

# **PRACTICAL FILE**

**MOBILE APPLICATION DEVELOPMENT**  
**DEIT-14711**



**Submitted By:**

Harpuneet Singh (1706854)

**Submitted To:**

Prof. Ranjodh Kaur

**Department of Information Technology,  
Guru Nanak Dev Engineering College,  
Ludhiana-141006**

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## **Task 1 Create a first App on Android**

### **activity\_home.xml file**

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout 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=".Home">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Harpuneet Singh :)"
        android:textSize="34dp"
        android:textStyle="italic"
        android:fontFamily="arial"
        android:textColor="@color/red"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

### **Home.java**

```
package com.example.mobile_harpuneet;

import android.content.Intent;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuInflater;
import android.view.MenuItem;

import androidx.appcompat.app.AppCompatActivity;

public class Home extends AppCompatActivity{

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

```
getSupportActionBar().setTitle("Home");  
getSupportActionBar().setHomeAsUpIndicator(R.drawable.homepage);  
  
}  
  
}
```



## **Task 2 Create icon of an app, change the label background**

**activity\_home.xml**

```
<?xml version="1.0" encoding="utf-8"?>  
<androidx.constraintlayout.widget.ConstraintLayout 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=".Home">  
    <TextView  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:text="Harpuneet Singh :)"  
        android:textSize="34dp"  
        android:textStyle="italic"  
        android:fontFamily="arial"
```

```
android:textColor="@color/red"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintLeft_toLeftOf="parent"
app:layout_constraintRight_toRightOf="parent"
app:layout_constraintTop_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

### colors.xml

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
<colorname="purple_200">#FFBB86FC</color>
<colorname="purple_500">#FF6200EE</color>
<colorname="purple_700">#FF3700B3</color>
<colorname="teal_200">#FF03DAC5</color>
<colorname="teal_700">#FF018786</color>
<colorname="black">#FF000000</color>
<colorname="white">#FFFFFFFF</color>
<colorname="darkred">#ED0707</color>
<colorname="blue">#2196F3</color>
<colorname="yellow">#FFEB3B</color>
<colorname="orange">#FA8C38</color>
<colorname="red100">#EC4A4A</color>
<colorname="grey">#D1CFCF</color>
<colorname="musturd">#D38704</color>
<colorname="red">#FC7C7C</color>

</resources>
```

### themes.xml

```
<resources xmlns:tools="http://schemas.android.com/tools">
<!-- Base application theme. -->
<style name="Theme.Mobile_Harpuneet"
parent="Theme.MaterialComponents.DayNight.DarkActionBar">
<!-- Primary brand color. -->
<item name="colorPrimary">@color/white</item>
<item name="colorPrimaryVariant">@color/red</item>
<item name="colorOnPrimary">@color/white</item>
<!-- Secondary brand color. -->
<item name="colorSecondary">@color/teal_200</item>
<item name="colorSecondaryVariant">@color/teal_700</item>
<item name="colorOnSecondary">@color/black</item>
<item name="actionBarTheme">@style/MyActionBarTheme</item>
<!-- Status bar color. -->
<item name="android:statusBarColor"
```

```
tools:targetApi="l">?attr/colorPrimaryVariant</item>
<!-- Customize your theme here. -->
</style>
<style name="MyActionBarTheme"
parent="ThemeOverlay.MaterialComponents.Dark.ActionBar">
<item name="android:textColorPrimary">@color/red</item>
</style>
</resources>
```

### Android\_manifest.xml

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
package="com.example.mobile_harpuneet">

<application
android:allowBackup="true"
android:icon="@drawable/smartphone"
android:label="@string/app_name"
android:roundIcon="@drawable/smartphone"
android:supportRtl="true"
android:theme="@style/Theme.Mobile_Harpuneet">
<activity android:name=".Debugging">
<intent-filter>
<action android:name="android.intent.action.MAIN" />

<category android:name="android.intent.category.LAUNCHER" />
</intent-filter>
</activity>
<activity android:name=".FragmentTask" >

</activity>
<activity android:name=".LoginPage" />
<activity android:name=".RegisterPage">

</activity>
<activity android:name=".Frame"></activity>
<activity android:name=".ConstraintLayout" />
<activity android:name=".RelativeLayout" />
<activity android:name=".Linear2" />
<activity android:name=".Linear" >

</activity>
<activity android:name=".Home" >
```

```
</activity>
<activity android:name=".Calculator" />
<activity android:name=".Form">
</activity>
<activity android:name=".MainActivity" >

</activity>
</application>

</manifest>
```

### Home.java

```
package com.example.mobile_harpuneet;

import android.content.Intent;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuInflater;
import android.view.MenuItem;

import androidx.appcompat.app.AppCompatActivity;

public class Home extends AppCompatActivity{

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_home);
        getSupportActionBar().setTitle("Home");
        getSupportActionBar().setHomeAsUpIndicator(R.drawable.homepage);

    }
}
```



### Task 3 Create the menu, button, and ScrollView in an application

#### MainActivity.java

```
package com.example.mobile_harpuneet;

import android.content.Intent;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuInflater;
import android.view.MenuItem;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity{

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        getSupportActionBar().setTitle("Task 3");
        getSupportActionBar().setDisplayHomeAsUpEnabled(true);
    }
}
```



```
getSupportActionBar().setHomeAsUpIndicator(R.drawable.homepage);
```

```
    }  
    @Override  
    public boolean onCreateOptionsMenu(Menu menu) {  
        MenuInflater inflater = getMenuInflater();  
        inflater.inflate(R.menu.menu, menu);  
  
        return true;  
    }  
  
    @Override  
    public boolean onOptionsItemSelected(MenuItem item) {  
        switch (item.getItemId()) {  
            case R.id.two:  
                Intent intent= new Intent(MainActivity.this, Form.class);  
                startActivity(intent);  
                return true;  
            case R.id.three:  
                Intent intent2 = new Intent(MainActivity.this, Calculator.class);  
                startActivity(intent2);  
                return true;  
  
            default:  
                return super.onOptionsItemSelected(item);  
        }  
    }  
  
    @Override  
    public boolean onSupportNavigateUp() {  
        Intent intent2 = new Intent(MainActivity.this, Home.class);  
        startActivity(intent2);  
        return true;  
    }  
  
    @Override  
    public void onBackPressed() {  
        Intent intent2 = new Intent(MainActivity.this, Home.class);  
        startActivity(intent2); }  
    }
```

**activity\_main.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:padding="15dp"
    android:orientation="vertical"
    android:layout_gravity="center"
    tools:context=".MainActivity">
```

```
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="USER INTERFACE"
    android:textColor="@color/red"
    android:layout_gravity="center"
    android:textSize="25dp"
    android:textStyle="bold">
```

```
</TextView>
```

```
<LinearLayout
    android:layout_width="match_parent"
    android:layout_marginTop="20dp"
    android:layout_height="wrap_content">
```

```
<ScrollView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content">
```

```
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="vertical"
>
```

```
<TextView
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:text="The user interface (UI) for an Android app is built as a hierarchy of layouts
and widgets. The layouts are ViewGroup objects, containers that control how their child
views are positioned on the screen. Widgets are View objects, UI components such as
buttons and text boxes.\n\nAndroid provides an XML vocabulary for ViewGroup and View
classes, so most of your UI is defined in XML files. However, rather than teach you to write
XML, this lesson shows you how to create a layout using Android Studio's Layout Editor. The
Layout Editor writes the XML for you as you drag and drop views to build your layout.
```

\n\n

User interfaces are the access points where users interact with designs. They come in three formats:

\n\n

1. Graphical user interfaces (GUIs)—Users interact with visual representations on digital control panels. A computer's desktop is a GUI.

\n\n2. Voice-controlled interfaces (VUIs)—Users interact with these through their voices. Most smart assistants—e.g., Siri on iPhone and Alexa on Amazon devices—are VUIs.

\n\n3. Gesture-based interfaces—Users engage with 3D design spaces through bodily motions: e.g., in virtual reality (VR) games.

"

android:textColor="@color/purple\_700"

android:textSize="15dp"

>

</TextView>

<View

android:layout\_width="match\_parent"

android:layout\_height="1dp"

android:layout\_marginTop="5dp"

android:background="#000000"/>

<View

android:layout\_width="match\_parent"

android:layout\_height="1dp"

android:layout\_marginTop="4dp"

android:background="#000000"/>

<TextView

android:layout\_marginTop="10dp"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:text="

1. Users judge designs quickly and care about usability and likeability.

\n\n2. They don't care about your design, but about getting their tasks done easily and with minimum effort.

Your design should therefore be "invisible": Users shouldn't focus on it but on completing tasks: e.g., ordering pizza on Domino's Zero Click app.

\n\n3. So, understand your users' contexts and task flows (which you can find from, e.g., customer journey maps), to fine-tune the best, most intuitive UIs that deliver seamless experiences.

\n\n4. UIs should also be enjoyable (or at least satisfying and frustration-free).

\n\n5. When your design predicts users' needs, they can enjoy more personalized and immersive experiences. Delight them, and they'll keep returning.

\n\n6. Where appropriate, elements of gamification can make your design more fun.

\n\n7. UIs should communicate brand values and reinforce users' trust.

\n\n8.Good design is emotional design. Users associate good feelings with brands that speak to them at all levels and keep the magic of pleasurable, seamless experiences alive.

```
android:textColor="@color/purple_700"
android:textSize="15dp" />
```

```
</LinearLayout>
```

```
</ScrollView>
```

```
</LinearLayout>
```

```
</LinearLayout>
```



#### **Task 4 Create the form using UI components i.e checkbox, radio button, textview etc.**

activity\_form.xml

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

```
android:layout_width="match_parent"
android:layout_height="match_parent"
android:orientation="vertical"
android:padding="16dp"
tools:context=".MainActivity" >
```

```
<TextView
android:id="@+id/tvRg"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_alignParentTop="true"
android:layout_centerHorizontal="true"
android:gravity="center"
android:textColor="@color/black"
android:textStyle="bold"
android:textSize="25dp"
android:text="User Profile"
android:textAppearance="?android:attr/textAppearanceMedium" />
<ImageView
android:layout_width="100dp"
android:layout_height="100dp"
android:layout_gravity="center"
android:layout_marginTop="20dp"
android:src="@drawable/adduser"/>
```

```
<EditText
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_marginTop="10dp"
android:hint="Enter Your Full Name"
android:padding="8dp"></EditText>
```

```
<RadioGroup
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_below="@+id/tvRg"
android:layout_centerHorizontal="true"
android:orientation="horizontal"
android:showDividers="beginning | middle | end"
android:layout_marginTop="10dp"
android:id="@+id/radioGroup" >
```

```
<RadioButton
android:id="@+id/rb1"
android:layout_width="wrap_content"
```

```
android:layout_height="wrap_content"
android:text="Male"
android:checked="true" />
```

```
<RadioButton
android:id="@+id/rb2"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Female"
android:layout_marginLeft="10dp"
android:checked="false" />
```

```
</RadioGroup>
```

```
<LinearLayout
android:layout_width="match_parent"
android:layout_height="wrap_content">
```

```
<TextView
android:layout_width="wrap_content"
android:layout_height="match_parent"
android:layout_marginTop="10dp"
android:padding="8dp"
android:text="Date of Birth"
android:textColor="@color/black"
android:textSize="15dp" />
```

```
<com.google.android.material.textfield.MaterialAutoCompleteTextView
android:id="@+id/date"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_marginLeft="20dp" />
```

```
</LinearLayout>
```

```
<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Choose Your Subjects"
android:layout_marginTop="5dp"
android:textColor="@color/black"
android:padding="8dp"
></TextView>
```

```
<CheckBox
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:text="Science"
android:id="@+id/cb1"
android:layout_below="@+id/tvCb"
android:layout_centerHorizontal="true"
android:checked="false"/>
```

```
<CheckBox
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:text="English"
android:id="@+id/cb2"
android:layout_below="@+id/cb1"
android:layout_centerHorizontal="true"
android:checked="false"/>
```

```
<CheckBox
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:text="Punjabi"
android:id="@+id/cb3"
android:layout_below="@+id/cb2"
android:layout_centerHorizontal="true"
android:checked="false"/>
```

```
<CheckBox
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:text="Maths"
android:id="@+id/cb4"
android:layout_below="@+id/cb3"
android:layout_centerHorizontal="true"
android:checked="false"/>
```

```
<ImageButton
android:layout_width="100dp"
android:layout_gravity="center"
android:layout_height="100dp"
android:src="@drawable/file"
android:id="@+id/btnSubmit"
android:background="@color/cardview_dark_background"
android:layout_below="@+id/radioGroup"
```

```
android:layout_centerHorizontal="true"  
android:layout_marginTop="10dp"/>
```

```
</LinearLayout>
```

### Form.java

```
package com.example.mobile_harpuneet;  
  
import android.app.DatePickerDialog;  
import android.content.Intent;  
import android.os.Bundle;  
import android.view.Menu;  
import android.view.MenuInflater;  
import android.view.MenuItem;  
import android.view.View;  
import android.widget.DatePicker;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import com.google.android.material.textfield.MaterialAutoCompleteTextView;  
  
import java.util.Calendar;  
  
public class Form extends AppCompatActivity {  
  
    MaterialAutoCompleteTextView tv;  
    DatePickerDialog datePickerDialog;  
  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_form);  
        getSupportActionBar().setTitle("Task 4_Form");  
        getSupportActionBar().setDisplayHomeAsUpEnabled(true);  
        getSupportActionBar().setHomeAsUpIndicator(R.drawable.homepage);  
  
        tv=findViewById(R.id.date);  
  
        Calendar myCalendar= Calendar.getInstance();  
        Integer month=myCalendar.get(Calendar.MONTH);  
        Integer dayOfMonth=myCalendar.get(Calendar.DAY_OF_MONTH);  
        Integer year=myCalendar.get(Calendar.YEAR);
```



```
tv.setOnFocusChangeListener(new View.OnFocusChangeListener() {
    @Override
    public void onFocusChange(View v, boolean hasFocus) {
        if(hasFocus){
            datePickerDialog=new DatePickerDialog(Form.this, new
            DatePickerDialog.OnDateSetListener() {
                @Override
                public void onDateSet(DatePickerview, int year, int month, int dayOfMonth) {
                    month += 1;
                    myCalendar.set(Calendar.YEAR, year);
                    myCalendar.set(Calendar.MONTH, month);
                    myCalendar.set(Calendar.DAY_OF_MONTH, dayOfMonth);
                    tv.setText(dayOfMonth+"/"+month+"/"+year);
                }
            }, year, month, dayOfMonth
        );
        datePickerDialog.show();

    }
});

}

@Override
public boolean onCreateOptionsMenu(Menu menu) {
    MenuInflater inflater = getMenuInflater();
    inflater.inflate(R.menu.menu, menu);
    return true;
}

@Override
public boolean onOptionsItemSelected(MenuItem item) {
    switch (item.getItemId()) {
        case R.id.one:
            Intent intent= new Intent(Form.this, MainActivity.class);
            startActivity(intent);
            return true;

        case R.id.three:
            Intent intent2 = new Intent(Form.this, Calculator.class);
            startActivity(intent2);
            return true;

        default:
            return super.onOptionsItemSelected(item);
    }
}
```

```
}
```

**@Override**

```
public boolean onSupportNavigateUp() {  
    Intent intent2 = new Intent(Form.this, Home.class);  
    startActivity(intent2);  
    return true;  
}
```

**@Override**

```
public void onBackPressed() {  
    Intent intent2 = new Intent(Form.this, Home.class);  
    startActivity(intent2); }  
}
```



### **Task 5 Design a form using all layouts**

#### **activity\_linear.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:gravity="center"
    tools:context=".Linear">

    <com.google.android.material.button.MaterialButton
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Layout 1"
        android:textSize="24sp"
        app:cornerRadius="8dp"
        android:layout_marginStart="40dp"
        android:layout_marginEnd="40dp"
        android:paddingTop="8dp"
        app:icon="@android:drawable/ic_dialog_dialer"
        app:iconSize="38dp"
        android:backgroundTint="@color/teal_700"
        app:iconGravity="start"
        android:onClick="layout1"
        app:iconTint="@color/yellow"
        android:paddingBottom="8dp"/>

    <com.google.android.material.button.MaterialButton
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Layout 2"
        android:textSize="24sp"
        app:cornerRadius="8dp"
        android:layout_marginStart="40dp"
        android:layout_marginEnd="40dp"
        android:paddingTop="8dp"
        app:icon="@android:drawable/ic_dialog_email"
        app:iconSize="38dp"
        android:backgroundTint="@color/teal_700"
        app:iconGravity="start"
```

```
android:onClick="layout2"
app:iconTint="@color/yellow"
android:paddingBottom="8dp"/>

<com.google.android.material.button.MaterialButton
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:text="Layout 3"
android:textSize="24sp"
app:cornerRadius="8dp"
android:layout_marginStart="40dp"
android:layout_marginEnd="40dp"
android:paddingTop="8dp"
app:icon="@android:drawable/ic_lock_power_off"
app:iconSize="38dp"
android:backgroundTint="@color/teal_700"
app:iconGravity="start"
app:iconTint="@color/yellow"
android:onClick="layout3"
android:paddingBottom="8dp"/>

<com.google.android.material.button.MaterialButton
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:text="Layout 4"
android:textSize="24sp"
app:cornerRadius="8dp"
android:layout_marginStart="40dp"
android:layout_marginEnd="40dp"
android:paddingTop="8dp"
app:icon="@android:drawable/ic_dialog_info"
app:iconSize="38dp"
android:backgroundTint="@color/teal_700"
app:iconGravity="start"
android:onClick="layout4"
app:iconTint="@color/yellow"
android:paddingBottom="8dp"/>

</LinearLayout>
```

### Linear.java

```
package com.example.mobile_harpuneet;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
```

```
import android.os.Bundle;
import android.view.View;

public class Linear extends AppCompatActivity{

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_linear);
        getSupportActionBar().setTitle("Task 5");
    }

    public void layout1(View view) {
        Intent intent=new Intent(Linear.this,Linear2.class);
        startActivity(intent);
    }

    public void layout2(View view) {
        Intent intent=new Intent(Linear.this,RelativeLayout.class);
        startActivity(intent);
    }

    public void layout3(View view) {
        Intent intent=new Intent(Linear.this,Frame.class);
        startActivity(intent);
    }

    public void layout4(View view) {
        Intent intent=new Intent(Linear.this,ConstraintLayout.class);
        startActivity(intent);
    }
}
```



### activity\_linear2.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayoutxmlns: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=".Linear2">

<TextView
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:text="Subscribe for Coderefer.com"
android:textSize="20sp"
android:textStyle="bold"
android:textColor="@color/red100"
android:layout_marginStart="20dp"
android:layout_marginEnd="20dp"
android:layout_marginTop="50dp"
android:gravity="center"/>
```

```
<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginTop="30dp"
android:text="Enter your Name:"
android:textStyle="bold"
android:textColor="@color/black"
android:textSize="16sp"
android:layout_marginStart="20dp"/>

<EditText
android:layout_width="match_parent"
android:layout_height="38dp"
android:layout_marginTop="10dp"
android:layout_marginStart="20dp"
android:layout_marginEnd="20dp"
android:background="@drawable/edit_text_border"/>
```

```
<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginTop="30dp"
android:text="Enter your Email:"
android:textStyle="bold"
android:textColor="@color/black"
android:textSize="16sp"
android:layout_marginStart="20dp"/>

<EditText
android:layout_width="match_parent"
android:layout_height="38dp"
android:layout_marginTop="10dp"
android:layout_marginStart="20dp"
android:layout_marginEnd="20dp"
android:background="@drawable/edit_text_border"/>
```

```
<com.google.android.material.button.MaterialButton
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_marginStart="20dp"
android:layout_marginEnd="20dp"
android:layout_marginTop="30dp"
android:text="Subscribe"
android:textStyle="bold"
android:backgroundTint="@color/orange"
```

```
android:textColor="@color/black"/>
```

```
</LinearLayout>
```

### Linear2.java

```
package com.example.mobile_harpuneet;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

public class Linear2 extends AppCompatActivity{

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_linear2);
        getSupportActionBar().setTitle("Linear Layout");
    }
}
```





### relative\_layout.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@color/musturd"
    tools:context=".RelativeLayout">

    <EditText
        android:id="@+id/etxt1"
        android:layout_width="210dp"
        android:layout_height="40dp"
        android:layout_marginTop="20dp"
        android:background="@color/white"
        android:hint="Name"
        android:paddingStart="8dp"
        android:paddingEnd="1dp" />

    <EditText
        android:id="@+id/etxt2"
        android:layout_width="180dp"
        android:layout_height="40dp"
        android:layout_alignParentEnd="true"
        android:layout_marginTop="20dp"
        android:background="@color/white"
        android:hint="Address"
        android:paddingStart="8dp"
        android:paddingEnd="1dp" />

    <EditText
        android:id="@+id/etxt3"
        android:layout_width="match_parent"
        android:layout_height="40dp"
        android:layout_below="@id/etxt1"
        android:layout_alignParentEnd="true"
        android:layout_marginTop="20dp"
        android:background="@color/white"
        android:hint="Subject"
        android:paddingStart="8dp"
        android:paddingEnd="1dp" />

    <EditText
        android:id="@+id/etxt4"
        android:layout_width="match_parent"
        android:layout_height="240dp"
```

```
android:layout_below="@id/etxt3"
android:layout_alignParentEnd="true"
android:layout_marginTop="20dp"
android:background="@color/white"
android:gravity="top"
android:hint="Message"
android:paddingStart="8dp"
android:paddingTop="10dp"
android:paddingEnd="1dp" />
```

```
<Button
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_below="@+id/etxt4"
android:layout_centerInParent="true"
android:layout_marginTop="30dp"
android:textColor="@color/black"
android:textStyle="bold"
android:backgroundTint="@color/grey"
android:text="Submit" />
```

```
</RelativeLayout>
```

### RelativeLayout.java

```
package com.example.mobile_harpuneet;

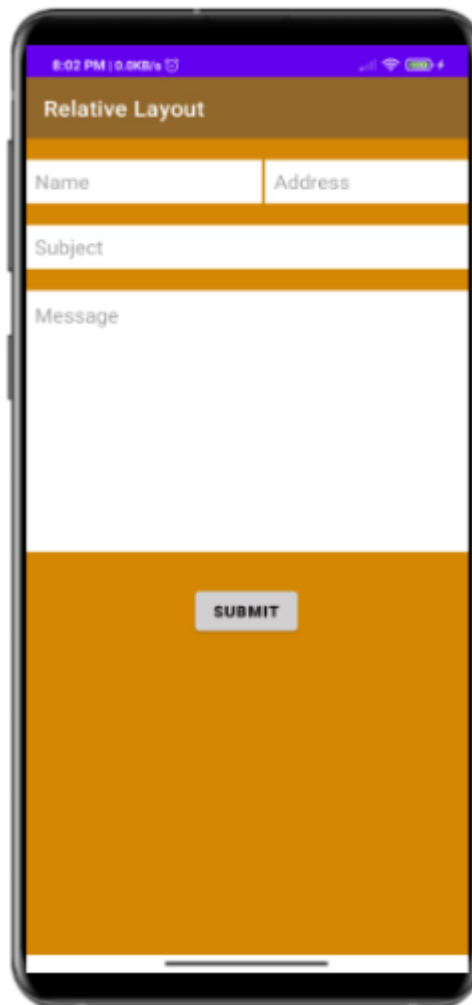
import androidx.appcompat.app.ActionBar;
import androidx.appcompat.app.AppCompatActivity;

import android.graphics.Color;
import android.graphics.drawable.ColorDrawable;
import android.os.Bundle;

public class RelativeLayout extends AppCompatActivity{
    ActionBar actionBar;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_relative_layout);
        getSupportActionBar().setTitle("Relative Layout");
    }
}
```

```
actionBar= getSupportActionBar();  
ColorDrawablecolorDrawable= new ColorDrawable(Color.parseColor("#91672C"));  
actionBar.setBackgroundDrawable(colorDrawable);  
  
}  
}
```



#### activity\_frame.xml

```
<?xml version="1.0" encoding="utf-8"?>  
<FrameLayoutxmlns:android="http://schemas.android.com/apk/res/android"  
xmlns:tools="http://schemas.android.com/tools"  
android:layout_width="match_parent"  
android:layout_height="match_parent"  
android:animateLayoutChanges="true"  
tools:context=".Frame">  
  
<FrameLayout  
android:id="@+id/layoutOne"  
android:layout_width="match_parent"
```

```
android:layout_height="match_parent"
android:background="@color/blue">
```

```
<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_gravity="top|center"
android:layout_marginTop="20dp"
android:text="ONE"
android:textColor="@color/white"
android:textSize="40sp" />
```

```
<Button
android:id="@+id/FL_btn1"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_gravity="center"
android:textColor="@color/black"
android:backgroundTint="@color/white"
android:text="Frame Layout 1" />
</FrameLayout>
```

```
<FrameLayout
android:id="@+id/layoutTwo"
android:layout_width="match_parent"
android:layout_height="match_parent"
android:background="@color/purple_700">
```

```
<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_gravity="top|center"
android:layout_marginTop="20dp"
android:text="TWO"
android:textColor="@color/white"
android:textSize="40sp" />
```

```
<Button
android:id="@+id/FL_btn2"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_gravity="center"
android:textColor="@color/black"
android:backgroundTint="@color/white"
android:text="Frame Layout 2" />
</FrameLayout>
```

```
<FrameLayout
    android:id="@+id/layoutThree"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@color/teal_200">
```

```
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="top|center"
    android:layout_marginTop="20dp"
    android:text="THREE"
    android:textColor="@color/white"
    android:textSize="40sp" />
```

```
<Button
    android:id="@+id/FL_btn3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:textColor="@color/black"
    android:backgroundTint="@color/white"
    android:text="Frame Layout 3" />
</FrameLayout>
</FrameLayout>
```

### Frame.java

```
package com.example.mobile_harpuneet;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.FrameLayout;

public class Frame extends AppCompatActivity{
    FrameLayout fl1,fl2,fl3;
    Button btn1,btn2,btn3;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_frame);
        getSupportActionBar().setTitle("Frame Layout");
    }
}
```

```
fl1 = findViewById(R.id.layoutOne);  
fl2 = findViewById(R.id.layoutTwo);  
fl3 = findViewById(R.id.layoutThree);
```

```
btn1 = findViewById(R.id.FL_btn1);  
btn2 = findViewById(R.id.FL_btn2);  
btn3 = findViewById(R.id.FL_btn3);
```

```
fl2.setVisibility(View.GONE);  
fl3.setVisibility(View.GONE);
```

```
btn1.setOnClickListener(v -> {  
    fl2.setVisibility(View.VISIBLE);  
    fl1.setVisibility(View.GONE);  
});
```

```
btn2.setOnClickListener(v -> {  
    fl3.setVisibility(View.VISIBLE);  
    fl2.setVisibility(View.GONE);  
});
```

```
btn3.setOnClickListener(v -> {  
    fl1.setVisibility(View.VISIBLE);  
    fl3.setVisibility(View.GONE);  
});  
}  
}
```



### constraint\_layout.xml

```
<?xml version="1.0" encoding="utf-8"?>
<ScrollViewxmlns: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="wrap_content"
tools:context=".ConstraintLayout">

<androidx.constraintlayout.widget.ConstraintLayout
android:layout_width="match_parent"
android:layout_height="wrap_content">

<TextView
android:id="@+id/textView2"
android:layout_width="194dp"
android:layout_height="62dp"
android:layout_marginStart="12dp"
android:layout_marginTop="8dp"
android:paddingStart="10dp"
android:paddingEnd="10dp"
android:text="Beauty and the Beast"
android:textColor="@color/black"
android:textSize="24sp"
android:textStyle="bold"
app:layout_constraintStart_toEndOf="@+id/imageView3"
app:layout_constraintTop_toBottomOf="@+id/imageView2" />

<ImageView
android:id="@+id/imageView2"
android:layout_width="0dp"
android:layout_height="250dp"
android:elevation="2dp"
android:scaleType="fitXY"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.0"
app:srcCompat="@drawable/beauty_bg" />

<TextView
android:id="@+id/textView3"
android:layout_width="236dp"
android:layout_height="22dp"
```



```
android:layout_marginStart="12dp"
android:layout_marginTop="8dp"
android:text="March 2017 PG 129 minutes"
android:textSize="14sp"
app:layout_constraintStart_toEndOf="@+id/imageView3"
app:layout_constraintTop_toBottomOf="@+id/textView2" />
```

```
<ImageView
android:id="@+id/imageView3"
android:layout_width="125dp"
android:layout_height="180dp"
android:layout_marginStart="8dp"
android:layout_marginTop="148dp"
android:background="@drawable/beauty_logo"
android:elevation="5dp"
android:scaleType="fitXY"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
tools:srcCompat="@drawable/beauty_logo" />
```

```
<ImageView
android:id="@+id/imageView4"
android:layout_width="44dp"
android:layout_height="47dp"
android:layout_marginTop="8dp"
android:layout_marginEnd="16dp"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintTop_toBottomOf="@+id/imageView2"
app:srcCompat="@drawable/ic_baseline"
app:tint="@color/red" />
```

```
<Button
android:id="@+id/button"
android:layout_width="185dp"
android:layout_height="50dp"
android:layout_marginStart="10dp"
android:layout_marginTop="16dp"
android:backgroundTint="@color/red"
android:text="Rent from Rs 2799 "
app:layout_constraintEnd_toStartOf="@+id/button2"
app:layout_constraintHorizontal_bias="0.0"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/textView3" />
```

```
<Button
android:id="@+id/button2"
android:layout_width="185dp"
```

```
android:layout_height="50dp"
android:layout_marginStart="10dp"
android:layout_marginTop="16dp"
android:layout_marginEnd="10dp"
android:backgroundTint="@color/red"
android:text="Buy from Rs 12799"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintTop_toBottomOf="@+id/textView3" />
```

```
<View
android:id="@+id/divider"
android:layout_width="match_parent"
android:layout_height="1dp"
android:layout_marginStart="10dp"
android:layout_marginTop="10dp"
android:layout_marginEnd="10dp"
android:background="?android:attr/listDivider"
app:layout_constraintTop_toBottomOf="@+id/button" />
```

```
<androidx.cardview.widget.CardView
android:id="@+id/cardView1"
android:layout_width="60dp"
android:layout_height="60dp"
android:layout_marginStart="24dp"
android:layout_marginTop="28dp"
app:cardBackgroundColor="@color/red"
app:cardCornerRadius="30dp"
app:contentPadding="8dp"
app:layout_constraintStart_toStartOf="@+id/button"
app:layout_constraintTop_toBottomOf="@+id/button">
```

```
<ImageView
android:id="@+id/imageView5"
android:layout_width="40dp"
android:layout_height="40dp"
android:layout_gravity="center"
android:scaleType="centerCrop"
app:srcCompat="@drawable/ic_baseline_star"
app:tint="@color/white" />
</androidx.cardview.widget.CardView>
```

```
<androidx.cardview.widget.CardView
android:id="@+id/cardView2"
android:layout_width="60dp"
android:layout_height="60dp"
android:layout_marginStart="30dp"
android:layout_marginTop="28dp"
```

```
app:cardBackgroundColor="@color/red"
app:cardCornerRadius="30dp"
app:contentPadding="8dp"
app:layout_constraintStart_toEndOf="@+id/cardView1"
app:layout_constraintTop_toBottomOf="@+id/button">
```

```
<ImageView
android:id="@+id/imageView6"
android:layout_width="40dp"
android:layout_height="40dp"
android:layout_gravity="center"
app:srcCompat="@drawable/ic_baseline_family"
app:tint="@color/white" />
</androidx.cardview.widget.CardView>
```

```
<androidx.cardview.widget.CardView
android:id="@+id/cardView3"
android:layout_width="60dp"
android:layout_height="60dp"
android:layout_marginStart="30dp"
android:layout_marginTop="28dp"
app:cardBackgroundColor="@color/yellow"
app:cardCornerRadius="30dp"
app:contentPadding="8dp"
app:layout_constraintStart_toEndOf="@+id/cardView2"
app:layout_constraintTop_toBottomOf="@+id/button2">
```

```
<ImageView
android:id="@+id/imageView7"
android:layout_width="40dp"
android:layout_height="40dp"
android:layout_gravity="center"
app:srcCompat="@drawable/ic_baseline_fav"
app:tint="@color/red" />
```

```
</androidx.cardview.widget.CardView>
```

```
<androidx.cardview.widget.CardView
android:id="@+id/cardView4"
android:layout_width="60dp"
android:layout_height="60dp"
android:layout_marginStart="30dp"
android:layout_marginTop="28dp"
android:layout_marginEnd="28dp"
app:cardBackgroundColor="@color/red"
app:cardCornerRadius="30dp"
app:contentPadding="8dp"
```

```
app:layout_constraintEnd_toEndOf="@+id/button2"
app:layout_constraintHorizontal_bias="0.87"
app:layout_constraintStart_toEndOf="@+id/cardView3"
app:layout_constraintTop_toBottomOf="@+id/button2">

<ImageView
    android:id="@+id/imageView8"
    android:layout_width="40dp"
    android:layout_height="40dp"
    android:layout_gravity="center"
    app:srcCompat="@drawable/ic_baseline_similar"
    app:tint="@color/white" />

</androidx.cardview.widget.CardView>

<androidx.constraintlayout.widget.Guideline
    android:id="@+id/guideline5"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:orientation="vertical"
    app:layout_constraintGuide_begin="12dp" />

<androidx.constraintlayout.widget.Guideline
    android:id="@+id/guideline6"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:orientation="vertical"
    app:layout_constraintGuide_begin="395dp" />

<TextView
    android:id="@+id/textView4"
    android:layout_width="wrap_content"
    android:layout_height="20dp"
    android:layout_marginTop="20dp"
    android:gravity="center"
    android:text="242 ratings"
    android:textSize="14sp"
    app:layout_constraintStart_toStartOf="@+id/cardView1"
    app:layout_constraintTop_toBottomOf="@+id/cardView1" />

<TextView
    android:id="@+id/textView5"
    android:layout_width="60dp"
    android:layout_height="20dp"
    android:layout_marginTop="20dp"
    android:gravity="center"
```

```
android:text="Family"
android:textSize="14sp"
app:layout_constraintStart_toStartOf="@+id/cardView2"
app:layout_constraintTop_toBottomOf="@+id/cardView2" />
```

```
<TextView
android:id="@+id/textView6"
android:layout_width="60dp"
android:layout_height="20dp"
android:layout_marginTop="20dp"
android:gravity="center"
android:text="71%"
android:textSize="14sp"
app:layout_constraintStart_toStartOf="@+id/cardView3"
app:layout_constraintTop_toBottomOf="@+id/cardView3" />
```

```
<TextView
android:id="@+id/textView7"
android:layout_width="60dp"
android:layout_height="20dp"
android:layout_marginTop="20dp"
android:gravity="center"
android:text="Similar"
android:textSize="14sp"
app:layout_constraintStart_toStartOf="@+id/cardView4"
app:layout_constraintTop_toBottomOf="@+id/cardView4" />
```

```
<View
android:id="@+id/divider2"
android:layout_width="match_parent"
android:layout_height="1dp"
android:layout_marginStart="10dp"
android:layout_marginTop="20dp"
android:layout_marginEnd="10dp"
android:background="?android:attr/listDivider"
app:layout_constraintTop_toBottomOf="@+id/textView4" />
```

```
<TextView
android:id="@+id/textView8"
android:layout_width="match_parent"
android:layout_height="120dp"
android:layout_marginStart="12dp"
android:layout_marginEnd="12dp"
android:gravity="center"
android:text="The story and characters you know and love come to spectacular life in the
live-action adaption of Disney's animated classic Beauty and the Beast."
android:textColor="@color/black"
```

```
android:textSize="20sp"
android:textStyle="bold"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.0"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/divider2"
app:layout_constraintVertical_bias="1.0" />

</androidx.constraintlayout.widget.ConstraintLayout>
</ScrollView>
```

### ConstraintLayout.java

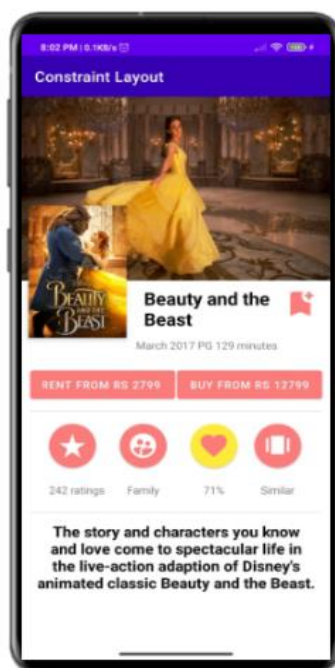
```
package com.example.mobile_harpuneet;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

public class ConstraintLayout extends AppCompatActivity{

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_constraint_layout);
        getSupportActionBar().setTitle("Constraint Layout");
    }
}
```



## **Task 6 Create a Fragment**

**fragment\_task.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:background="@color/white"
    tools:context=".FragmentTask"
    android:orientation="vertical">

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:background="@color/purple_500"
        android:orientation="horizontal">

        <Button
            android:id="@+id/btn1"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_margin="5dp"
            android:layout_weight="1"
            android:backgroundTint="@color/yellow"
            android:text="First"
            android:textColor="@color/black"
            android:textSize="20dp"

        >

    </Button>

    <Button
        android:id="@+id/btn2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_margin="5dp"
        android:layout_weight="1"
        android:backgroundTint="@color/red"
        android:text="Second"
        android:textColor="@color/black"
        android:textSize="20dp">
```

```
</Button>
```

```
</LinearLayout>
```

```
<LinearLayout  
    android:layout_width="match_parent"  
    android:layout_height="match_parent"  
    android:id="@+id/linearlayout"  
    android:orientation="horizontal"  
>
```

```
</LinearLayout>
```

```
</LinearLayout>
```

### FragmentTask.java

```
package com.example.mobile_harpuneet;  
  
import androidx.appcompat.app.AppCompatActivity;  
import androidx.fragment.app.FragmentTransaction;  
  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.LinearLayout;  
  
import com.example.mobile_harpuneet.Fragments.FirstFragment;  
import com.example.mobile_harpuneet.Fragments.SecondFragment;  
  
public class FragmentTask extends AppCompatActivity {  
  
    Button btn1, btn2;  
    LinearLayout linearLayout;  
  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_fragment_task);  
  
        getSupportActionBar().setTitle("Fragment Task 6");  
  
        btn1 = findViewById(R.id.btn1);  
        btn2 = findViewById(R.id.btn2);
```



```
linearLayout= findViewById(R.id.linearLayout);

btn1.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {

        FirstFragmentfirstFragment= new FirstFragment();
        FragmentTransaction transaction = getSupportFragmentManager().beginTransaction();
        transaction.replace(R.id.linearLayout,firstFragment);
        transaction.commit();
    }
});

btn2.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {

        SecondFragmentsecondFragment= new SecondFragment();
        FragmentTransaction transaction = getSupportFragmentManager().beginTransaction();
        transaction.replace(R.id.linearLayout,secondFragment);
        transaction.commit();
    }
});

    }
}
```

### **FirstFragment.java**

```
package com.example.mobile_harpuneet.Fragments;

import android.os.Bundle;

import androidx.fragment.app.Fragment;

import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;

import com.example.mobile_harpuneet.R;

public class FirstFragment extends Fragment {
```

```
public FirstFragment() {  
    // Required empty public constructor  
}
```

**@Override**

```
public View onCreateView(LayoutInflater inflater, ViewGroup container,  
    Bundle savedInstanceState) {  
    // Inflate the layout for this fragment  
    View view= inflater.inflate(R.layout.fragment_first, container, false);  
  
    return view;  
}
```

SecondFragment.java

```
package com.example.mobile_harpuneet.Fragments;  
  
import android.os.Bundle;  
  
import androidx.fragment.app.Fragment;  
  
import android.view.LayoutInflater;  
import android.view.View;  
import android.view.ViewGroup;  
  
import com.example.mobile_harpuneet.R;  
  
public class SecondFragment extends Fragment {  
  
    public SecondFragment() {  
        // Required empty public constructor  
    }
```

#### @Override

```
public View onCreateView(LayoutInflater inflater, ViewGroup container,
    Bundle savedInstanceState) {
    // Inflate the layout for this fragment
    View view= inflater.inflate(R.layout.fragment_second, container, false);

    return view;
}
```

#### first\_fragment.xml

```
<?xml version="1.0" encoding="utf-8"?>
<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@color/purple_200"
    tools:context=".Fragments.FirstFragment">

    <!-- TODO: Update blank fragment layout -->
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textSize="40dp"
        android:layout_gravity="center"
        android:textColor="@color/white"
        android:textStyle="bold"
        android:text="First Fragment" />

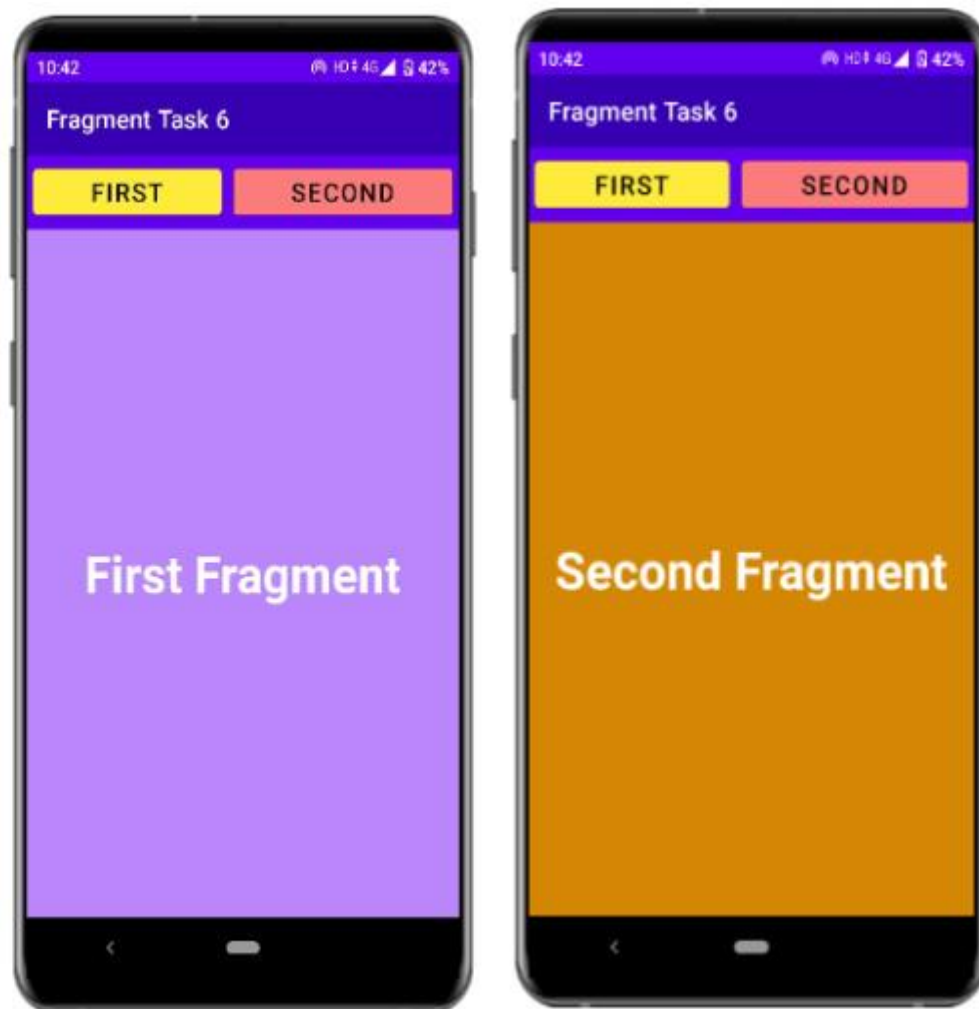
</FrameLayout>
```

#### Second\_fragment.xml

```
<?xml version="1.0" encoding="utf-8"?>
<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@color/musturd"
    tools:context=".Fragments.SecondFragment">

    <!-- TODO: Update blank fragment layout -->
```

```
<TextView  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:textSize="40dp"  
    android:layout_gravity="center"  
    android:textColor="@color/white"  
    android:textStyle="bold"  
    android:text="Second Fragment" />  
</FrameLayout>
```



### Task 7 Demonstration on Activities and Intents

#### Register.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:padding="10dp"
android:background="@color/white"
android:backgroundTint="@color/white"
tools:context=".RegisterPage">
```

```
<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Register"
android:textSize="30dp"
android:textColor="@color/purple_700"
android:layout_gravity="center"
android:layout_marginTop="50dp"
></TextView>
```

```
<LinearLayout
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:orientation="horizontal"
>
```

```
<com.google.android.material.textfield.TextInputLayout
android:layout_width="match_parent"
android:layout_height="wrap_content"
>
```

```
<com.google.android.material.textfield.TextInputEditText
android:layout_width="match_parent"
android:id="@+id/name"
android:background="@color/white"
android:layout_height="wrap_content"
android:layout_marginTop="30dp"
android:drawableLeft="@drawable/user"
android:drawablePadding="8dp"
android:hint="Name"
android:textSize="20dp">
```

```
</com.google.android.material.textfield.TextInputEditText>
```

```
</com.google.android.material.textfield.TextInputLayout>
```

```
</LinearLayout>
```

```
<LinearLayout
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:orientation="horizontal"
>

<com.google.android.material.textfield.TextInputLayout
android:layout_width="match_parent"
android:layout_height="wrap_content"
>
<com.google.android.material.textfield.TextInputEditText
android:layout_width="match_parent"
android:id="@+id/email"
android:background="@color/white"
android:layout_height="wrap_content"
android:layout_marginTop="30dp"
android:drawableLeft="@drawable/email"
android:drawablePadding="8dp"

android:hint="Email"
android:textSize="20dp">

</com.google.android.material.textfield.TextInputEditText>
</com.google.android.material.textfield.TextInputLayout>
</LinearLayout>

<LinearLayout
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:orientation="horizontal"
>

<com.google.android.material.textfield.TextInputLayout
android:layout_width="match_parent"
android:layout_height="wrap_content"
app:passwordToggleEnabled="false"
>
<com.google.android.material.textfield.TextInputEditText
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_marginTop="30dp"
android:id="@+id/password"
android:drawablePadding="8dp"
android:drawableLeft="@drawable/lock"
android:hint=" Password"
android:background="@color/white"
android:inputType="textPassword"
```

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

</com.google.android.material.textfield.TextInputEditText>
</com.google.android.material.textfield.TextInputLayout>
</LinearLayout>

<Button
android:layout_width="wrap_content"
android:id="@+id/register"
android:layout_height="wrap_content"
android:layout_marginTop="50dp"
android:layout_gravity="center"
android:background="@drawable/btn_rounded_red"
android:text="Register"
android:textColor="@color/white"
android:textSize="20dp"

></Button>
</LinearLayout>
```

### RegisterPage.java

```
package com.example.mobile_harpuneet;

import androidx.appcompat.app.AppCompatActivity;

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

import com.google.android.material.textfield.TextInputEditText;

public class RegisterPage extends AppCompatActivity{

    TextInputEditText name, email, password;
    Button register;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_register_page);

        getSupportActionBar().setTitle("Task7_Register Page");
```

```
name = findViewById(R.id.name);
email = findViewById(R.id.email);
password = findViewById(R.id.password);
register = findViewById(R.id.register);

register.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        String getEmail= email.getText().toString();
        String getPassword= password.getText().toString();

        Intent intent= new Intent(RegisterPage.this, LoginPage.class);
        intent.putExtra("email",getEmail);
        intent.putExtra("password",getPassword);
        startActivity(intent);

    }
});

}
```

#### login\_page.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayoutxmlns: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:padding="10dp"
android:backgroundTint="@color/white"
android:background="@color/white"
tools:context=".LoginPage">

<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Login"
    android:textSize="30dp"
    android:textColor="@color/purple_700"
    android:layout_gravity="center"
    android:layout_marginTop="50dp"
></TextView>
```



```
<LinearLayout
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:orientation="horizontal"
>

<com.google.android.material.textfield.TextInputLayout
android:layout_width="match_parent"
android:layout_height="wrap_content"
>

<com.google.android.material.textfield.TextInputEditText
android:layout_width="match_parent"
android:id="@+id/lemail"
android:background="@color/white"
android:layout_height="wrap_content"
android:drawablePadding="8dp"
android:layout_marginTop="30dp"
android:drawableLeft="@drawable/email"
android:hint="Email"
android:textSize="20dp">

</com.google.android.material.textfield.TextInputEditText>

</com.google.android.material.textfield.TextInputLayout>

</LinearLayout>

<LinearLayout
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:orientation="horizontal"
>

<com.google.android.material.textfield.TextInputLayout
android:layout_width="match_parent"
android:layout_height="wrap_content"
app:passwordToggleEnabled="false"
>

<com.google.android.material.textfield.TextInputEditText
android:layout_width="match_parent"
android:id="@+id/lpassword"
android:layout_height="wrap_content"
```

```
android:layout_marginTop="30dp"
android:drawableLeft="@drawable/lock"
android:hint="Password"
android:drawablePadding="8dp"
android:background="@color/white"
android:inputType="textPassword"
android:textSize="20dp">

</com.google.android.material.textfield.TextInputEditText>

</com.google.android.material.textfield.TextInputLayout>

</LinearLayout>

<Button
android:layout_width="wrap_content"
android:id="@+id/login"
android:layout_height="wrap_content"
android:layout_marginTop="50dp"
android:layout_gravity="center"
android:background="@drawable/btn_rounded_red"
android:text="Login"
android:textColor="@color/white"
android:textSize="20dp"

></Button>
</LinearLayout>
```

### LoginPage.java

```
package com.example.mobile_harpuneet;

import androidx.appcompat.app.AppCompatActivity;

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

import com.google.android.material.textfield.TextInputEditText;

public class LoginPage extends AppCompatActivity{

    TextInputEditText email, password;
```

```
Button login;
String rcv1,rcv2;

@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_login_page);

    getSupportActionBar().setTitle("Login Page");

    lemail= findViewById(R.id.lemail);
    lpassword= findViewById(R.id.lpassword);
    login = findViewById(R.id.login);

    rcv1 = getIntent().getStringExtra("email");
    rcv2 = getIntent().getStringExtra("password");

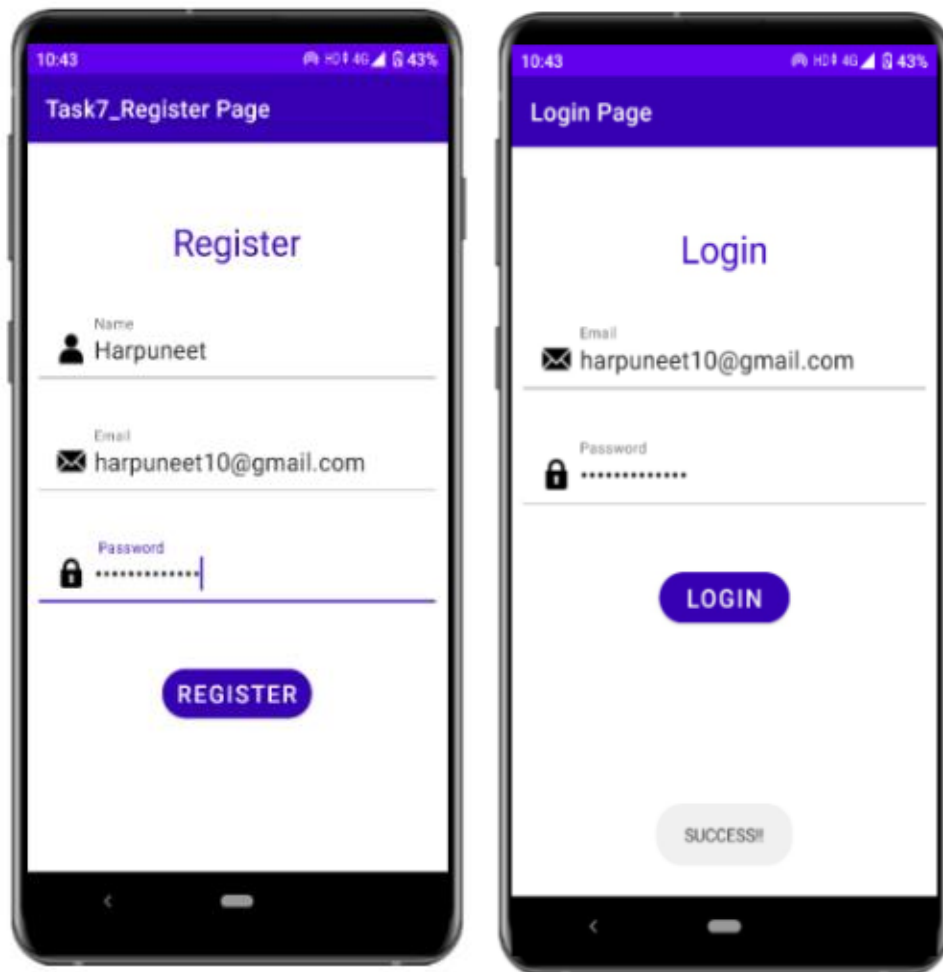
    lemail.setText(rcv1);
    lpassword.setText(rcv2);

    login.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            Toast.makeText(LoginPage.this, "SUCCESS!!", Toast.LENGTH_SHORT).show();
            //      Intent intent = new Intent(LoginPage.this,FragmentTask.class);
            //      startActivity(intent);

        }
    });

}

//
```



### Task 8 Demonstration on SQLite

#### activity\_sqlite.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=".SQLite">

    <TextView
```

```
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="SQLiteDatabase"
        android:layout_marginTop="20dp"
        android:textSize="28sp"
        android:gravity="center"/>

<com.google.android.material.textfield.TextInputLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginStart="8dp"
    android:layout_marginEnd="8dp"
    android:layout_marginTop="20dp"
    style="@style/Widget.MaterialComponents.TextInputLayout.OutlinedBox"
    android:hint="Enter Student Name">

    <com.google.android.material.textfield.TextInputEditText
        android:id="@+id/etxtStudentName"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:inputType="text"/>

</com.google.android.material.textfield.TextInputLayout>

<com.google.android.material.textfield.TextInputLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginStart="8dp"
    android:layout_marginEnd="8dp"
    android:layout_marginTop="20dp"
    style="@style/Widget.MaterialComponents.TextInputLayout.OutlinedBox"
    android:hint="Enter your College Name">

    <com.google.android.material.textfield.TextInputEditText
        android:id="@+id/etxtCollegeName"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:inputType="text"/>

</com.google.android.material.textfield.TextInputLayout>

<com.google.android.material.button.MaterialButton
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="20dp"
    android:layout_marginStart="40dp"
    android:layout_marginEnd="40dp"
```

```
android:layout_gravity="center"
android:onClick="doSave"
android:text="Save"/>
```

```
<com.google.android.material.button.MaterialButton
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="20dp"
    android:layout_marginStart="40dp"
    android:layout_marginEnd="40dp"
    android:layout_gravity="center"
    android:backgroundTint="@color/black"
    android:onClick="doLoad"
    android:text="Load"/>
</LinearLayout>
```

### **SQLite.java**

```
package com.example.mobile_harpuneet;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;

import com.example.mobile_harpuneet.MySqlLiteHelper;
import com.google.android.material.textfield.TextInputEditText;

public class SQLite extends AppCompatActivity {

    TextInputEditText etxtStudentName,etxtCollege;
    MySqlLiteHelper mSqlLiteHelper;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_sqlite);
        mSqlLiteHelper = new MySqlLiteHelper(this);
        etxtStudentName = findViewById(R.id.etxtStudentName);
        etxtCollege = findViewById(R.id.etxtCollegeName);
    }

    public void doSave(View view) {

        mSqlLiteHelper.insertData(etxtStudentName.getText().toString(),etxtCollege.getText().toString());
    }
}
```

```
    }

    public void doLoad(View view) {
        mSqlLiteHelper.getAll();
    }
}
```

### **MySQLiteHelper.java**

```
package com.example.mobile_harpuneet;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;
import android.util.Log;
import android.widget.Toast;

import androidx.annotation.Nullable;

public class MySQLiteHelper extends SQLiteOpenHelper {
    private static final String TAG = "MySQLiteHelper";
    private static final String DB_NAME = "Education";
    private static final String DB_TABLE = "students";
    private static final int DB_VER = 1;
    Context context;
    SQLiteDatabase myDb;

    public MySQLiteHelper(@Nullable Context context) {
        super(context, DB_NAME, null, DB_VER);
        this.context = context;
    }

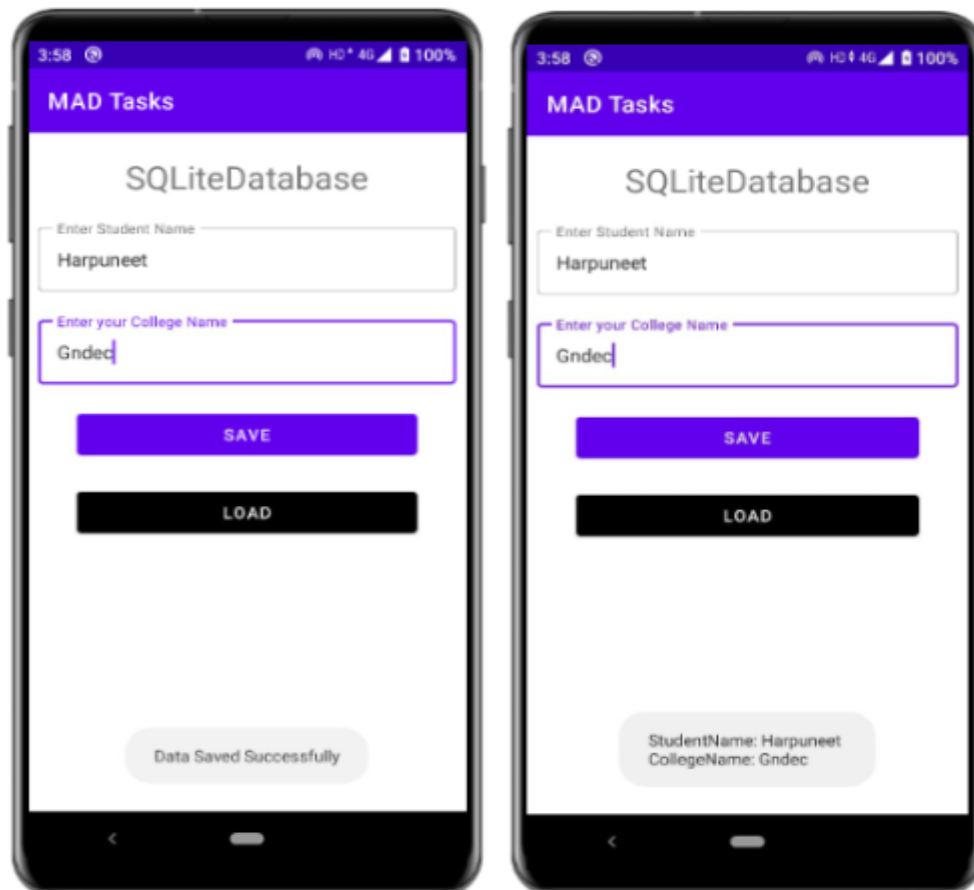
    @Override
    public void onCreate(SQLiteDatabase db) {
        db.execSQL("create table "+DB_TABLE+" (_id integer primary key\nautoincrement,student_name text,college_name text);");
        Log.i(TAG, "onCreate: Table Created");
    }

    @Override
    public void onUpgrade(SQLiteDatabase db, int oldVersion, int newVersion) {
        db.execSQL("drop table if exists "+DB_TABLE);
        onCreate(db);
    }

    public void insertData(String s1,String s2){
        myDb = getWritableDatabase();
    }
}
```

```
myDb.execSQL("insert into "+DB_TABLE+" (student_name,college_name)
values('"+s1+"','"+s2+"');");
Toast.makeText(context,"Data Saved Successfully",Toast.LENGTH_SHORT).show();
}

public void getAll(){
    myDb = getReadableDatabase();
    Cursor cr = myDb.rawQuery("Select * from " + DB_TABLE,null);
    StringBuilder str = new StringBuilder();
    while ((cr.moveToNext())){
        String s1= cr.getString(1);
        String s2= cr.getString(2);
        str.append("StudentName: ").append(s1).append("\nCollegeName: ").append(s2);
    }
    cr.close();
    Toast.makeText(context,str.toString(),Toast.LENGTH_SHORT).show();
}
}
```





## Task 9 Content Providers

### activity\_content\_provider.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:padding="8dp"
    tools:context=".ContentProvider">

    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="CONTENT PROVIDER"
        android:textColor="@color/black"
        android:textSize="30dp"
        android:gravity="center"
        android:layout_marginTop="30dp"

    ></TextView>

    <EditText
        android:layout_width="match_parent"
        android:id="@+id/tv1"
        android:layout_height="wrap_content"
        android:layout_marginTop="40dp"
        android:hint="Enter Employee Name"

    ></EditText>

    <EditText
        android:layout_width="match_parent"
        android:id="@+id/tv2"
        android:layout_height="wrap_content"
        android:layout_marginTop="20dp"
        android:hint="Enter Employee Job Profile"

    ></EditText>
```

```
<Button
    android:layout_width="wrap_content"
    android:id="@+id/bt1"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:layout_marginTop="50dp"
    android:text="Save"
    android:background="@color/teal_200"
    android:textSize="20dp"
    android:onClick="doSaveContent"

>>/Button>
```

```
<Button
    android:layout_width="wrap_content"
    android:id="@+id/bt2"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:layout_marginTop="30dp"
    android:text="Load"
    android:textSize="20dp"
    android:background="@color/yellow"
    android:onClick="doLoadContent"
```

```
>>/Button>
```

```
</LinearLayout>
```

### **ContentProvider.java**

```
package com.example.mobile_lab;
```

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

```
import android.content.ContentValues;
```

```
import android.database.Cursor;
```

```
import android.net.Uri;
```

```
import android.os.Bundle;
```

```
import android.view.View;
```

```
import android.widget.Button;
```

```
import android.widget.EditText;
```

```
import android.widget.Toast;
```

```
public class ContentProvider extends AppCompatActivity {
```

```
    EditText et1, et2;
```

```
    Button b1,b2;
```

```
ContentValues values = new ContentValues();

@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_content_provider);

    getSupportActionBar().setTitle("Task_9");

    et1 = findViewById(R.id.tv1);
    et2 = findViewById(R.id.tv2);
    b1 = findViewById(R.id.bt1);
    b2 = findViewById(R.id.bt2);

}

public void doSaveContent(View view) {

    values.put("emp_name",et1.getText().toString());
    values.put("profile",et2.getText().toString());

    Uri uri = getContentResolver().insert(CompanyProvider.CONTENT_URI,values);
    Toast.makeText(this, uri.toString(), Toast.LENGTH_SHORT).show();

}

public void doLoadContent(View view) {

    Cursor cr =
getContentResolver().query(CompanyProvider.CONTENT_URI,null,null,null,"_id");
    StringBuilder stringBuilder = new StringBuilder();

    while(cr.moveToNext()){

        int id = cr.getInt(0);
        String s1 = cr.getString(1);
        String s2 = cr.getString(2);
        stringBuilder.append(id+" "+s1+" "+s2+" \n");

    }

    Toast.makeText(this, stringBuilder.toString(), Toast.LENGTH_SHORT).show();
}
}
```

### CompanyProvider.java

```
package com.example.mobile_lab;

import android.content.ContentProvider;
import android.content.ContentUris;
import android.content.ContentValues;
import android.content.Context;
import android.content.UriMatcher;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;
import android.database.sqlite.SQLiteQueryBuilder;
import android.net.Uri;

import androidx.annotation.Nullable;

import java.net.URI;

public class CompanyProvider extends ContentProvider {

    SQLiteDatabase myDb;

    private static final String DB_Name = "company";
    private static final String DB_Table = "emp";
    private static final int DB_VER = 1;

    public CompanyProvider() {
    }

    public static final String AUTHORITY = "com.mobile_lab.company_provider";
    public static final Uri CONTENT_URI = Uri.parse("content://" + AUTHORITY + "/emp");

    public static int EMP = 1;
    public static int EMP_ID = 2;

    static UriMatcher myUri = new UriMatcher(UriMatcher.NO_MATCH);
    static {
        myUri.addURI(AUTHORITY, "emp", EMP);
        myUri.addURI(AUTHORITY, "emp/#", EMP_ID);
    }
}
```

```
private class MyOwnDatabase extends SQLiteOpenHelper{

    public MyOwnDatabase(Context ct){
        super(ct,DB_Name,null,DB_VER);
    }

    @Override
    public void onCreate(SQLiteDatabase sqLiteDatabase) {

        sqLiteDatabase.execSQL("create table "+DB_Table+" (_id integer primary key
autoincrement, emp_name text, profile text);");

    }

    @Override
    public void onUpgrade(SQLiteDatabase sqLiteDatabase, int i, int i1) {

        sqLiteDatabase.execSQL("drop table if exists "+DB_Table);
    }
}

@Override
public int delete(Uri uri, String selection, String[] selectionArgs) {
    // Implement this to handle requests to delete one or more rows.
    throw new UnsupportedOperationException("Not yet implemented");
}

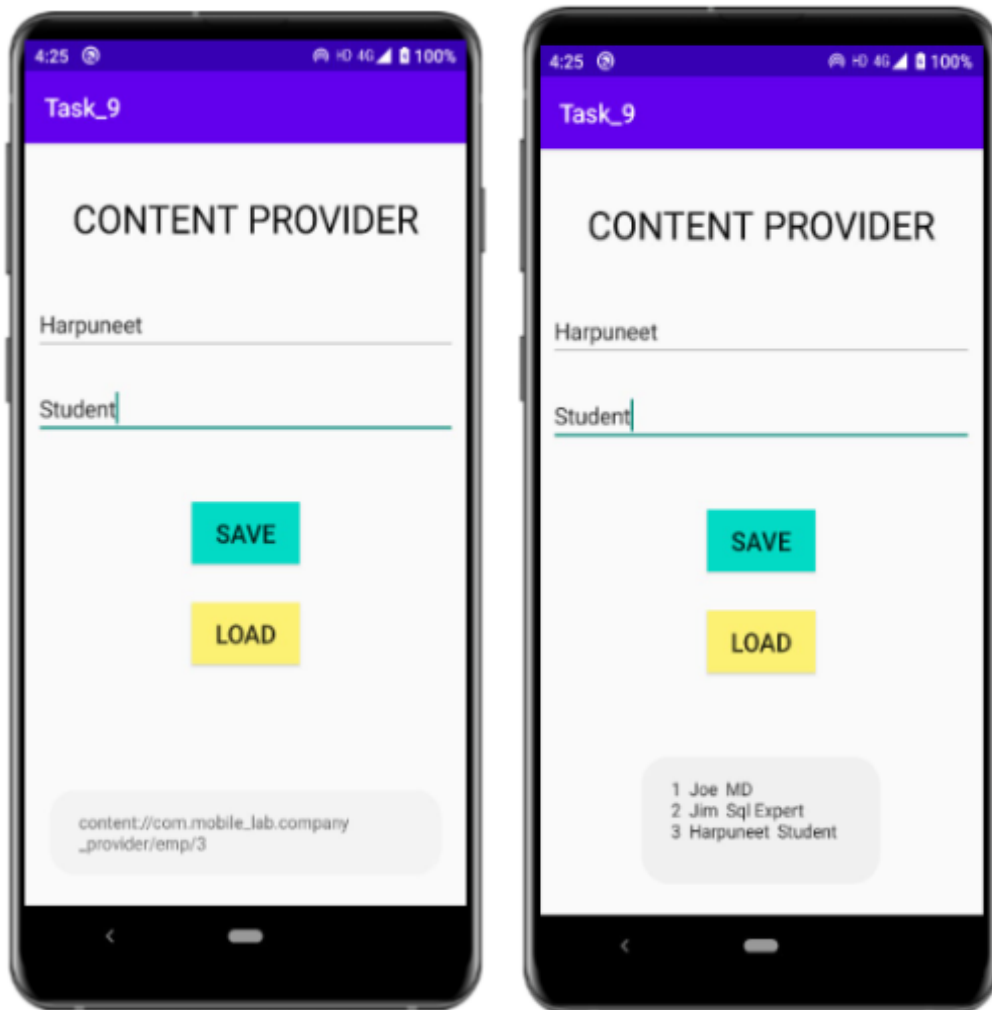
@Override
public String getType(Uri uri) {
    // TODO: Implement this to handle requests for the MIME type of the data
    // at the given URI.
    throw new UnsupportedOperationException("Not yet implemented");
}

@Override
public Uri insert(Uri uri, ContentValues values) {

    long row = myDb.insert(DB_Table,null,values);

    if(row > 0){
        uri = ContentUris.withAppendedId(CONTENT_URI,row);
        getContext().getContentResolver().notifyChange(uri,null);
    }
}
```

```
    }  
    return uri;  
}  
  
@Override  
public boolean onCreate() {  
  
    MyOwnDatabase myHelper = new MyOwnDatabase(getContext());  
  
    myDb = myHelper.getWritableDatabase();  
  
    if(myDb != null){  
        return true;  
    }  
    else{  
        return false;  
    }  
  
}  
  
@Override  
public Cursor query(Uri uri, String[] projection, String selection,  
                    String[] selectionArgs, String sortOrder) {  
  
    SQLiteQueryBuilder myQuery = new SQLiteQueryBuilder();  
    myQuery.setTables(DB_Table);  
  
    Cursor cr = myQuery.query(myDb,null,null,null,null,null,"_id");  
  
    cr.setNotificationUri(getContext().getContentResolver(),uri);  
  
    return cr;  
  
}  
  
@Override  
public int update(Uri uri, ContentValues values, String selection,  
                  String[] selectionArgs) {  
  
    throw new UnsupportedOperationException("Not yet implemented");  
  
}  
}
```



### Task 10 Demonstration on Services

#### **activity\_service.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:gravity="center"
    tools:context=". Service">
```

```
<TextView
    android:id="@+id/textView9"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Service Demo"
    android:layout_marginBottom="80dp"
    android:textSize="32sp"
    android:gravity="center"/>

<com.google.android.material.button.MaterialButton
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Start Service"
    android:onClick="startMyService"
    android:layout_marginTop="20dp"/>

<com.google.android.material.button.MaterialButton
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="20dp"
    android:onClick="stopMyService"
    android:text="Stop Service"
    android:backgroundTint="@color/red"/>
</LinearLayout>
```

### **Service.java**

```
package com.example.mobile_harpuneet;
import androidx.appcompat.app.AppCompatActivity;
```



```
import android.content.Intent;

import android.os.Bundle;

import android.view.View;

import com.example.mobile_harpuneet.MyService;

public class Service extends AppCompatActivity {

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_service);

    }

    public void startMyService(View view) {

        Intent intent = new Intent(this, MyService.class);

        startService(intent);

    }

    public void stopMyService(View view) {

        Intent intent = new Intent(this, MyService.class);

        stopService(intent);

    }

}
```

### **MyService.java**

```
package com.example.mobile_harpuneet;

import android.app.Service;

import android.content.Intent;

import android.os.IBinder;

import android.util.Log;

import android.widget.Toast;

public class MyService extends Service {
```

```
private static final String TAG = "MyService";

public MyService() {
}

@Override

public IBinder onBind(Intent intent) {
    return null;
}

@Override

public void onCreate() {
    super.onCreate();

    Toast.makeText(this,"Service Created",Toast.LENGTH_SHORT).show();

    Log.i(TAG, "onCreate: Service Created");
}

@Override

public int onStartCommand(Intent intent, int flags, int startId) {
    Toast.makeText(this,"Service Started",Toast.LENGTH_SHORT).show();

    Log.i(TAG, "onCreate: Service Started");

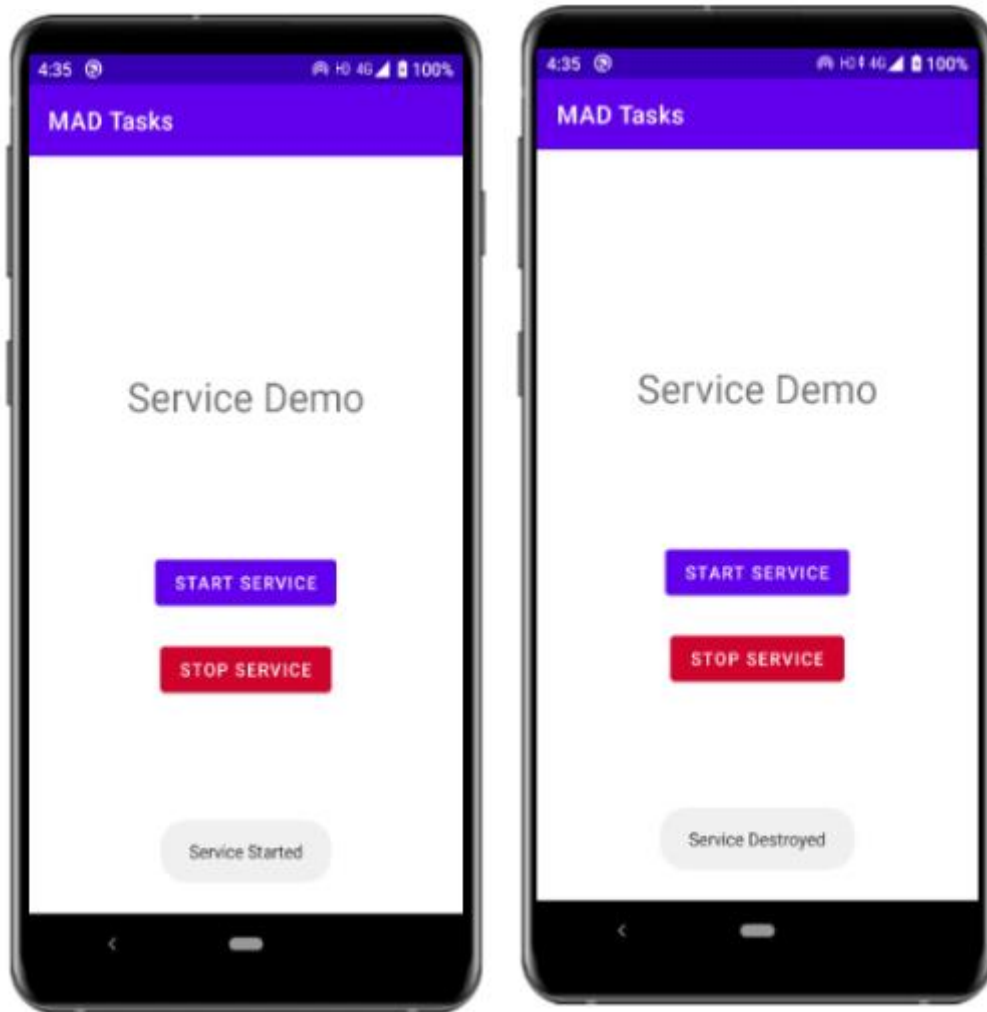
    return START_STICKY;
}

@Override

public void onDestroy() {
    super.onDestroy();

    Toast.makeText(this,"Service Destroyed",Toast.LENGTH_SHORT).show();

    Log.i(TAG, "onCreate: Service Destroyed");
}
}
```



## Task 11 Android Security and Debugging

### Debugging.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:padding="8dp"
    android:layout_marginTop="50dp"
    tools:context=".Debugging">

    <com.google.android.material.textfield.TextInputLayout
        android:layout_width="match_parent"
```

```
android:layout_height="wrap_content"

>

<com.google.android.material.textfield.TextInputEditText
android:id="@+id/edit1"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:ems="10"
android:drawableRight="@drawable/one"
android:drawablePadding="5dp"
android:drawableTint="@color/black"
android:background="@drawable/edit_text_border"
android:hint="Enter Number 1"
android:backgroundTint="@color/white"
android:inputType="textPersonName"
tools:layout_editor_absoluteX="0dp"
tools:layout_editor_absoluteY="69dp" />

</com.google.android.material.textfield.TextInputLayout>

<com.google.android.material.textfield.TextInputLayout
android:layout_width="match_parent"
android:layout_height="wrap_content">

<com.google.android.material.textfield.TextInputEditText
android:id="@+id/edit2"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:ems="10"
android:drawableRight="@drawable/two"
android:drawablePadding="5dp"
android:background="@drawable/edit_text_border"
android:layout_marginTop="20dp"
android:hint="Enter Number 2"
android:backgroundTint="@color/white"
android:inputType="textPersonName"
tools:layout_editor_absoluteX="0dp"
tools:layout_editor_absoluteY="178dp" />

</com.google.android.material.textfield.TextInputLayout>

<Button
android:id="@+id/addNumbers"
android:layout_width="wrap_content"
```

```
android:layout_height="wrap_content"
android:text="Add Numbers"
android:layout_gravity="center_horizontal"
android:background="@drawable/rounded_button"
android:layout_marginTop="40dp"
tools:layout_editor_absoluteX="16dp"
tools:layout_editor_absoluteY="288dp"
android:onClick="addNumbers"/>
```

```
<TextView
android:id="@+id/result"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginTop="50dp"
android:textSize="20dp"
android:layout_gravity="center_horizontal"
android:textStyle="bold"
android:textColor="@color/black"
android:fontFamily="arial"
tools:layout_editor_absoluteX="0dp"
tools:layout_editor_absoluteY="394dp" />
```

```
</LinearLayout>
```

### Debugging.java

```
package com.example.mobile_harpuneet;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.util.Log;
import android.view.View;
import android.widget.EditText;
import android.widget.TextView;

public class Debugging extends AppCompatActivity{

    EditTexte1, e2;
    TextViewv1;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_debugging);
        getSupportActionBar().setTitle("Task 11_Debugging");
    }
}
```

```
e1 = (EditText)findViewById(R.id.edit1);
e2 = (EditText)findViewById(R.id.edit2);
v1 = (TextView)findViewById(R.id.result);
}

public void addNumbers(View view) {
    Log.i("Debugging", "Addition_Executed 1");
    int n1 = Integer.parseInt(e1.getText().toString());
    Log.i("Debugging", "Addition_Executed 2");
    int n2 = Integer.parseInt(e2.getText().toString());
    Log.i("Debugging", "Addition_Executed 3");
    int result = n1 + n2;
    Log.i("Debugging", "Addition_Executed 4");
    v1.setText("Result = "+result);
    Log.i("Debugging", "Addition_Executed 5");
}
}
```



```
//clic2021-06-07 21:18:47.596 19071-19071/com.example.mobile_harpuneet I/Debugging: Addition_Executed 1
2021-06-07 21:18:47.596 19071-19071/com.example.mobile_harpuneet I/Debugging: Addition_Executed 2
2021-06-07 21:18:47.596 19071-19071/com.example.mobile_harpuneet I/Debugging: Addition_Executed 3
? 2021-06-07 21:18:47.596 19071-19071/com.example.mobile_harpuneet I/Debugging: Addition_Executed 4
2021-06-07 21:18:47.598 19071-19071/com.example.mobile_harpuneet I/Debugging: Addition_Executed 5
```