressWarnings("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.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.ArrayAdapter;
import android.widget.Spinner;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity implements
    AdapterView.OnItemClickListener {

    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.setOnItemClickListener(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="#ffffff"

        >

    </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="#ffffff"
/>
```

```
<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="#ffffff" />
    <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" />
```

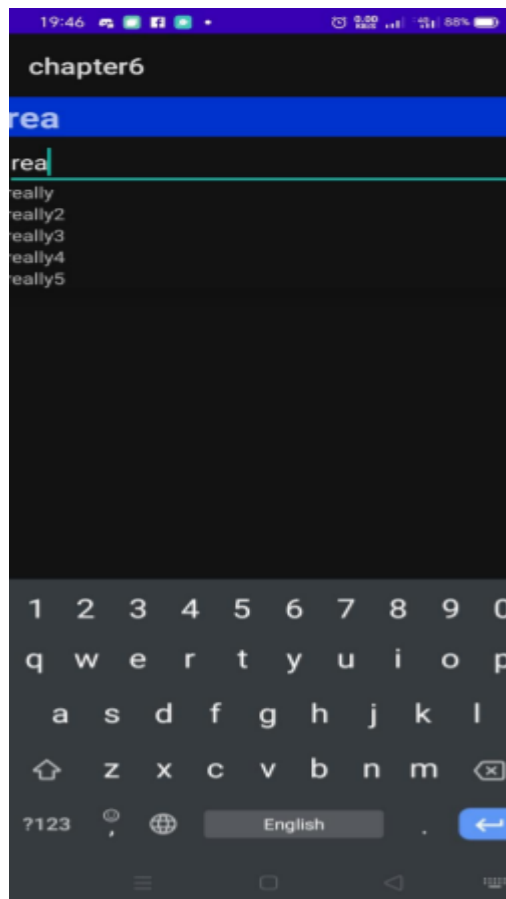
```
</LinearLayout>
```

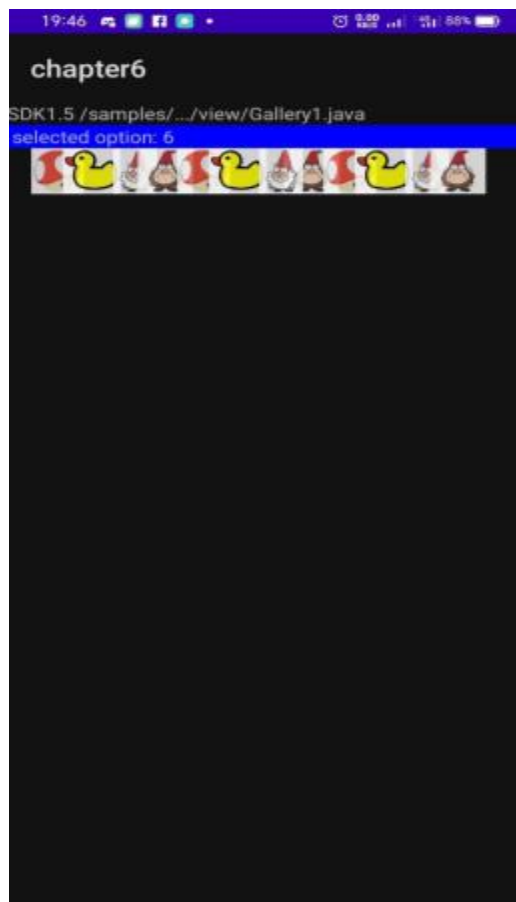
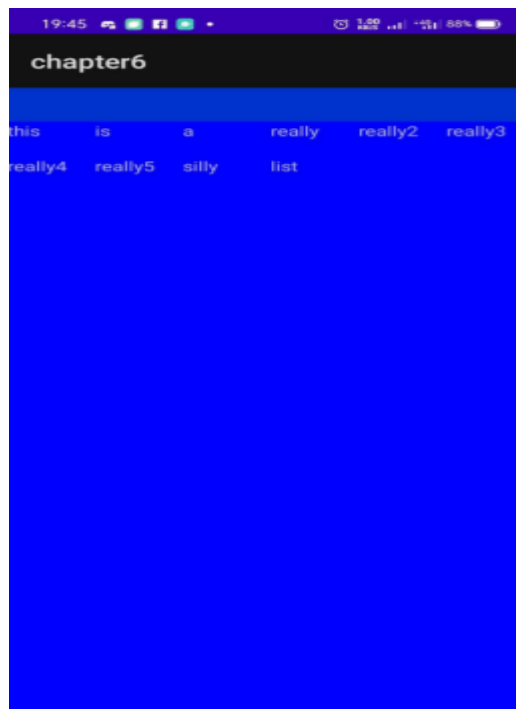
textview.xml

```
<?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:







chapter6

Chapter 6

- Select Option from spinner ▾
- GridView
- AutoCompleteTextView
- gallery widget
- Image based GridView
- Customized Lists