Enterprise Application Development
Tasks

Name: Muhammad Abdullah

 Roll No.:   18101002-125

Section: Grey

Chapter 5:

Java classes:

```java
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);
  }
}
```

```java
linearlayout.java

package com.example.chapter5;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.ListView;
import android.widget.TextView;

public class linearlayout extends AppCompatActivity {

    ListView listview =
    null; @Override
    protected void onCreate(Bundle
        savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_linear_layout);

        listview = findViewById(R.id.listview2);

        String[] items = {"orientation","fill
            model","weight", "gravity","padding &
            margin"};
    ArrayAdapter<String> adpt = new
    ArrayAdapter<String>(this,R.layout.list_view,items); listview.setAdapter(adpt);
    listview.setOnItemClickListener(new AdapterView.OnItemClickListener() {
```

```java
    @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;
```

```java
import
android.os.Bundle;
import
android.view.View;
import
android.widget.AdapterView;
import
android.widget.ArrayAdapter;
import
android.widget.LinearLayout;
import android.widget.ListView;
import android.widget.TextView;


public class ll_orientation extends AppCompatActivity {

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

```java
            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;

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;
```

```java
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
        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">
```

```xml
<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
<?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
<?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_paren
        t"
        android:layout_height="wrap_conte
        nt" android:textSize="18sp"
        />

    <Button
```

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

        android:layout_width="125dip"

        android:layout_height="wrap_conte

nt" android:text="Go"

        android:textStyle="bold"

        android:layout_gravity="right"

        />


</LinearLayout>
```

activity_ll_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/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"

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

```xml
    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_paren
        t"

        android:layout_height="wrap_conte
        nt" 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_paren
    t"

    android:layout_height="match_pare
    nt" android:orientation="horizontal"

    android:background="#ff0033cc"

    tools:context=".orientation">
```

```xml
    <TextView
        android:id="@+id/labelUserName"
        android:layout_width="wrap_content
        "
        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
<?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_conte
    nt" android:text="Go"
    android:textStyle="bold"
    />


</LinearLayout>




activity_relativelayout.xml


<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/rl1"
    android:layout_width="match_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>
```

```xml
    <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"
        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
<?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"
        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"

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>
```

```xml
      <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="vertica

l"
```

android:textSize="20dp"

>

</TextView>

Screenshots:
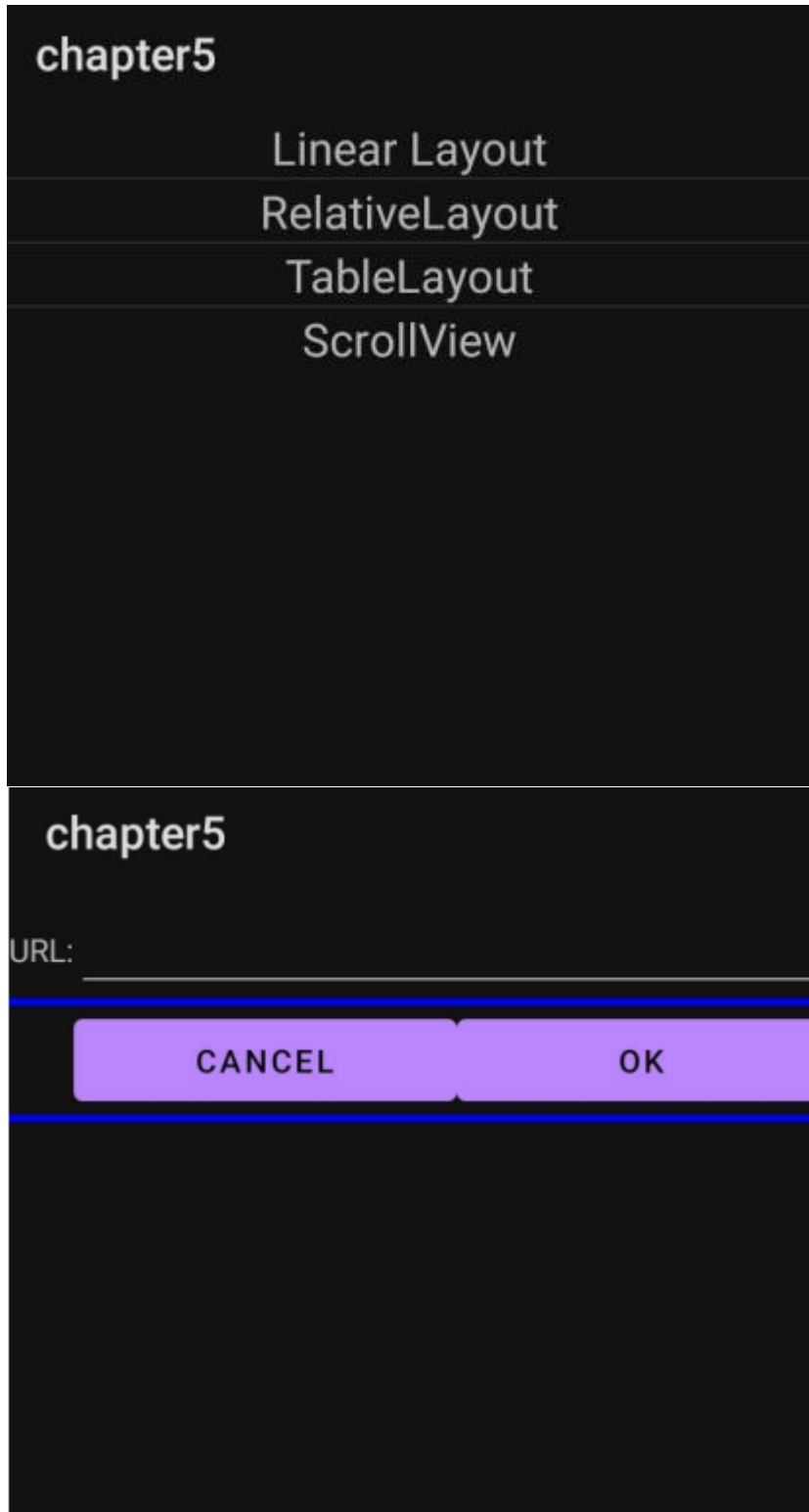
chapter5

User Name

GO

chapter5

User Name

CANCEL   GO

Line1

Line2

Line3

Line4

Line5

User Name
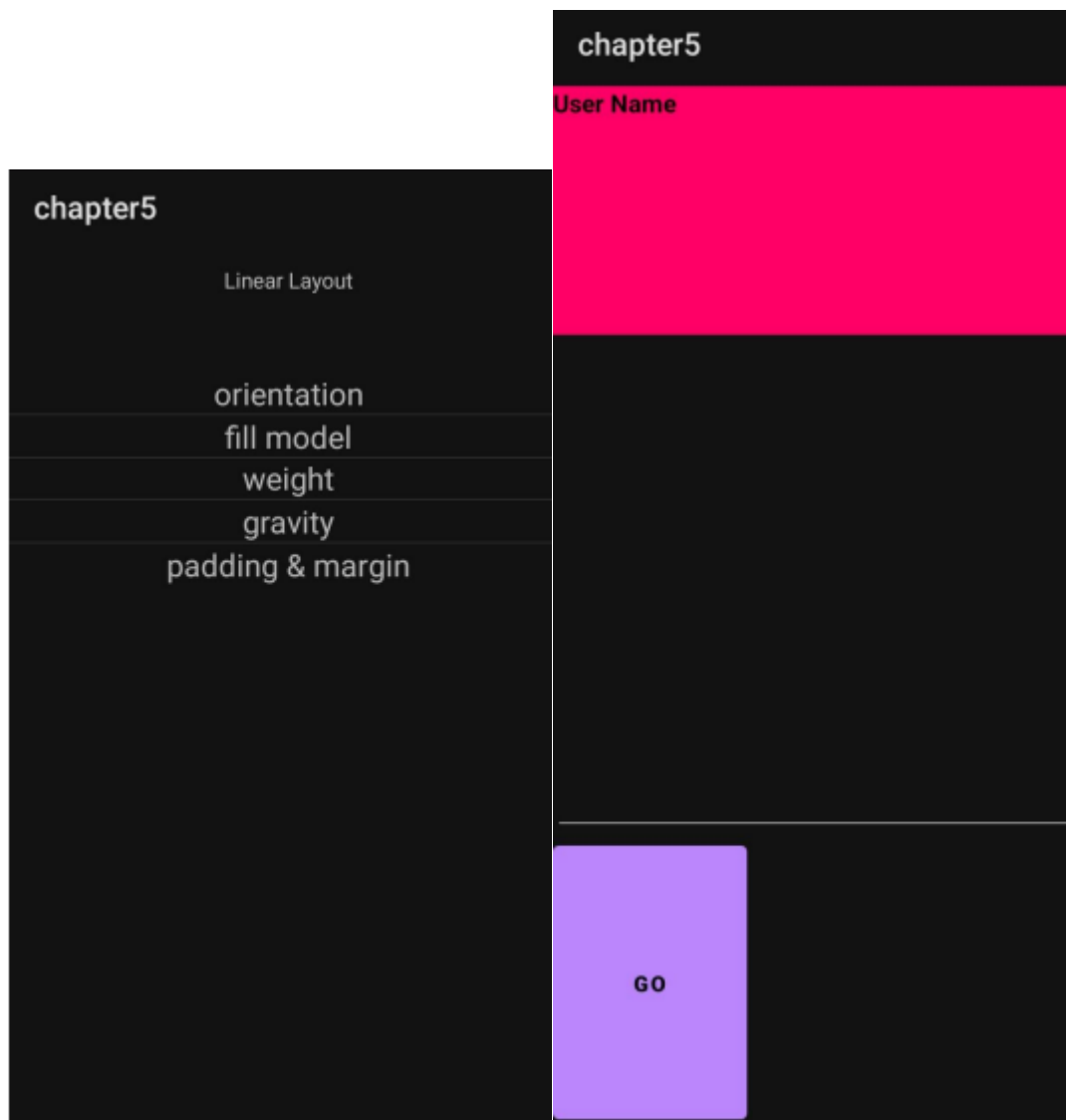
GO

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;

```java
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);
```

```java
        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

```java
package com.example.chapter6;


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

```java
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;
    @Overrid
    e
    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"};
```

```java
//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;
```

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

import
android.content.Context;
import android.os.Bundle;
import android.view.View;
import
android.view.ViewGroup;
import
android.widget.AdapterView;
import
android.widget.BaseAdapter;
import android.widget.Gallery;
import android.widget.TextView;
import android.widget.ImageView;
public class gallary extends AppCompatActivity{

    TextView
    txt3; Gallery
    gllry;
    @Override
    protected void onCreate(Bundle
        savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_gallary);
        txt3 = findViewById(R.id.txt3);
        gllry = findViewById(R.id.myGallery);
        int[] img_ids = { R.drawable.image1, R.drawable.image2,
            R.drawable.image3,                R.drawable.image4,R.drawable.image1,
            R.drawable.image2,                              R.drawable.image3,
            R.drawable.image4,R.drawable.image1,          R.drawable.image2,
            R.drawable.image3, R.drawable.image4 };
        gllry.setAdapter(new                 ImageAdapter(this,img_ids,12));
        gllry.setOnItemSelectedListener(new
```

```java
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);
```

```java
// Set the Width & Height of the individual images
    iv.setLayoutParams(new
    Gallery.LayoutParams(90, 75)); return iv;

  }
}
```

gridview.java

```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

```java
package com.example.chapter6;

import androidx.appcompat.app.AppCompatActivity;

import
android.annotation.SuppressLint;
import android.content.Context;
import
android.content.Intent;
import android.os.Bundle;
import android.view.View;
```

```
import android.view.ViewGroup;

import android.widget.Adapter;

import

android.widget.AdapterView;

import

android.widget.BaseAdapter;

import android.widget.Button;

import android.widget.GridView;

import android.widget.ImageView;

import android.widget.TextView;

import android.widget.Toast;


public class imgGridView extends AppCompatActivity implements
AdapterView.OnItemClickListener
{
    TextView tvMsg;

    GridView gridview;

    TextView tvSoloMsg;

    int[] mThumbIds;

    ImageView

    ivSoloPicture; Button

    btnBack;

    Intent

    startintent;

    @Override

    protected void onCreate(Bundle

        savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_img_grid_vie

        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;
    }
```

```java
    @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_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;
```

```java
import
android.widget.ArrayAdapter;
import android.widget.Spinner;
import android.widget.TextView;


public class MainActivity extends AppCompatActivity
implements AdapterView.OnItemSelectedListener {

    private Spinner spinner;
    //private TextView
    textView; String[]
    spinner_items; @Override
    protected void onCreate(Bundle
        savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        spinner = findViewById(R.id.spinner);
        //textView = findViewById(R.id.textView);
        spinner_items = new String[]{"Select Option
        from
spinner","GridView","AutoCompleteTextView",
            "gallary widget","Image based GridView","Customized Lists"};
        ArrayAdapter<String> adp = new
        ArrayAdapter<String>(this,R.layout.textview,spinner_items);
        adp.setDropDownViewResource(R.layout.textview);
        spinner.setAdapter(adp);
        spinner.setOnItemSelectedListener(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(new
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
<?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
<?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_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"
```

>

>

```
    </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"

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


            />



</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="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"
```

```xml
            android:textStyle="bold"
            />
        <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
<?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
    ">
```

```xml
    <TextView
        android:id="@+id/tvMsg"
        android:layout_width="match_parent"
        android:layout_height="wrap_content" android:background="#ff0000ff"
        />
    <View
        android:layout_width="match_parent" android:layout_height="3px"
        android:background="#ffffffff"
        />
    <GridView
    android:id="@+id/gridview2"
    android:layout_width="match_parent"
    android:layout_height="match_parent" android:numColumns="auto_fit"
    android:verticalSpacing="10dp"
    android:horizontalSpacing="10dp"
    android:columnWidth="90dp"
    android:stretchMode="columnWidth"
    android:gravity="center"
    android:background="#ff777777" />

</LinearLayout>
```

activity_main.xml

```xml
<?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"
    tools:context=".MainActivity">

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

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

<TextView

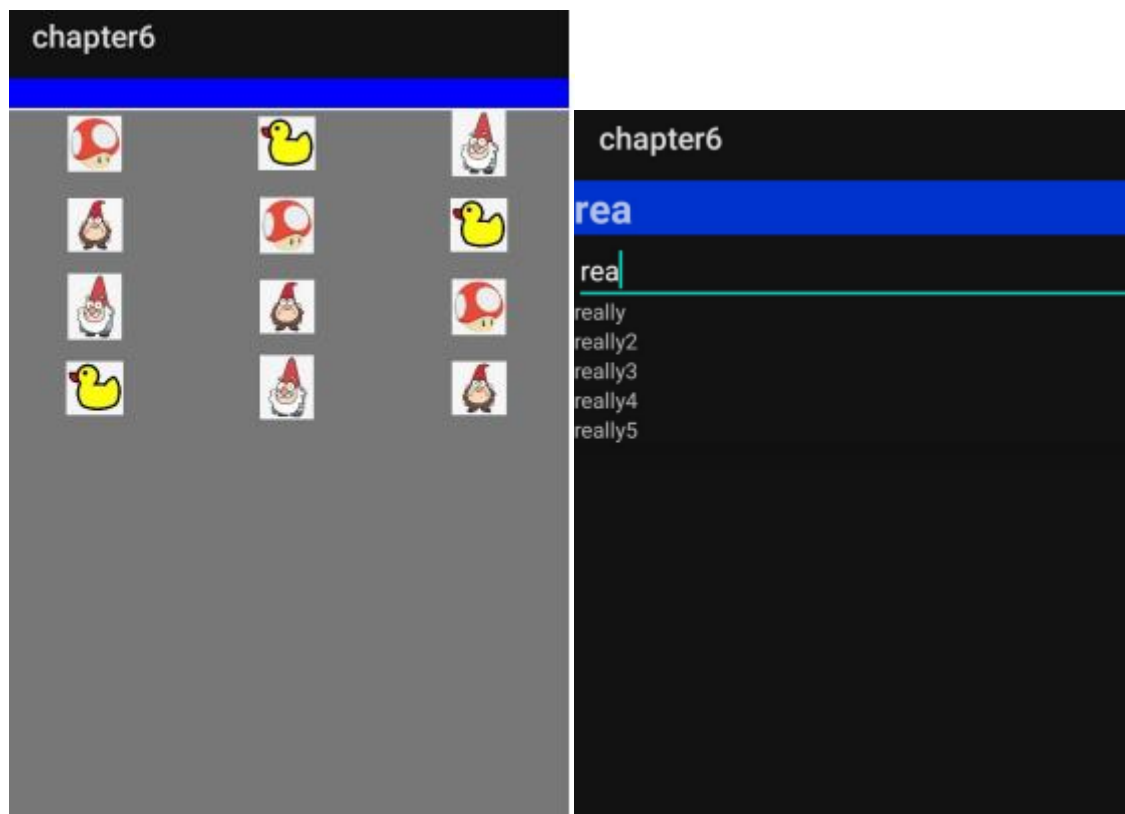 xmlns:android="http://schemas.android.com/apk/res/android"

  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;
```

```java
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);
```

```java
        btnDate.setOnClickListener(new

            View.OnClickListener() { public void onClick(View

            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
        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);
    }
}
```

```java
Tab_Widget.java

package com.example.chapter7;

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"
```

```xml
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            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">
```

```xml
    <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"
```

```xml
    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">
```

```xml
<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" />
<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"
```

```xml
    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"

    />

<TextView

    android:id="@+id/filler1"

    android:layout_width="fill_parent"

    android:layout_height="wrap_content"

    android:textSize="6sp" />

<Button

    android:id="@+id/btn1"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:padding="4px"
```

```
                android:text=" btn1 -time? " />
            <Button
                android:id="@+id/btn2"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:padding="4px"
                android:text=" btn2 -close " />
        </LinearLayout>
    </SlidingDrawer>


</RelativeLayout>
```

activity_tab_widget.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_parent">
        <include
            layout="@layout/tab1"


            />


    </FrameLayout>

    <FrameLayout
        android:id="@+id/tab2"
        android:layout_width="match_parent"
        android:layout_height="match_parent">
```

```xml
            <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:

1-CLOCK 2-LOGIN

chapter7

19:47

chapter7

Nov 19, 2021 19:47:16

SET THE DATE

SET THE TIME

19:47

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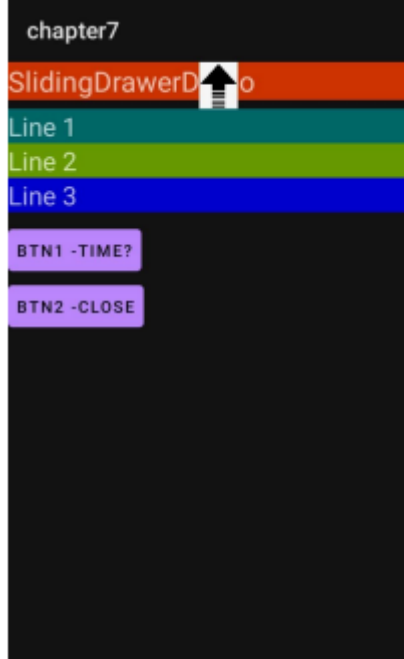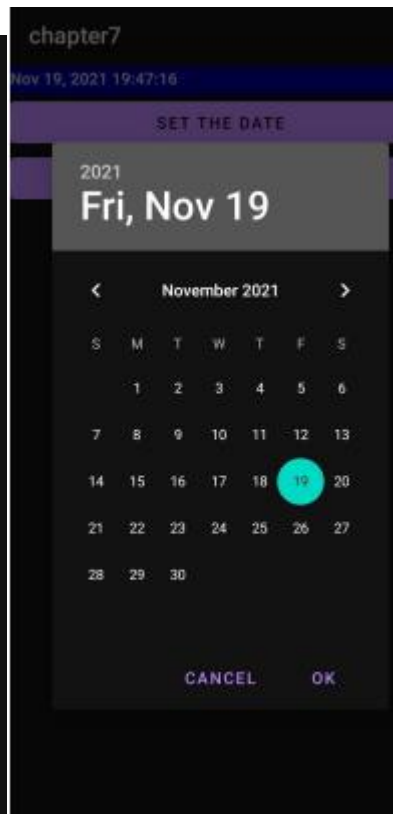   18
7   5
      6

CANCEL   OK

chapter7

SlidingDrawerDemo

Chapter 8

Java classes:

MainActivity.java

```java
package com.example.chapter8;

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);
```

```java
        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){

        //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");
```

```java
        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.germany);

        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");


    }
    public void onCreateContextMenu(ContextMenu menu, View v,
                        ContextMenu.ContextMenuInfo menuInfo) {
```

```java
        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) );


    }
```

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

```java
            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 (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"
```
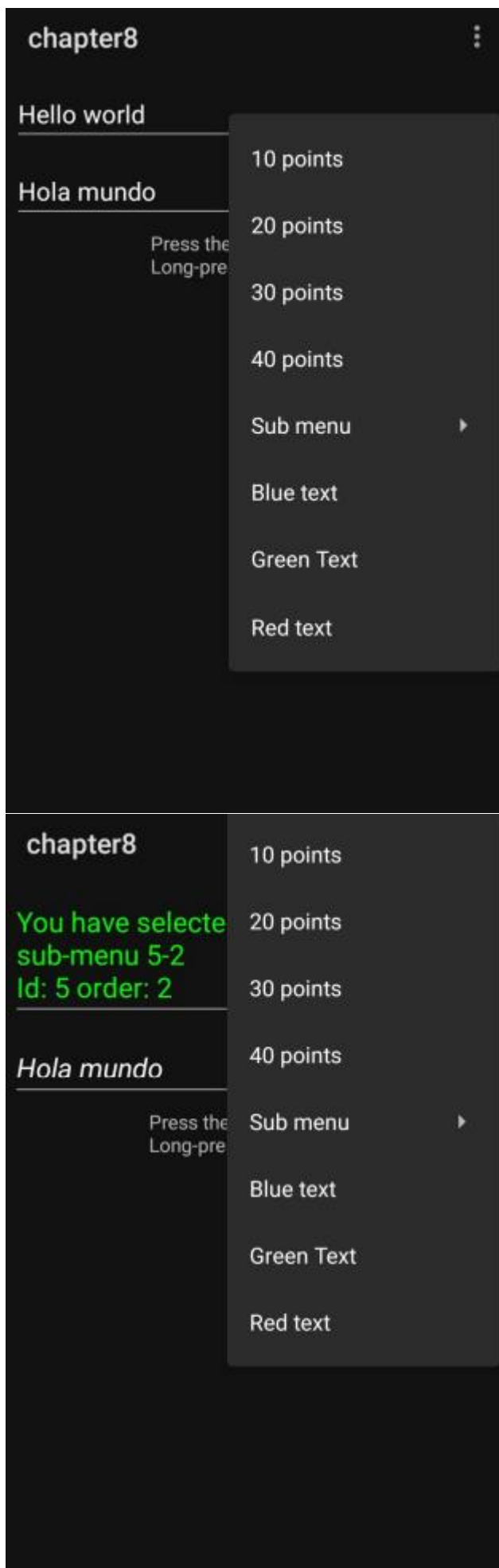
```xml
    android:orientation="vertical"

    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:

chapter8

Hello world

Hola mundo

Press the
Long-pre

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

chapter8

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	
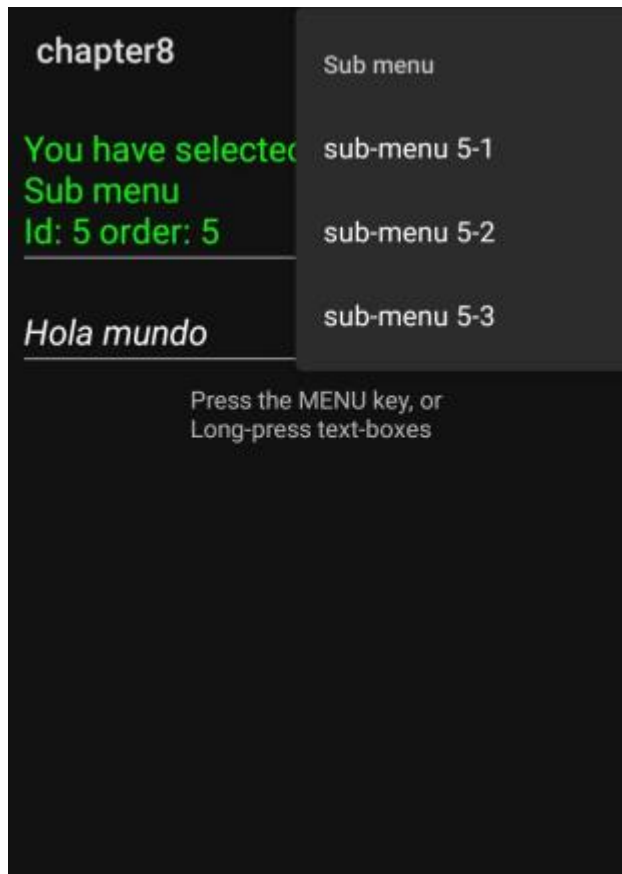
Chapter 9

Java classes:

MainActivity.java

```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"
```

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

```xml
<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"

    />

<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:

sans: Hello, world!
sans: Hello, world!
sans: Hello, world!
sans: *Hello, world!*

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);
        }
    });



}
```

```java
}




webview.java


package com.example.chapter10;


import androidx.appcompat.app.AppCompatActivity;


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");
```

```java
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/@32.46608775788683,74.51402883432716,17z");
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">

    <Button
        android:id="@+id/b1"
```

```
        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_gravity="center"

        android:textSize="20sp"

        android:text="Facebook"

        />

    <Button

        android:id="@+id/b2"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_gravity="center"

        android:textSize="20sp"

        android:text="google map"

        />




</LinearLayout>




activity_webview.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"
```
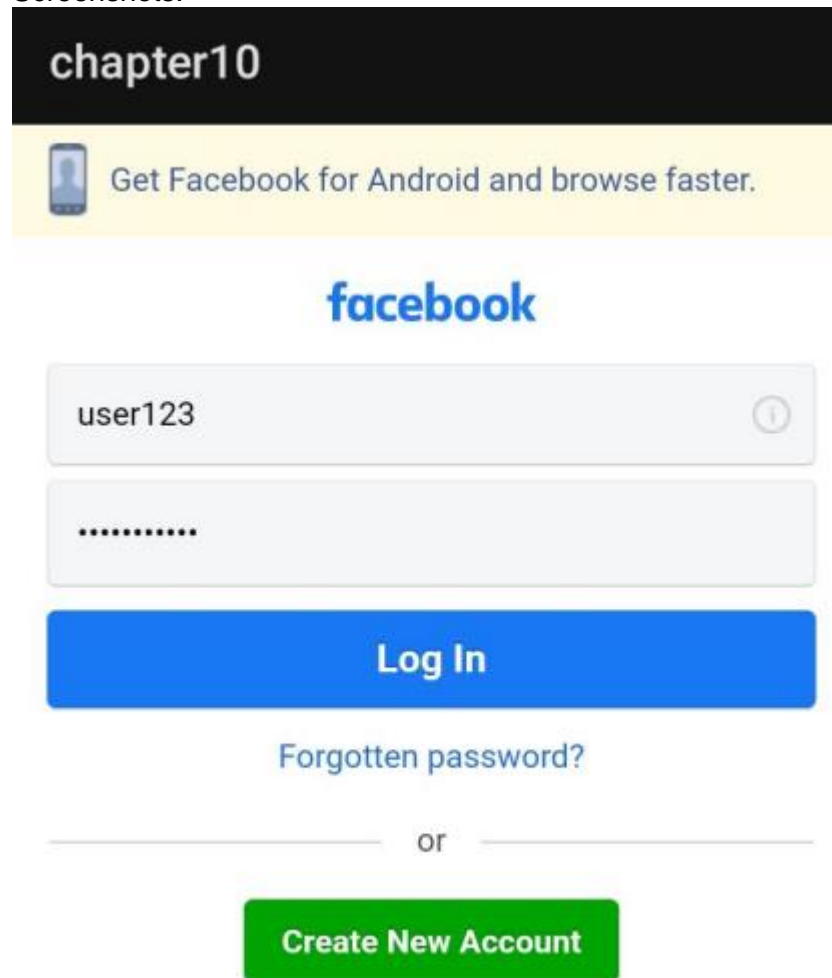
```
android:layout_width="match_parent"

android:layout_height="match_parent"

android:orientation="vertical" tools:context=".webview">
```

```
</WebView>
```

Screenshots:

FACEBOOK

GOOGLE MAP

≡ Find a place

Rescue 1122
ریسکیو 1122

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

Maaz Karyana Store

University
of Sialkot
سیالکوٹ
یونیورسٹی

ling Power Industry

ROSE KIS

f 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

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 {

```java
EditText xBox;
EditText yBox;
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

```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
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();
```

```java
                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) {

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

            }

        });


    }


    private AlertDialog createDialogBox() {

        AlertDialog myQuittingDialogBox =

                new AlertDialog.Builder(this)
//set message, title, and icon
```

```java
                    .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_content"

        android:background="#ff009999"

        android:text="Testing Toast - Gravity.CENTER 320x480 pixels"

        android:gravity="center"

        android:layout_span="2"


        />

</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_content"

        android:layout_width="wrap_content"
```

```xml
            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"

            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_parent"
        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"?>
```

```xml
<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"
```

```xml
        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:

Chapter11

GO | click the go button

SHOW TOAST MESSAGE

CUSTOMIZED TOAST

Chapter11

GO | I am here!

SHOW TOAST MESSAGE

CUSTOMIZED TOAST

Terminator
Are you sure that you want to quit?

CANCEL   NO   YES

Chapter11

Testing Toast - Gravity.CENTER 320x480 pixels

X offset: 0

Y offset: 0

SHOW TOAST

Saludos amigos
Hasta la vista

Chapter11

GO | YES -1

SHOW TOAST MESSAGE

CUSTOMIZED TOAST

Hello! how are you doing today?