Enterprise Application Development
PRACTICAL WORK

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Chapter 5:

Java classes:

fill_model.java

```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

```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;
```

```java
                }
                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);
```

```java
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);
```

```java
                break;
}


        }



        }
});
}


}
```

ll_weight.java

```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

```java
package com.example.chapter5;


import androidx.appcompat.app.AppCompatActivity;
```

```java
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
```

```java
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:{

    }
  }
}

});


  }
}
```

```java
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.VERTI
            CAL);

        }else if(b.getInt("orientation")==0){
            temp.setOrientation(LinearLayout.HORIZON
            TAL);


        }
        }
}

}
```

padding.java

```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

```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

```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_scrollviewlayo
        ut);
    }
}
```

tablelayout.java

```java
package com.example.chapter5;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

public class tablelayout extends AppCompatActivity {

    @Override protected void
    onCreate(Bundle
```

```java
        savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_tablelayout);
    }
}
```

Xml layouts:

activity_fill_model.xml

```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="#ff0033
    cc"
    tools:context=".fill_model">

    <TextView
        android:id="@+id/labelUserName"
        android:layout_width="match_paren
        t"
        android:layout_height="wrap_conte
        nt" android:background="#ffff0066"
        android:text="User Name"
        android:textSize="16sp"
        android:textStyle="bold"
        android:textColor="#ff000000"
        />


    <EditText android:layout_width="match_paren
        t"
```

```xml
        android:layout_height="wrap_conte
        nt" android:textSize="18sp"
        />

    <Button android:id="@+id/btnGo"
        android:layout_width="125di p"
        android:layout_height="wrap_conte
        nt" android:text="Go"
        android:textStyle="bold"
        />
```

```xml
</LinearLayout> activity_linear_layout.xml
```

```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="vertica
    l"
    tools:context=".linearlayout"
    >

    <TextView
        android:id="@+id/textVie
        w"
        android:layout_width="match_paren
        t"
        android:layout_height="wrap_conte
        nt" android:text="Linear Layout"
        android:gravity="center"
        android:layout_marginTop="10dp"
        />
```

```xml
    <ListView
        android:id="@+id/listview
        2"
        android:layout_width="match_paren
        t"
        android:layout_height="wrap_conte
        nt" android:gravity="center"
        android:layout_marginTop="50dp"
        />
</LinearLayout>
```

activity_ll_gravity.xml

```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"
```

```xml
        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_paren
        t"
        android:layout_height="wrap_conte
        nt" android:text="Vertical"
        android:gravity="center"
        android:layout_marginTop="10dp" />
    <ListView
        android:id="@+id/listview
        3"
        android:layout_width="match_paren
        t"
```

```
        android:layout_height="wrap_conte
        nt" 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="vertica
    l"
    tools:context=".ll_weight">
    <TextView
        android:id="@+id/labelUserName"
        android:layout_width="match_paren
        t"
        android:layout_height="wrap_conte
        nt" android:background="#ffff0066"
        android:text="User Name"
        android:textSize="16sp"
        android:textStyle="bold"
        android:textColor="#ff000000"
```

```xml
            android:layout_weight="1"

            />

        <EditText
            android:layout_width="match_paren
            t"
            android:layout_height="wrap_conte
            nt" android:textSize="18sp"
            android:layout_weight="2"

            />

        <Button
            android:id="@+id/btnGo"
            android:layout_width="125di
            p"
            android:layout_height="wrap_conte
            nt" android:text="Go"
            android:textStyle="bold"
            android:layout_weight="1"

            />

</LinearLayout>
```

activity_main.xml

```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/resauto"
```

```xml
    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_paren
        t"
        android:layout_height="wrap_conte
        nt" android:gravity="center"
        />

</LinearLayout>
```

activity_orientation.xml

```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_paren t"
    android:layout_height="match_pare
    nt" android:orientation="horizontal"
    android:background="#ff0033cc"
    tools:context=".orientation">
    <TextView
    android:id="@+id/labelUserName"
    android:layout_width="wrap_content
        "
```

```xml
    android:layout_height="wrap_conte

    nt" android:background="#ffff0066"

    android:text="User Name"

    android:textSize="16sp"

    android:textStyle="bold"

    android:textColor="#ff000000"

    />


<EditText

    android:id="@+id/ediNam

    e"

    android:layout_width="wrap_content

    "

    android:layout_height="wrap_conte

    nt" android:textSize="18sp"

    />

<Button android:id="@+id/btnG o"

    android:layout_width="wrap_content

    "

    android:layout_height="wrap_conte

    nt" 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"
```

```xml
    android:layout_height="match_parent"
    android:orientation="vertica l" tools:context=".padding">
    <TextView
        android:id="@+id/labelUserName"
        android:layout_width="match_paren
        t"
        android:layout_height="wrap_conte
        nt" android:background="#ffff0066"
        android:text="User Name"
        android:textSize="16sp"
        android:textStyle="bold"
        android:textColor="#ff000000"
        />


    <EditText
        android:layout_width="match_paren
        t"
        android:layout_height="wrap_conte
        nt" android:textSize="18sp"
        android:padding="50dp"
        android:layout_margin="50dp"
        />

    <Button
        android:id="@+id/btnGo"
        android:layout_width="125di
        p"
        android:layout_height="wrap_
        conte nt" android:text="Go"
        android:textStyle="bold"
        />

</LinearLayout>
```

activity_relativelayout.xml

```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_paren t"
    android:layout_height="match_pare
    nt" tools:context=".relativelayout">
    <TextView
        android:id="@+id/lblUserName"
        android:layout_width="match_parent
        "
        android:layout_height="wrap_conten
        t" android:background="#ffff0066"
        android:text="User Name"
        android:textStyle="bold"
        android:textColor="#ff000000"
        android:layout_alignParentTop="tru
        e"
        android:layout_alignParentLeft="true
        ">

    </TextView>
    <EditText android:id="@+id/ediUserName"
        android:layout_width="match_paren
        t"
        android:layout_height="wrap_conte
        nt"
        android:layout_below="@+id/lblUserNa
        me"
        android:layout_alignParentLeft="true"
        android:padding="20dip"
```

```xml
        android:layout_alignTop="@+id/rl1"

        tools:ignore="NotSibling" />

    <Button

        android:id="@+id/btnG

        o"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_below="@+id/ediUserName"

        android:layout_alignRight="@+id/ediUserNa

        me" android:text="Go"

        android:textStyle="bold">

    </Button>

    <Button android:id="@+id/btnCanc

        el"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_toLeftOf="@+id/btnGo"

        android:layout_below="@+id/ediUserNa

        me" 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/myLinearLayoutVertic

        al"
```

```xml
    android:layout_width="match_parent"

    android:layout_height="match_parent"

    android:orientation="vertical"

>

<LinearLayout

    android:id="@+id/myLinearLayoutHorizont

    al1" 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_conte

        nt"

        android:src="@drawable/ic_launcher_background" />

    <TextView

        android:id="@+id/textView

        1"
        android:layout_width="match_parent"
```

```xml
        android:layout_height="wrap_conte
        nt" android:text="Line1"
        android:textSize="70dip" />
    </LinearLayout>
    <View
        android:layout_width="match_paren
        t" android:layout_height="6dip"
        android:background="#ffccffcc" />
    <TextView
        android:id="@+id/textView
        2" android:layout_width="match_paren
        t"
        android:layout_height="wrap_conte
        nt" android:text="Line2"
        android:textSize="70dip" />
    <View
        android:layout_width="match_paren
        t" android:layout_height="6dip"
        android:background="#ffccffcc" />
    <TextView
        android:id="@+id/textView
        3" android:layout_width="match_paren
        t"
        android:layout_height="wrap_conte
        nt" android:text="Line3"
        android:textSize="70dip" />
    <View
        android:layout_width="match_paren
        t" android:layout_height="6dip"
        android:background="#ffccffcc" />
    <TextView
        android:id="@+id/textView
        4" android:layout_width="match_parent"
```

```xml
            android:layout_height="wrap_conte
            nt" android:text="Line4"
            android:textSize="70dip" />
        <View
            android:layout_width="match_paren
            t" android:layout_height="6dip"
            android:background="#ffccffcc" />
        <TextView
            android:id="@+id/textView
            5"
            android:layout_width="match_paren
            t"
            android:layout_height="wrap_conte
            nt" android:text="Line5"
            android:textSize="70dip" />
    </LinearLayout>

</ScrollView>
```

activity_tablelayout.xml

```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:"
            />
```

```xml
        <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>
```
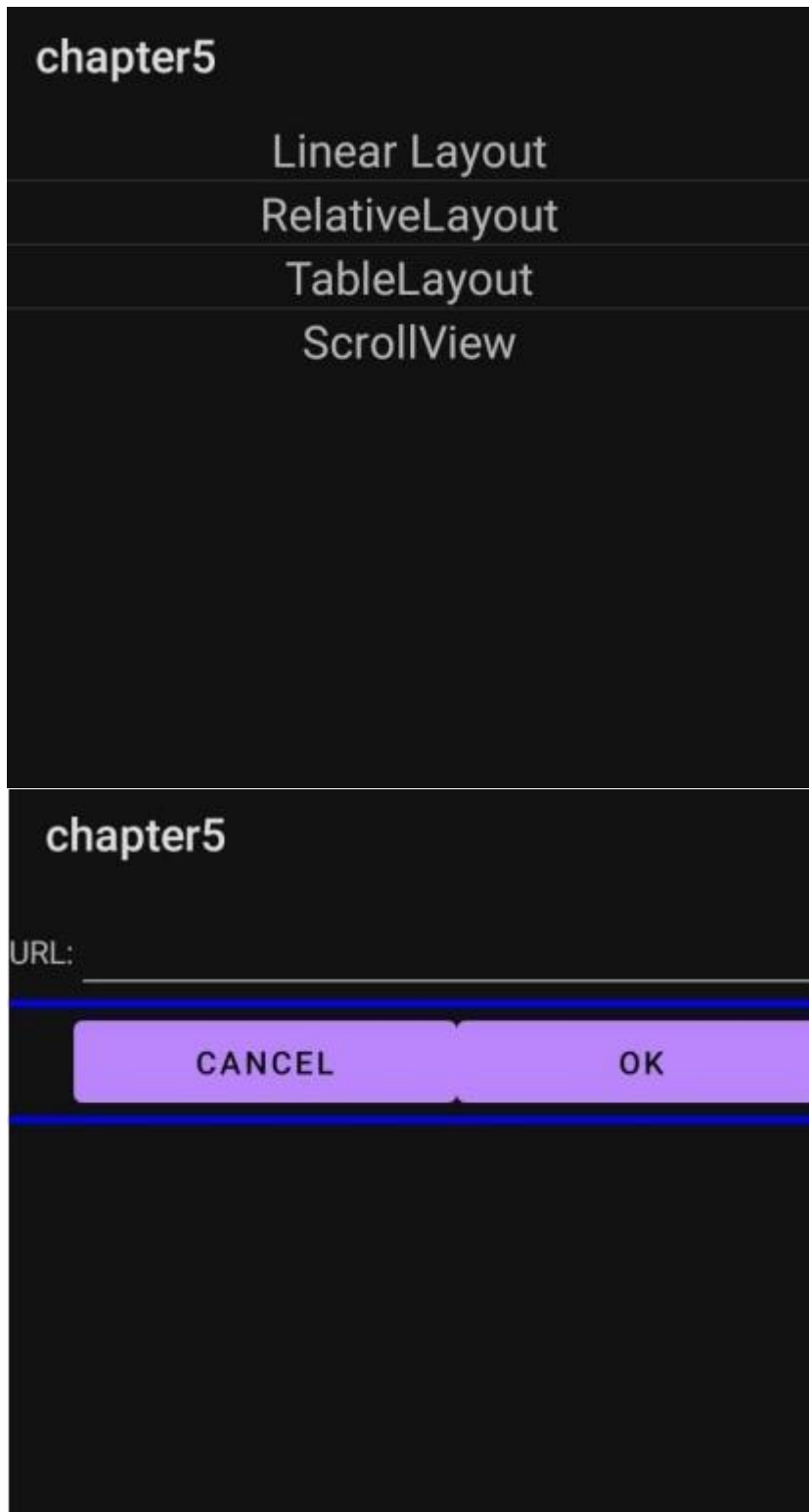
list_view.xml

```xml
<?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="vertica
    l"
```

```
    android:textSize="20dp"

    >

</TextView>
```
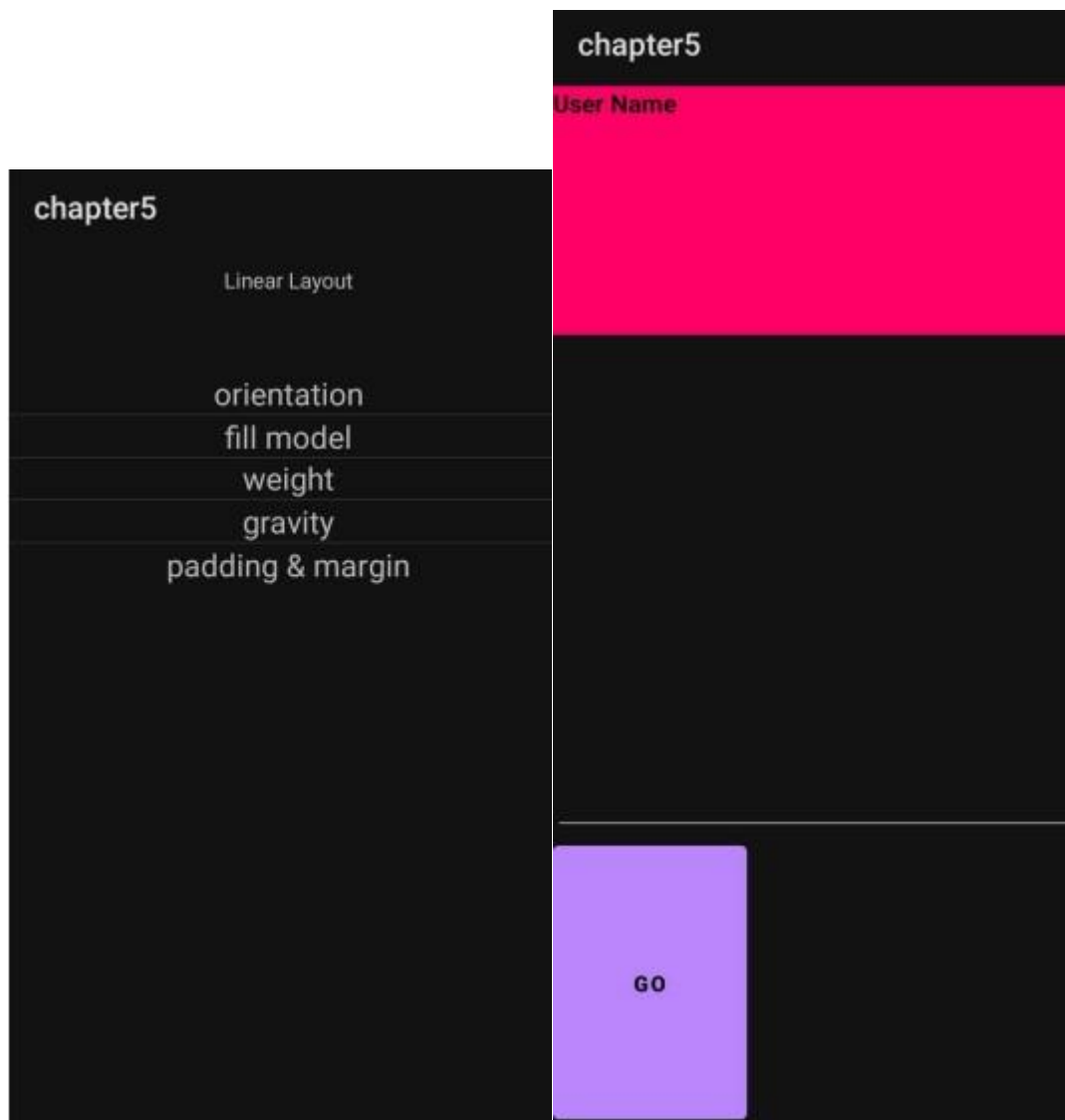
Screenshots:

User Name

GO

User Name

CANCEL   GO

Line1

Line2

Line3

Line4

Line5

User Name

GO

Linear Layout

orientation
fill model
weight
gravity
padding & margin

User Name

GO

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

```java
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.tex
      tview,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());
    }
```

```java
    @Override

    public void afterTextChanged(Editable editable) {

    }

}
```

customlists.java

```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;
```

```java
@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));
```

```java
    }

}

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
```

```java
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 );
```

```java
            }

            @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];}
```

```java
    }
    // 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_X
        Y);
        iv.setScaleType(ImageView.ScaleType.FIT_
        END);
        //iv.setScaleType(ImageView.ScaleType.FIT_START);
// Set the Width & Height of the individual images
        iv.setLayoutParams(new
```

```java
            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);
```

```java
        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;
```

```java
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_vi

        e w); 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.i

            mage2,

            R.drawable.image3,R.drawable.image4,R.drawable.image1,R.drawable.i

        mage2, R.drawable.image3,R.drawable.image4}; gridview.setAdapter(new

        GridImageAdapter(this,mThumbIds));
```

```java
        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[positi
        on]); 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.



        });
    }

}
```

```java
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("WrongConsta
    nt") @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));
```

```java
            imageView.setScaleType(ImageView.ScaleType.CENTER_C
            ROP); imageView.setPadding(8, 8, 8, 8); }
        else {
            imageView = (ImageView) view;
        }
        imageView.setImageResource(mThumbId
        s[i]); return imageView;
    }
}
```

MainActivity.java

```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
```

```java
        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(t

        his);

    }
    @Override
    public void onItemSelected(AdapterView<?> adapterView, View view, int i,
        long l) { switch(adapterView.getId()){

            case

                R.id.spinner:{

                switch(i){ case

                1:{

                startActivity(n

                ew

                    Intent(getApplicationContext(),gridview.class)); break;
```

```java
                }
                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"?>

```xml
<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="vertica l" tools:context=".ACTV">



    <TextView android:id="@+id/txt2
        "
        android:layout_width="fill_parent"
        android:layout_height="wrap_conte
        nt" android:background="#ff0033cc"
        android:textSize="14pt"
        android:textStyle="bold"
        />

    <AutoCompleteTextView
        android:layout_width="match_paren
        t"
        android:layout_height="wrap_conte
        nt"
        android:completionThreshold="3"
        android:id="@+id/edit"


        />


</LinearLayout>
```

activity_customlists.xml

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

```xml
<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_paren
        t"
        android:layout_height="wrap_conte
        nt" android:background="#ff0033cc"
        android:textSize="20px"
        android:textStyle="bold"
        android:textColor="#ffffffff"
        >
    </TextView>
    <ListView
        android:id="@+id/list2
        "
        android:layout_width="match_paren
        t"
        android:layout_height="match_pare
        nt"
        >
```

```xml
    </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="vertica l" tools:context=".gallary">



    <TextView
        android:layout_width="match_paren
        t"
        android:layout_height="wrap_conte
        nt"
        android:text="SDK1.5 /samples/.../view/Gallery1.java" />
    <TextView android:id="@+id/txt3
        "
        android:layout_width="match_paren
        t"
        android:layout_height="wrap_conte
        nt" android:background="#ff0000ff"
```

```xml
                />
            <Gallery
                android:id="@+id/myGaller
                y"
                android:layout_width="match_paren
                t"
                android:layout_height="wrap_conte
                nt"


                />



    </LinearLayout>
```

activity_gridview.xml

```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="vertica l" 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"

        />
```

```xml
        <GridView
            android:id="@+id/grdv"
            android:background="#ff0000
            ff"
            android:layout_width="match_paren
            t"
            android:layout_height="match_pare
            nt" 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/tvMs g"
        android:layout_width="match_paren
        t"
```

```xml
        android:layout_height="wrap_conte
        nt" android:background="#ff0000ff"
        />
    <View
        android:layout_width="match_paren
        t" android:layout_height="3px"
        android:background="#ffffffff"
        /> <GridView
    android:id="@+id/gridview2"
    android:layout_width="match_paren
    t"
    android:layout_height="match_pare
    nt" 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
<?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">
```

```xml
    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content
"
        android:layout_height="wrap_conte
nt" android:layout_gravity="center"
        android:text="Chapter 6"
        />
    <Spinner
        android:id="@+id/spinner"
        android:layout_width="250d
p"
        android:layout_height="wrap_conte
nt" 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"
```

```xml
        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_conte

        nt" android:textSize="20sp"/>


</LinearLayout>
```

solo_pic.xml

```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_paren t"

    android:layout_height="match_pare

    nt" android:background="#ff005500"

    >
```

```xml
    <TextView
        android:id="@+id/tvSoloMs
        g"
        android:layout_width="match_paren
        t"
        android:layout_height="wrap_conte
        nt" android:background="#ff0000ff"
        />
    <TextView
    android:layout_width="match_paren t"
    android:layout_height="3px"
    android:background="#ffffffff" />
    <ImageView
    android:id="@+id/imgSoloPhoto"
    android:layout_width="match_paren
    t"
    android:layout_height="fill_parent"
    android:layout_gravity="center|fill"
    android:layout_weight="2" />
    <Button android:text="Bac k"
        android:id="@+id/btnBack"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center_horizontal"
        />


</LinearLayout>
```

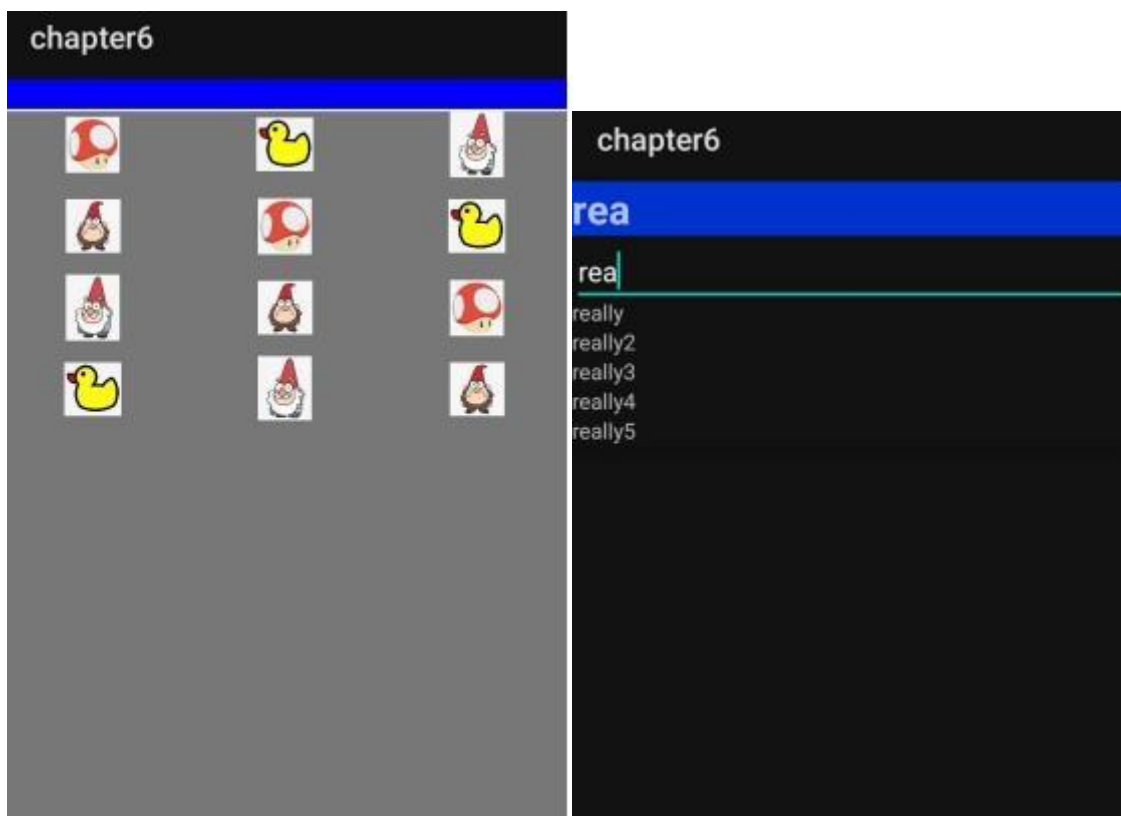textview.xml

```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:

- ✓ this
- ✓ is
- ✓ a
- ✓ really
- ✓ really2
- ✓ really3
- ✓ really4
- ✓ really5
- ✓ silly
- ✓ list

| this | is | a | really | really2 | really3 |
| really4 | really5 | silly | list | | |

SDK1.5 /samples/.../view/Gallery1.java

selected option: 6

Chapter 6

Select Option from spinner ▼
GridView
AutoCompleteTextView
gallary widget
Image based GridView
Customized Lists

Chapter 7:

Java classes:

DateTimePickerDialoug.java

```java
package com.example.chapter7;

import androidx.appcompat.app.AppCompatActivity;

import android.app.DatePickerDialog;
import
android.app.DatePickerDialog.OnDateSetListener
; import android.app.TimePickerDialog; import
android.os.Bundle; import android.view.View;
import android.widget.Button; import
android.widget.DatePicker; import
android.widget.TextView; import
android.widget.TimePicker;

import java.text.DateFormat;
```

```java
import java.util.Calendar;

public class DateTimePickerDialoug extends AppCompatActivity
  { DateFormat fmtDateAndTime=
  DateFormat.getDateTimeInstance(); TextView
  lblDateAndTime;
  Calendar myCalendar= Calendar.getInstance();
  DatePickerDialog.OnDateSetListener d = new
  OnDateSetListener() { @Override
    public void onDateSet(DatePicker datePicker, int i, int i1,
      int i2) { myCalendar.set(Calendar.YEAR, i);
      myCalendar.set(Calendar.MONTH, i1);
      myCalendar.set(Calendar.DAY_OF_MONTH, i2);
      updateLabel();
    }
  };


  TimePickerDialog.OnTimeSetListener t = new
    TimePickerDialog.OnTimeSetListener() { @Override
    public void onTimeSet(TimePicker timePicker, int i,
      int i1) { myCalendar.set(Calendar.HOUR_OF_DAY,
      i); myCalendar.set(Calendar.MINUTE, i1);
      updateLabel();
    }
  };


  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_datetimepickerdialoug);
    lblDateAndTime= (TextView)
    findViewById(R.id.lblDateAndTime); Button btnDate=
    (Button) findViewById(R.id.btnDate);
    btnDate.setOnClickListener(new
      View.OnClickListener() { public void onClick(View
```

```java
        v) {
            new DatePickerDialog(DateTimePickerDialoug.this, d,
                myCalendar.get(Calendar.YEAR),

                myCalendar.get(Calendar.MONTH),

                myCalendar.get(Calendar.DAY_OF_MONTH)).show();

        }

    });

    Button btnTime= (Button)

    findViewById(R.id.btnTime);

    btnTime.setOnClickListener(new

    View.OnClickListener() {

        public void onClick(View v) {

            new

                TimePickerDialog(DateTimePickerDialoug.thi

                s, t,

                myCalendar.get(Calendar.HOUR_OF_DAY),

                myCalendar.get(Calendar.MINUTE),

                true).show();

        }

    });

    updateLabel();

}
private void updateLabel() {

    lblDateAndTime.setText(fmtDateAndTime.format(myCalendar.getTi

    me()));

}

}
```

DigitalAnalogClock.java

```java
package com.example.chapter7;
```

```java
import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
```

```java
public class DigitalAnalogClock extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState)
        { super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_digital_analog_cl
        ock);
    }
}
```

Main.java

```java
package com.example.chapter7;

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.Spinner;

public class Main extends AppCompatActivity implements
AdapterView.OnItemSelectedListener {

    @Override protected void
    onCreate(Bundle
```

```java
savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
```

```java
    Spinner spinner1 = findViewById(R.id.spinner1);

    String[] items = {"Select Options","Date&Time Picker Dialog","Digital&Analog
Clock","Tab widget","Sliding Drawer"};

    ArrayAdapter<String> adp = new

    ArrayAdapter<String>(this,R.layout.textview,items);

    spinner1.setAdapter(adp); spinner1.setOnItemSelectedListener(this);

 }


 @Override
 public void onItemSelected(AdapterView<?> adapterView, View view, int i,
    long l) { switch ( adapterView.getId()){
      case
        R.id.spinner1:
        { switch(i){
        case 0:{
            break

            ;

          }
          case 1:{
            startActivity(new

            Intent(getApplicationContext(),DateTimePickerDialoug.class)); break;

          }
          case 2:{
            startActivity(new

            Intent(getApplicationContext(),DigitalAnalogClock.class)); break;

          }
          case 3:{
            startActivity(new

            Intent(getApplicationContext(),Tab_Widget.class)); break;

          }
          case 4:{
            startActivity(new

            Intent(getApplicationContext(),SlidingDrawer.class)); break;

          }


        }
```

```java
                break;
        }
    }


    }


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


    }
```

SlidingDrawer.java

```java
package com.example.chapter7;


import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

public class SlidingDrawer extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle
        savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_sliding_drawe
        r);
    }
}
```

Tab_Widget.java

```java
package com.example.chapter7;
```

```java
import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.widget.TabHost;


public class Tab_Widget extends AppCompatActivity {

    @Override protected void
    onCreate(Bundle
        savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_tab_widget);
        TabHost
        tabs=(TabHost)findViewById(R.id.tabhost);
        tabs.setup();
        TabHost.TabSpec spec; spec
        =tabs.newTabSpec("tag1");
        spec.setContent(R.id.tab1);
        spec.setIndicator("1-Clock");
        tabs.addTab(spec);

        spec=tabs.newTabSpec("tag
        2");
        spec.setContent(R.id.tab2);
        spec.setIndicator("2-Login");
        tabs.addTab(spec);
        tabs.setCurrentTab(0);
    }

}
```

XML layouts:

activity_datetimepickerdialoug.xml

```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:orientation="vertical" android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".DateTimePickerDialoug">

    <TextView android:id="@+id/lblDateAndTime"
        android:layout_width="match_parent"
        android:layout_height="47px"
        android:background="#ff000099"
        android:textStyle="bold">

    </TextView>
    <Button
        android:id="@+id/btnDate"
        android:layout_width="match_
        parent"
        android:layout_height="wrap_c
        ontent" android:text="Set the
        Date">

    </Button>
    <Button android:id="@+id/btnTime"
        android:layout_width="match_parent"
        android:layout_height="wrap_content
        " android:text="Set the Time">

    </Button>

</LinearLayout>
```

activity_digital_analog_clock.xml

```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:orientation="vertical"
    android:layout_height="match_parent"
    tools:context=".DigitalAnalogClock">

    <DigitalClock android:id="@+id/digital"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:background="#ff0000ff"
        android:textSize="20px"
        android:layout_below="@+id/analog"
        android:layout_centerHorizontal="true
        "
        >
    </DigitalClock>
    <AnalogClock
        android:id="@+id/analog"
        android:layout_width="match_parent"
        android:layout_height="wrap_content
        "
        android:layout_alignParentTop="true
        "
        android:layout_alignParentLeft="true"
        >
    </AnalogClock>

</LinearLayout>
```

activity_main.xml

```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:orientation="vertical"
android:layout_width="match_parent"    android:layout_height="match_parent"
tools:context=".Main">

    <Spinner android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/spinner1"
        />

</LinearLayout>
```

activity_sliding_drawer.xml

```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:layout_width="match_parent" android:layout_height="match_parent"
   tools:context=".SlidingDrawer">
   <TextView android:id="@+id/label0"
      android:layout_alignParentTop="true
      "
      android:layout_width="match_parent"
      android:layout_height="wrap_content
      " android:background="#ffcc3300"
      android:text="SlidingDrawerDemo"
      android:textSize="24sp" />
```

```xml
<SlidingDrawer
    android:id="@+id/drawer"
    android:layout_alignParentBottom="true" android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:handle="@+id/handle"
    android:content="@+id/content" >
<ImageView android:id="@id/handle"
    android:layout_width="40sp"
    android:layout_height="40sp"
    android:src="@drawable/tray_handle_normal" />
<LinearLayout android:id="@id/content"
android:layout_width="fill_parent"
android:layout_height="fill_parent"
android:orientation="vertical" >
<TextView
    android:id="@+id/label1"
    android:layout_width="fill_parent"
    android:layout_height="wrap_content"
    android:background="#ff006666"
    android:text="Line 1"
    android:textSize="22sp"
    />
<TextView android:id="@+id/label2"
    android:layout_width="fill_parent"
    android:layout_height="wrap_content"
    android:background="#ff669900"
    android:text="Line 2"
    android:textSize="22sp"
    />
<TextView android:id="@+id/label3"
    android:layout_width="fill_parent"
    android:layout_height="wrap_content"
    android:background="#ff0000cc"
    android:text="Line 3"
    android:textSize="22sp"
```

```xml
                    />
    <TextView android:id="@+id/filler1"
        android:layout_width="fill_parent"
        android:layout_height="wrap_conte
        nt" android:textSize="6sp" />
    <Button android:id="@+id/btn1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_conten
        t" android:padding="4px"
        android:text=" btn1 -time? " />
        <Button android:id="@+id/btn2"
            android:layout_width="wrap_content"
            android:layout_height="wrap_conten
            t" android:padding="4px"
            android:text=" btn2 -close " />
    </LinearLayout>
    </SlidingDrawer>


</RelativeLayout>
```

activity_tab_widget.xml

```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:orientation="vertical"
    android:layout_height="match_parent" tools:context=".Tab_Widget">



    <TabHost
```

```xml
    android:id="@+id/tabhost"
    android:layout_width="match_parent"
    android:layout_height="match_parent">
  <TabWidget android:id="@android:id/tabs"
      android:layout_width="match_parent"
      android:layout_height="wrap_content"/>
  <FrameLayout android:id="@android:id/tabcontent"
      android:layout_width="match_parent"
      android:layout_height="match_parent"
      android:paddingTop="62px">
      <!--PUT HERE FrameLayout1 --><!--PUT HERE FrameLayout2 -->
      <FrameLayout android:id="@+id/tab1"
          android:layout_width="match_parent"
          android:layout_height="match_paren
          t">
          <include layout="@layout/tab1"


              />


      </FrameLayout>


      <FrameLayout android:id="@+id/tab2"
          android:layout_width="match_parent"
          android:layout_height="match_paren
          t"> <include layout="@layout/tab2" />
      </FrameLayout>


      </FrameLayout>





</TabHost>
```

</LinearLayout>

tab1.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<AnalogClock      xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent" android:layout_height="match_parent"
    android:id="@+id/tab1"
    >

</AnalogClock>
```

tab2.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="vertical" android:id="@+id/tab2"
    android:layout_width="match_parent"
    android:layout_height="match_parent">

    <TextView android:id="@+id/caption1"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:background="#ff0000ff"
        android:text="Person Name"
        android:textSize="20px">

    </TextView>
    <EditText                android:id="@+id/txtPerson"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="txtPerson" android:textSize="18sp">
```

```
        </EditText>

        <Button android:id="@+id/btnGo"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Go">


        </Button>




</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:

19:47

Nov 19, 2021 19:47:16

SET THE DATE

SET THE TIME

19:47

11 12 1
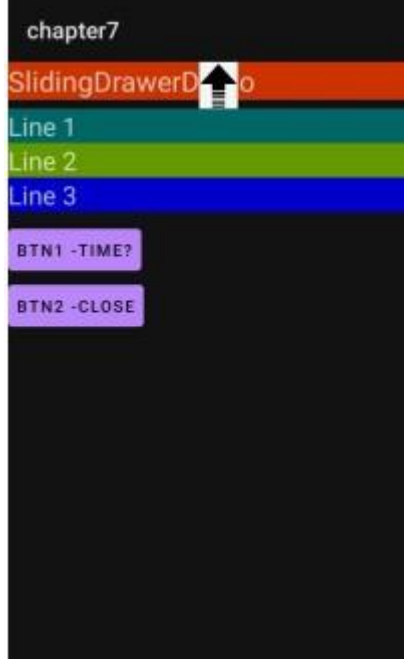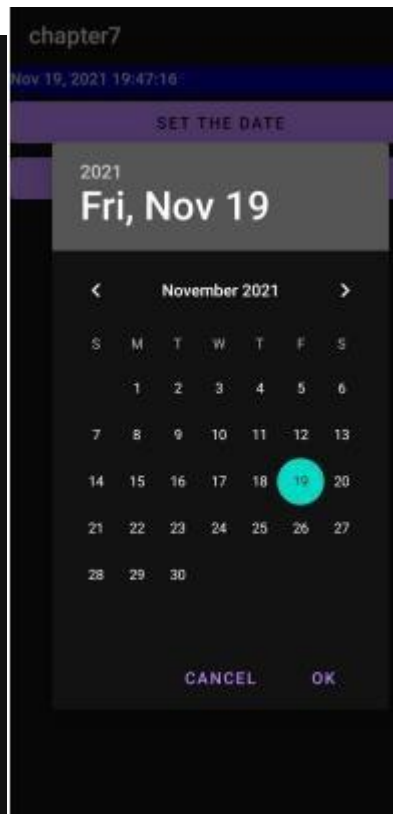10 23 00 13 2
22 14
9 21 15 3
20 16
8 19 17 4
18
7 5
6

CANCEL   OK

SlidingDrawerDemo

Chapter 8

Java classes:

MainActivity.java package com.example.chapter8;

```java
import androidx.appcompat.app.AppCompatActivity;

import android.graphics.Color;
import android.os.Bundle; import
android.text.Html; import
android.text.Spanned; import
android.view.ContextMenu;
import android.view.Menu; import
android.view.MenuItem; import
android.view.SubMenu; import
android.view.View; import
android.widget.EditText;


public class MainActivity extends AppCompatActivity {


    EditText etMessage1, etMessage2; Integer[]
    arrayPointSize = {10,20,30,40,50}; @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main); etMessage1 =
        findViewById(R.id.etMessage1); etMessage2 =
        findViewById(R.id.etMessage2);
        registerForContextMenu(etMessage1);
        registerForContextMenu(etMessage2);



    }
    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
// only one Option menu per activity
        populateMyFirstMenu(menu); return
        super.onCreateOptionsMenu(menu);


    }
    @Override
    public boolean onPrepareOptionsMenu(Menu menu){
```

```java
        //populateMyFirstMenu(menu); return
        super.onPrepareOptionsMenu(menu);


    }

private void populateMyFirstMenu(Menu menu){ int
        groupId = 0;
//arguments: groupId, optionId, order, title
        MenuItem item1 =menu.add(groupId, 1, 1, "10 points");

        MenuItem item2 =menu.add(groupId, 2, 2, "20 points");

        MenuItem item3 =menu.add(groupId, 3, 3, "30 points");

        MenuItem item4 =menu.add(groupId, 4, 4, "40 points");

        //menu.add(groupId, 5, 5, "50 points");
        menu.add(groupId, 6, 8, "Red text");

        menu.add(groupId, 7, 7, "Green Text");

        menu.add(groupId, 8, 6, "Blue text");

item1.setIcon(R.drawable.france);
         item2.setIcon(R.drawable.german
         y); item3.setIcon(R.drawable.uk);
         item4.setIcon(R.drawable.us);


        item1.setShortcut('1','1');

        item2.setShortcut('2','2');

        item3.setShortcut('3','3');

        item4.setShortcut('4','4');

        int smGroupId = 0; // don't care, same as Menu.NONE int
        smItemId = 5; // fifth element int smOrder = 5; // don't
        care, same as Menu.NONE


        SubMenu subMenu =
menu.addSubMenu(smGroupId,smItemId,smOrder,"Sub menu");
subMenu.setHeaderIcon(R.drawable.uk); subMenu.setIcon(R.drawable.us);
        MenuItem sub51 = subMenu.add(smGroupId,5,1,"sub-menu 5-1");

        MenuItem sub52 = subMenu.add(smGroupId,5,2,"sub-menu 5-2"); MenuItem
        sub53 = subMenu.add(smGroupId,5,3,"sub-menu 5-3");
}
```

```java
    public void onCreateContextMenu(ContextMenu menu, View v,
                        ContextMenu.ContextMenuInfo menuInfo) {
        super.onCreateContextMenu(menu, v, menuInfo);

if (v.getId() == etMessage1.getId())
// create a menu for etMessage1 box
            populateMyFirstMenu(menu);
        if (v.getId() == etMessage2.getId()){
// create a menu for etMessage2 box
            populateMySecondMenu(menu);

        }
    }

    private void populateMySecondMenu(Menu menu){ int
        groupId = 0;
//arguments: groupId, optionId, order, title
        menu.add(groupId, 9, 1, "Bold");
        menu.add(groupId, 10, 2, "Italic");
        menu.add(groupId, 11, 3, "Normal");

    }
    @Override
    public boolean onContextItemSelected(MenuItem item) {
        return(applyMenuOption(item) ||
            super.onContextItemSelected(item) );

    }
    @Override
    public boolean onOptionsItemSelected(MenuItem item) {
        return(applyMenuOption(item) ||
            super.onOptionsItemSelected(item) );


    }
    private boolean applyMenuOption(MenuItem item){ int
        menuItemId = item.getItemId(); // 1, 2, 3, ...11 String
        strMsg2 = etMessage2.getText().toString(); if
        (menuItemId < 5) {
```

```java
// first five option are for setting text size int newPointSize
        = arrayPointSize[menuItemId - 1];
        etMessage1.setTextSize(newPointSize);
        etMessage2.setTextSize(newPointSize);
    }
    else if (menuItemId == 5) {


        etMessage1.setText(
            "You have selected: \n" + item.getTitle()
                + "\nId: " + menuItemId
                + " order: " + item.getOrder());
    }

    else {
// either change color on box text1 or style on text2 if
        (menuItemId == 6)
            etMessage1.setTextColor(Color.RED);
//etMessage1.setTextColor(0xffff0000); // red else
        if (menuItemId == 7)

            etMessage1.setTextColor(0xff00ff00); // green
        else if (menuItemId == 8)
            etMessage1.setTextColor(0xff0000ff); // blue
        else if (menuItemId == 9)
            etMessage2.setText(beautify(strMsg2, "BOLD")); //bold
        else if (menuItemId == 10)
            etMessage2.setText(beautify(strMsg2, "ITALIC")); //italic
        else if (menuItemId == 11) etMessage2.setText(beautify(strMsg2,
            "NORMAL")); //normal
    }

    return false;
}

private Spanned beautify (String originalText, String
    selectedStyle){ Spanned answer = null; if
```

```java
        (selectedStyle.equals("BOLD")) answer = Html.fromHtml("<b>" +
        originalText +"</b>"); else
        if (selectedStyle.equals("ITALIC"))
            answer = Html.fromHtml("<i>" + originalText +"</i>"); else
        if (selectedStyle.equals("NORMAL"))
            answer = Html.fromHtml("<normal>" + originalText +"</normal"); return
        answer;
    }
}
```

XML layouts:

activity_main.xml

```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:orientation="vertical"
    android:layout_width="match_parent" android:layout_height="match_parent"
    tools:context=".MainActivity">


    <EditText  android:id="@+id/etMessage1"
        android:text="Hello              world"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_margin = "5dp" />
    <EditText  android:id="@+id/etMessage2"
        android:text="Hola              mundo"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_margin = "5dp" />
    <TextView android:text="Press the MENU key, or \nLong-press
        text-boxes" android:layout_width="wrap_content"
```

```
            android:layout_height="wrap_content"

            android:layout_gravity="center" />



</LinearLayout>
```

Screenshots:

Hello world

Hola mundo

Press the
Long-pre

10 points	
20 points	
30 points	
40 points	
Sub menu	▶
Blue text	
Green Text	
Red text	

You have selecte
sub-menu 5-2
Id: 5 order: 2

Hola mundo

Press the
Long-pre

10 points	
20 points	
30 points	
40 points	
Sub menu	▶
Blue text	
Green Text	
Red text	
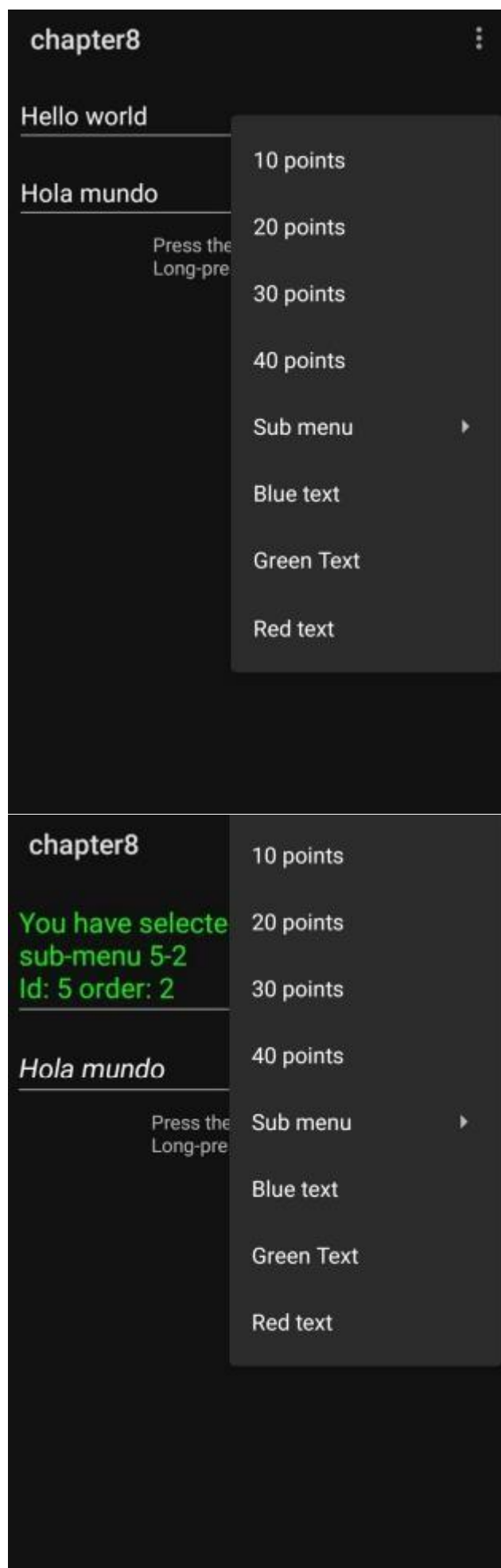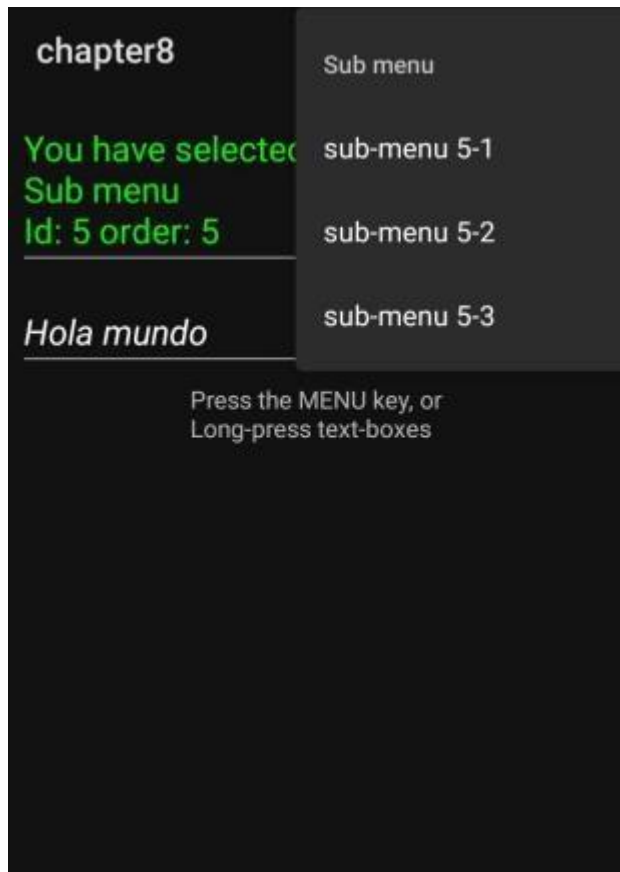
Chapter 9

Java classes:

MainActivity.java

package com.example.chapter9;

import androidx.appcompat.app.AppCompatActivity;

import android.graphics.Typeface;
import android.os.Bundle;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {

@Override

```java
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    TextView textView = findViewById(R.id.custom);
    Typeface typeface = Typeface.createFromAsset(getAssets(),"fonts/mvboli.ttf");
    textView.setTypeface(typeface);
    }
}
```

Xml layouts:

activity_main.xml

```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="1"
    tools:context=".MainActivity">

    <TableRow android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal"
        android:id="@+id/row1">
        <TextView android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:background="#ff006666"
            android:layout_marginRight="24px"
            android:text="sans:" android:textSize="20sp"
            />
        <TextView android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Hello, world!"
            android:textSize="20sp"
            android:typeface="sans"
            />
    </TableRow>

    <TableRow android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal"
        android:id="@+id/row2">
        <TextView android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:background="#ff006666"
            android:layout_marginRight="24px"
            android:text="sans:" android:textSize="20sp"
```

```xml
                    />
        <TextView android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Hello, world!"
            android:textSize="20sp"
            android:typeface="serif"
            />

    </TableRow>
    <TableRow android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal"
        android:id="@+id/row3">
        <TextView android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:background="#ff006666"
            android:layout_marginRight="24px"
            android:text="sans:" android:textSize="20sp"
            />
        <TextView android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Hello, world!"
            android:textSize="20sp"
            android:typeface="monospace"
            />
    </TableRow>

    <TableRow android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal"
        android:id="@+id/row4">
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:background="#ff006666"
            android:layout_marginRight="24px"
            android:text="sans:" android:textSize="20sp"
            />
```

```xml
<TextView android:id="@+id/custom"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Hello, world!"
    android:textSize="20sp"

    />
</TableRow>




</TableLayout>
```
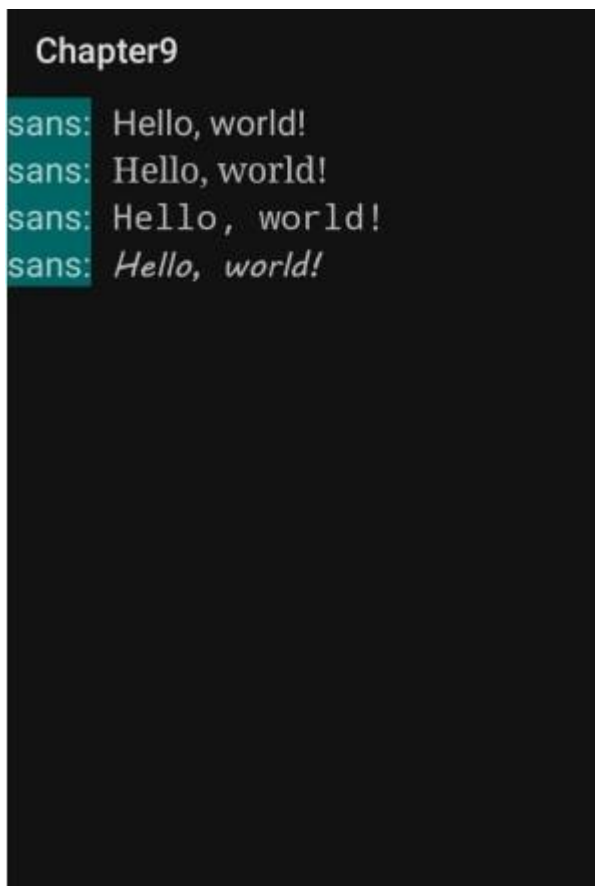
Screenshots:

Chapter 10:

Java classes:

MainActivity.java

```java
package com.example.chapter10;


import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent; import
android.os.Bundle; import
android.view.View; import
android.webkit.WebView; import
android.webkit.WebViewClient;
import android.widget.Button;

public class MainActivity extends AppCompatActivity {

    @Override
```

```java
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);



        Intent i = new Intent(this,webview.class); Button
        b1=null,b2=null; b1 = findViewById(R.id.b1); b2 =
        findViewById(R.id.b2); b1.setOnClickListener(new
        View.OnClickListener() {
            @Override public void
            onClick(View view) {
             //
                i.putExtra("website",0); startActivity(i);
            }
        });

        b2.setOnClickListener(new View.OnClickListener() {
            @Override public void
            onClick(View view) {
                // i.putExtra("website",1);
                startActivity(i);
            }
        });



    }
}



webview.java


package com.example.chapter10;


import androidx.appcompat.app.AppCompatActivity;
```

```java
import android.os.Bundle; import
android.webkit.WebView;

import android.webkit.WebViewClient;


public class webview extends AppCompatActivity {


    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_webview); WebView
        webView = findViewById(R.id.webview1);


        webView.getSettings().setJavaScriptEnabled(true);
        webView.getSettings().setDomStorageEnabled(true);
        Bundle b= getIntent().getExtras();
        switch(b.getInt("website")){
            case 0:{ webView.loadUrl("https://facebook.com");
            webView.setWebViewClient(new WebViewClient() {

                @Override public boolean shouldOverrideUrlLoading(WebView
                view, String url){

                    // do your handling codes here, which url is the requested url

                    // probably you need to open that url rather than redirect:

                    view.loadUrl(url);

                    return false; // then it is not handled by default action


                }

                @Override

                public void onPageFinished(WebView view, String url) {

                    // do your stuff here

                    super.onPageFinished(view, url);

                    webView.loadUrl("javascript: var
x=document.getElementById('m_login_email').value='user123';");

                    webView.loadUrl("javascript: var
y=document.getElementById('m_login_password').value='password123';");




                }
```

```
                    });

                break;

            }

        case 1:{

webView.loadUrl("https://www.google.com/maps/@32.46608775788683,74.51402
883432716,17z"); webView.setWebViewClient(new

            WebViewClient() {

                @Override

                public boolean shouldOverrideUrlLoading(WebView view, String url){
                    // do your handling codes here, which url is the requested url

                    // probably you need to open that url rather than redirect:

                    view.loadUrl(url);

                    return false; // then it is not handled by default action

                }


            });
            break;

        }

    }

  }

}
```

XML layouts:

activity_main.xml

```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">
```

```xml
<Button android:id="@+id/b1"
    android:layout_width="wra
    p_content"
    android:layout_height="wra
    p_content"
    android:layout_gravity="ce
    nter"
    android:textSize="20sp"
    android:text="Facebook"
    />
<Button android:id="@+id/b2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_conten
    t" android:layout_gravity="center"
    android:textSize="20sp"
    android:text="google map"
    />
```

```xml
</LinearLayout>
```

activity_webview.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<WebView 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/webview1"
    android:layout_width="match_parent" android:layout_height="match_parent"
    android:orientation="vertical" tools:context=".webview">
```

</WebView>

Screenshots:

FACEBOOK

GOOGLE MAP

≡ Find a place

Rescue 1122
زسکیو 1122

Quaid-e-Azam Public
Higher Secondary...
قائد اعظم پبلک بائر
سیکنڈری اسکول بوائز

Maaz Karyana Store

University
of Sialkot
سیالکوٹ
یونیورسٹی

ling Power Industry

ROSE KIS

af Nawab (pvt)
wear store

Ningbo Green Light
Energy (Sialkot Office)

Micro Corporation

Google
ir Syed

Your location ⊕

Directions

Continue in the app

Get real-time navigation and more in the
Maps app

STAY ON WEB   USE THE APP
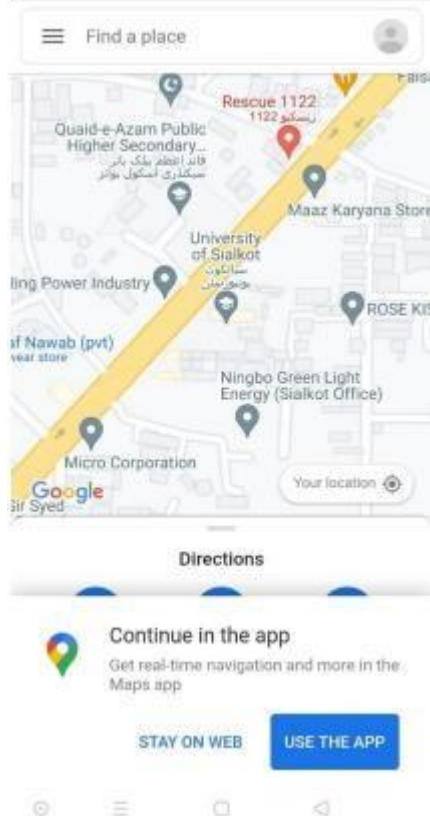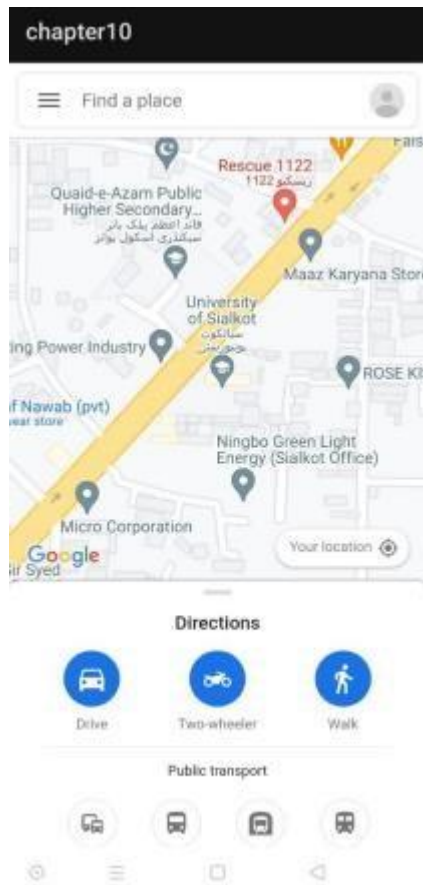
Chapter 11

Java classes:

customtoast.java

```java
package com.example.chapter11;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle; import
android.view.Gravity; import
android.view.View; import
android.widget.Button; import
android.widget.EditText; import
android.widget.Toast;

public class customtoast extends AppCompatActivity {
EditText xBox; EditText yBox;
```

```java
Button btn1; @Override protected void onCreate(Bundle
savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_customtoast); xBox =
    (EditText)findViewById(R.id.xBox); yBox
    = (EditText)findViewById(R.id.yBox);
```

```java
        btn1 = (Button)findViewById(R.id.btn1);

        btn1.setOnClickListener(new View.OnClickListener() {

            @Override public void

            onClick(View v) { try {

                    Toast myToast = Toast.makeText(

                        getApplicationContext(), "Saludos

                        amigos \n Hasta la vista",

                        Toast.LENGTH_LONG);

                    myToast.setGravity(Gravity.CENTER,

                        Integer.valueOf(xBox.getText().toString()),

                        Integer.valueOf(yBox.getText().toString()) );

                    myToast.show();


            } catch (NumberFormatException e) {

                Toast.makeText(getApplicationContext(),

                    e.getMessage(),

                    Toast.LENGTH_LONG).show();

            }

        }// onClick

    }); // listener

  }

}
```

MainActivity.java
package com.example.chapter11;

import androidx.appcompat.app.AlertDialog;

import androidx.appcompat.app.AppCompatActivity;

import android.content.DialogInterface;
import android.content.Intent; import
android.os.Bundle; import
android.view.View; import
android.widget.Button; import

```java
android.widget.EditText; import
android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    Button btnGo;
    EditText txtMsg;
    String msg;
    Button b2; @Override protected void onCreate(Bundle
    savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main); txtMsg =
        findViewById(R.id.txtMsg); btnGo =
        findViewById(R.id.btnGo);
        btnGo.setOnClickListener(new View.OnClickListener()
        {
            @Override
            public void onClick(View view) { AlertDialog
                dialBox = createDialogBox();
                dialBox.show(); txtMsg.setText("I
                am here! ");
            }
        });

        b2 = findViewById(R.id.b2); b2.setOnClickListener(new
        View.OnClickListener() {
            String msg2 = "Hello! how are you doing today?";
            @Override
            public void onClick(View view) {

Toast.makeText(getApplicationContext(),msg2,Toast.LENGTH_LONG).show();
            }

        });
        Button btnToast = findViewById(R.id.btnToast);
        btnToast.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
```

```java
            startActivity(new Intent(getApplicationContext(),customtoast.class));

        }
    });


    }

private AlertDialog createDialogBox() {
    AlertDialog myQuittingDialogBox = new
        AlertDialog.Builder(this)
//set message, title, and icon
            .setTitle("Terminator")
            .setMessage("Are you sure that you want to quit?")
            //.setIcon(R.drawable.ic_menu_end_conversation) //set
three option buttons
            .setPositiveButton("Yes", new DialogInterface.OnClickListener() {
                public void onClick(DialogInterface dialog, int whichButton) {
                    msg = "YES " + Integer.toString(whichButton);
                    txtMsg.setText(msg);

                }
            })//setPositiveButton
            .setNeutralButton("Cancel",new DialogInterface.OnClickListener() {
public void onClick(DialogInterface dialog, int whichButton) { //whatever should be
done when answering "CANCEL" goes here msg = "CANCEL " +
Integer.toString(whichButton); txtMsg.setText(msg);
                }//OnClick
            })//setNeutralButton
            .setNegativeButton("NO", new DialogInterface.OnClickListener() {
public void onClick(DialogInterface dialog, int whichButton) { //whatever should
be done when answering "NO" goes here msg = "NO " +
Integer.toString(whichButton); txtMsg.setText(msg);
                }
            })//setNegativeButton

            .create();
            return myQuittingDialogBox;
```

```
        }
}
```

XML layouts:

activity_customtoast.xml

```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:id="@+id/myTableLayout" android:layout_width="match_parent"
    android:layout_height="match_parent" android:background="#ff0000ff"
    android:orientation="vertical" android:stretchColumns="1,2"

    tools:context=".customtoast">

    <TableRow
        android:layout_height="match_parent"
        android:layout_width="match_parent"
        android:orientation="horizontal"
        >

        <TextView
            android:id="@+id/myCaption"
            android:layout_width="match_parent
            "
            android:layout_height="wrap_conten
            t" android:background="#ff009999"
            android:text="Testing Toast -
            Gravity.CENTER 320x480 pixels"
            android:gravity="center"
            android:layout_span="2"

            />
```

```xml
</TableRow>
<TableRow android:id="@+id/myRow1"
    android:layout_width="match_parent"
    android:layout_height="wrap_content
    " android:background="#ff0000ff"
    android:padding="10px"
    android:orientation="horizontal"
    >
    <TextView android:id="@+id/xLabel"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="X offset: " android:textSize="18sp"
        />
    <EditText android:id="@+id/xBox"
        android:layout_height="wrap_conten
        t"
        android:layout_width="wrap_content"
        android:textSize="18sp"
        android:text="0"
        />

</TableRow>
<TableRow android:id="@+id/myRow2"
    android:layout_width="match_parent"
    android:layout_height="wrap_content
    " android:background="#ff0000ff"
    android:padding="10px"
    android:orientation="horizontal"
    >
    <TextView android:id="@+id/yLabel"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Y offset: " android:textSize="18sp"
        />
    <EditText android:id="@+id/yBox"
        android:layout_height="wrap_content"
```

```xml
            android:layout_width="wrap_content"

            android:textSize="18sp" android:text="0"

            />
    </TableRow>

    <TableRow android:id="@+id/myRow3"

        android:layout_width="match_parent"

        android:layout_height="match_paren

        t" android:background="#ff0000ff"

        android:padding="10px"

        android:orientation="horizontal"

        >

        <Button                         android:id="@+id/btn1"

            android:layout_width="wrap_content"

            android:layout_height="wrap_content"

            android:text="

            Show Toast " android:layout_span="2"

            >

        </Button>




    </TableRow>



</TableLayout>



activity_main.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:layout_width="match_parent" android:orientation="horizontal"

    android:layout_height="match_parent" tools:context=".MainActivity">


    <Button android:text="GO"

        android:id="@+id/btnGo"
```

```
        android:layout_width="wrap_content"

        android:layout_height="wrap_content

        ">

</Button>


<EditText

android:hint="click the go button"

android:id="@+id/txtMsg"

android:layout_width="match_parent"

android:layout_height="wrap_content"

android:layout_toRightOf="@+id/btnGo

" >

</EditText>

<Button android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:id="@+id/b2" android:text="show toast

        message"
```

```
        android:layout_marginTop="50dp" android:layout_gravity="left"


    />
  <Button android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="Customized toast"
      android:id="@+id/btnToast" android:layout_below="@id/b2"
      android:layout_marginTop="100sp"
      />


</RelativeLayout>
```

Screenshots:

GO | click the go button

SHOW TOAST MESSAGE

CUSTOMIZED TOAST

GO | I am here!

SHOW TOAST MESSAGE

CUSTOMIZED TOAST

Terminator

Are you sure that you want to quit?

CANCEL   NO   YES

Testing Toast - Gravity.CENTER 320x480 pixels

X offset: 0

Y offset: 0

SHOW TOAST

Saludos amigos
Hasta la vista

GO | YES -1

SHOW TOAST MESSAGE

CUSTOMIZED TOAST

Hello! how are you doing today?