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Chapter 7:

Java classes:

DateTimePickerDialog.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;
```

```
import java.util.Calendar;
```

```
public class DateTimePickerDialog 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_datetimepickerdialog);
lblDateAndTime= (TextView) findViewById(R.id.lblDateAndTime);
Button btnDate= (Button) findViewById(R.id.btnDate);
btnDate.setOnClickListener(new View.OnClickListener() {
public void onClick(View v) {
new DatePickerDialog(DateTimePickerDialog.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(DateTimePickerDialog.this, t,

```

```

myCalendar.get(Calendar.HOUR_OF_DAY),
myCalendar.get(Calendar.MINUTE), true).show();
}
});
updateLabel();
}
private void updateLabel() {
lblDateAndTime.setText(fmtDateAndTime.format(myCalendar.getTime()));
}
}

```

DigitalAnalogClock.java

```

package com.example.chapter7;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
public class DigitalAnalogClock extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_digital_analog_clock);
    }
}

```

Main.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.OnItemClickListener {

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

        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.setOnItemClickListener(this);

    }

    @Override

    public void onItemClick(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(),DateTimePickerDialog.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;
}
}
break;
}
}
}
@Override
public void onNothingSelected(AdapterView<?> adapterView) {
}
}

```

SlidingDrawer.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_drawer);
    }
}

```

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("tag2");

        spec.setContent(R.id.tab2);

        spec.setIndicator("2-Login");

        tabs.addTab(spec);

        tabs.setCurrentTab(0);

    }

}

```

XML layouts:

activity_datetimepickerdialog.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=".DateTimePickerDialog">
```

```
<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_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 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 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 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" />

    <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" />
    <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
        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">
<include
layout="@layout/tab2" />
</FrameLayout>
</FrameLayout>
</TabHost>
</LinearLayout>
```

tab1.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 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"?>
```

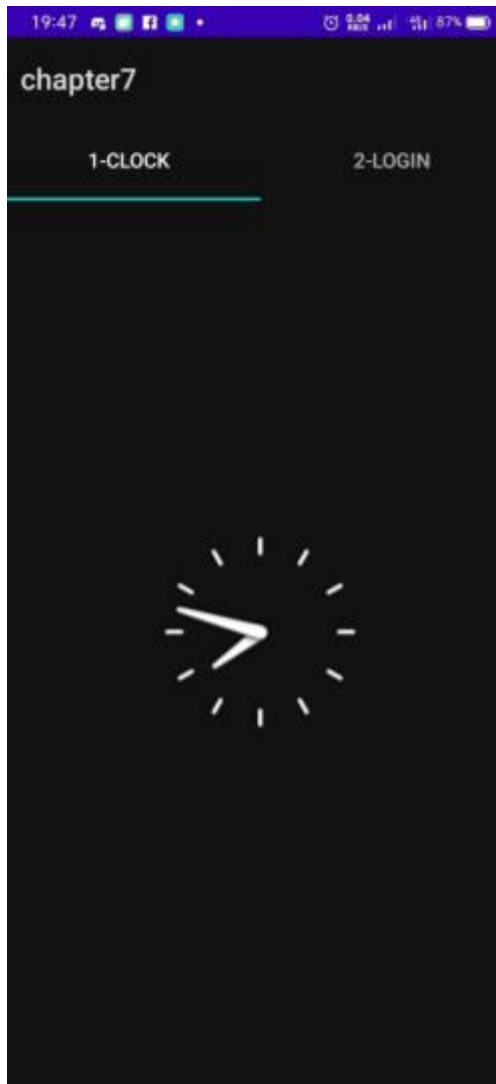
```
<TextView xmlns:android="http://schemas.android.com/apk/res/android"
```

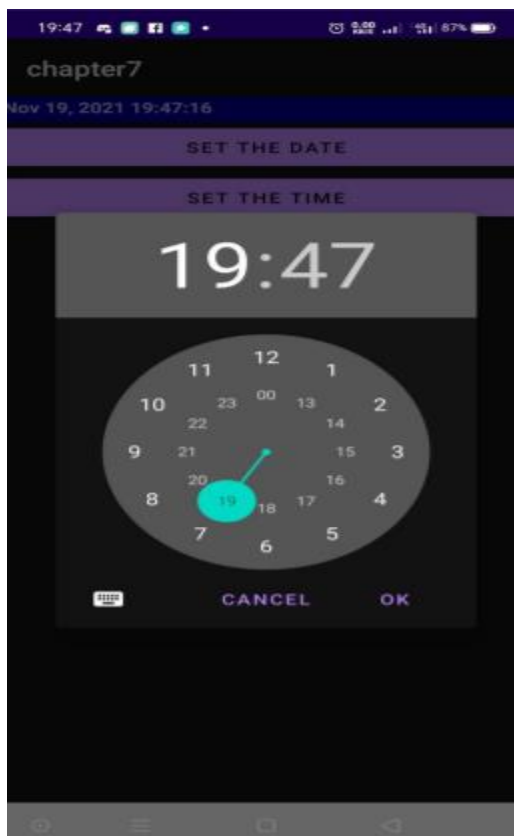
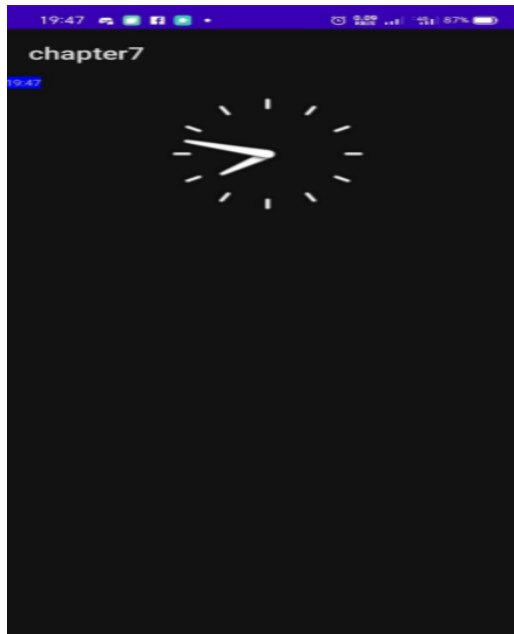
```
android:layout_width="match_parent"
```

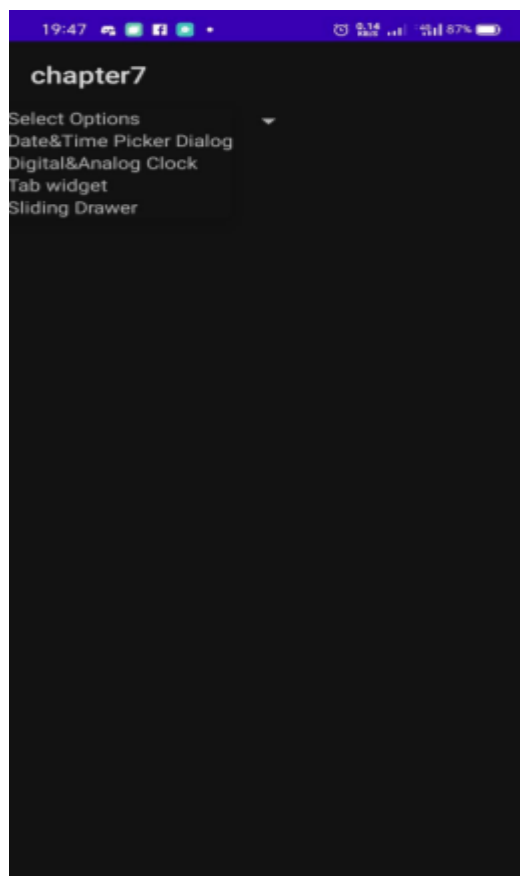
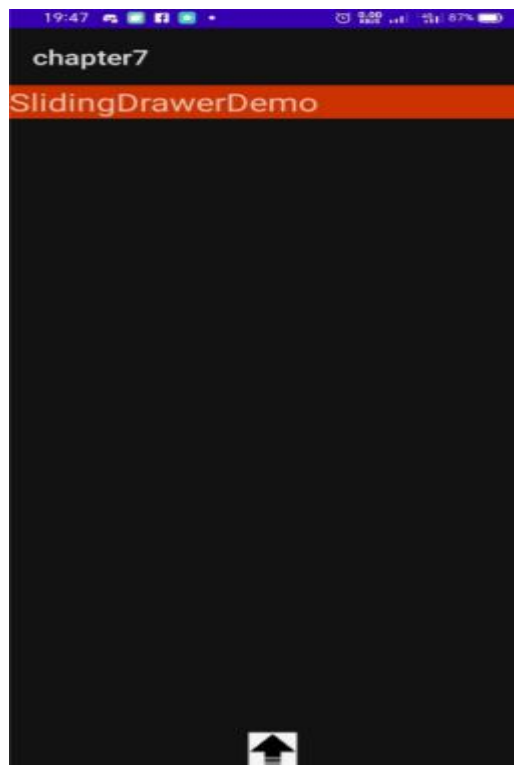
```
android:layout_height="match_parent">
```

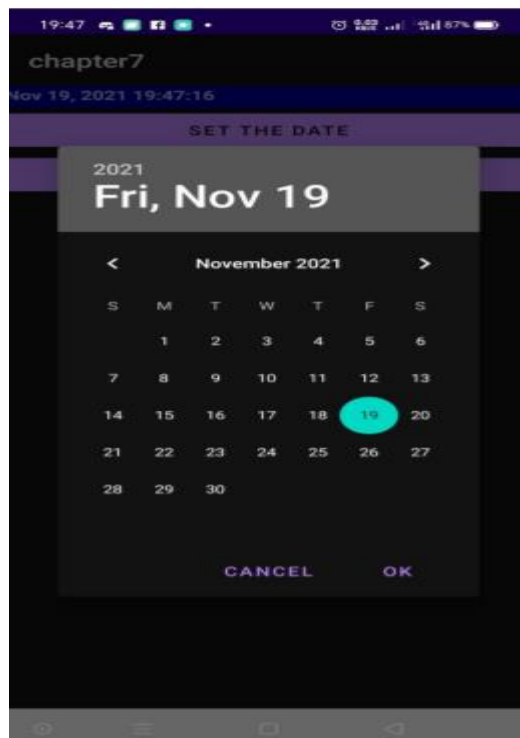
```
</TextView>
```

Screenshots:









Chapter 8

Java classes:

MainActivity.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);
        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");

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) {
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) {
// 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 (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

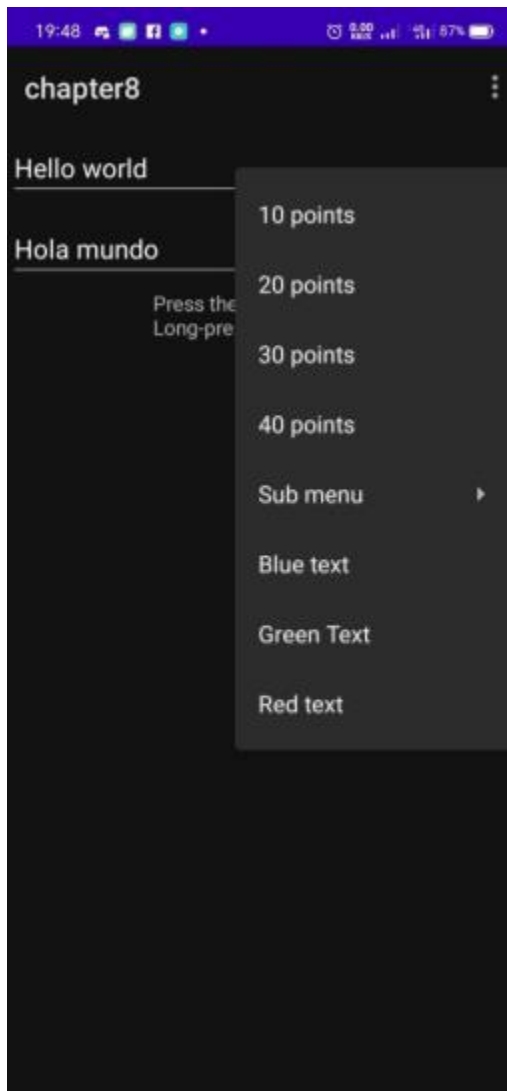
```

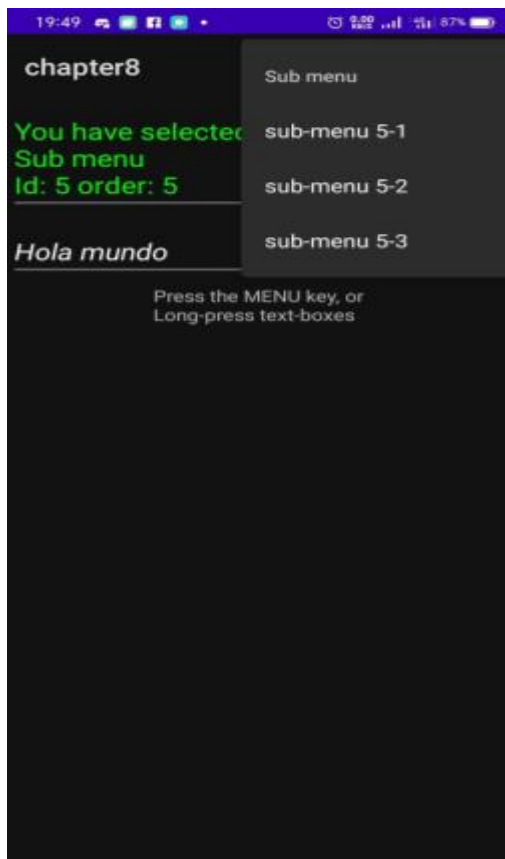
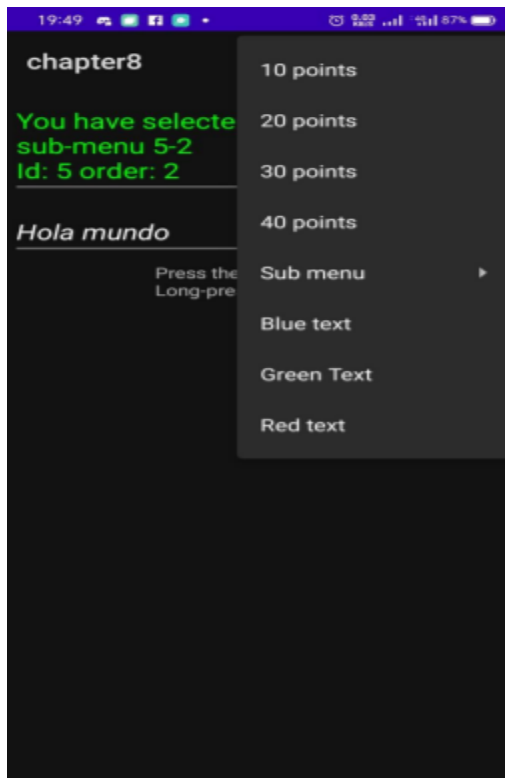
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:orientation="vertical"
android:layout_width="match_parent"

```

```
    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:





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

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

Screenshot:

