PRACTICAL FILE

MOBILE APPLICATION DEVELOPMENT

IT-14711

Submitted By: Submitted To:

Ishvir Singh (1706858)   Prof. Ranjodh Kaur

Department Of Information Technology,

Guru Nanak Dev Engineering College,

Ludhiana-141006

Contents

Task-1 Create a first app on Android

activity_home.xml

```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="Ishvir Singh"
        android:textSize="34dp"
        android:textColor="@color/orange_dark"
        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

```java
package com.example.practicalday_2;

import androidx.appcompat.app.AppCompatActivity;

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

public class Home extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_home);
        getSupportActionBar().setTitle("Task 1");

    }
}
```

Task 1

Ishvir Singh

Task-2 Create icon of app, change the label Background

activity_home.xml

```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=".MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Ishvir Singh"
        android:textSize="34dp"
        android:textColor="@color/orange_dark"
        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

```java
package com.example.practicalday_2;

import androidx.appcompat.app.AppCompatActivity;

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

public class Home extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_home);
        getSupportActionBar().setTitle("Task 1");

    }
}
```

themes.xml

```xml
<resources xmlns:tools="http://schemas.android.com/tools">
    <!-- Base application theme. -->
    <style name="Theme.PracticalDay2"
parent="Theme.MaterialComponents.DayNight.DarkActionBar">
        <!-- Primary brand color. -->
        <item name="colorPrimary">@color/orange_light</item>
        <item name="colorPrimaryVariant">@color/orange_dark</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/yellow_title</item>
    </style>
</resources>
```
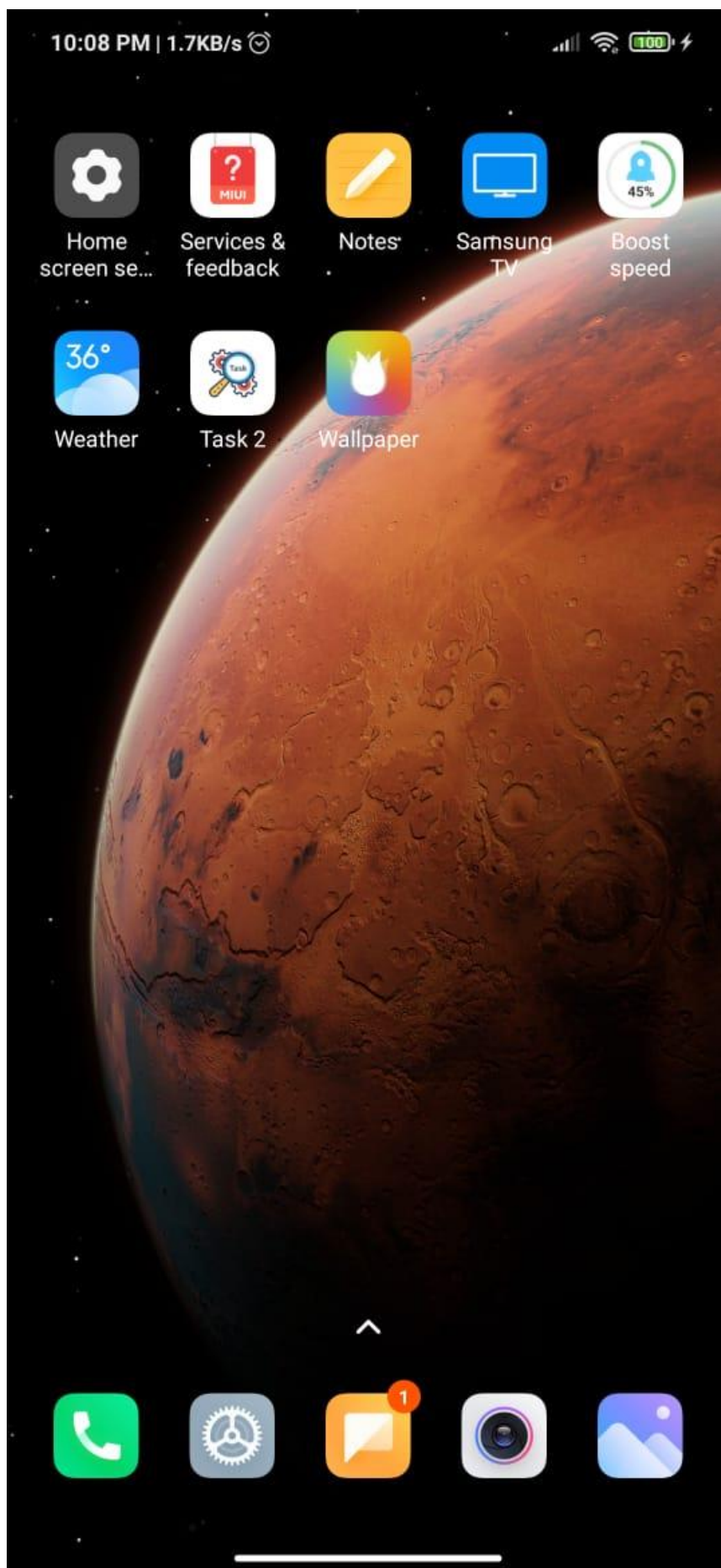
colors.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <color name="purple_200">#FFBB86FC</color>
    <color name="purple_500">#FF6200EE</color>
    <color name="purple_700">#FF3700B3</color>
    <color name="teal_200">#FF03DAC5</color>
    <color name="teal_700">#FF018786</color>
    <color name="black">#FF000000</color>
    <color name="white">#FFFFFFFF</color>
    <color name="orange_light">#FF8C00</color>
    <color name="orange_dark">#FF7700</color>
    <color name="green_light">#1CB693</color>
    <color name="green_dark">#208871</color>
    <color name="yellow_title">#E91E63</color>
</resources>
```

ic_launcher_task.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<adaptive-icon xmlns:android="http://schemas.android.com/apk/res/android">
    <background android:drawable="@color/ic_launcher_task_background"/>
    <foreground android:drawable="@mipmap/ic_launcher_task_foreground"/>
</adaptive-icon>
```

Home screen se...

Services & feedback

Notes

Samsung TV

Boost speed

Weather

Task 2

Wallpaper

Task 2

Ishvir Singh

Task-3 Create the menu, Buttons and ScrollView in an Application

MainActivity.java

```java
package com.example.practicalday_2;

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

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

public class MainActivity extends AppCompatActivity {

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

        getSupportActionBar().setTitle("User Interface");
        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);
        }
    }
```

```java
    @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
<?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/purple_700"
        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.
"

```xml
                android:textColor="@color/black"
                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.
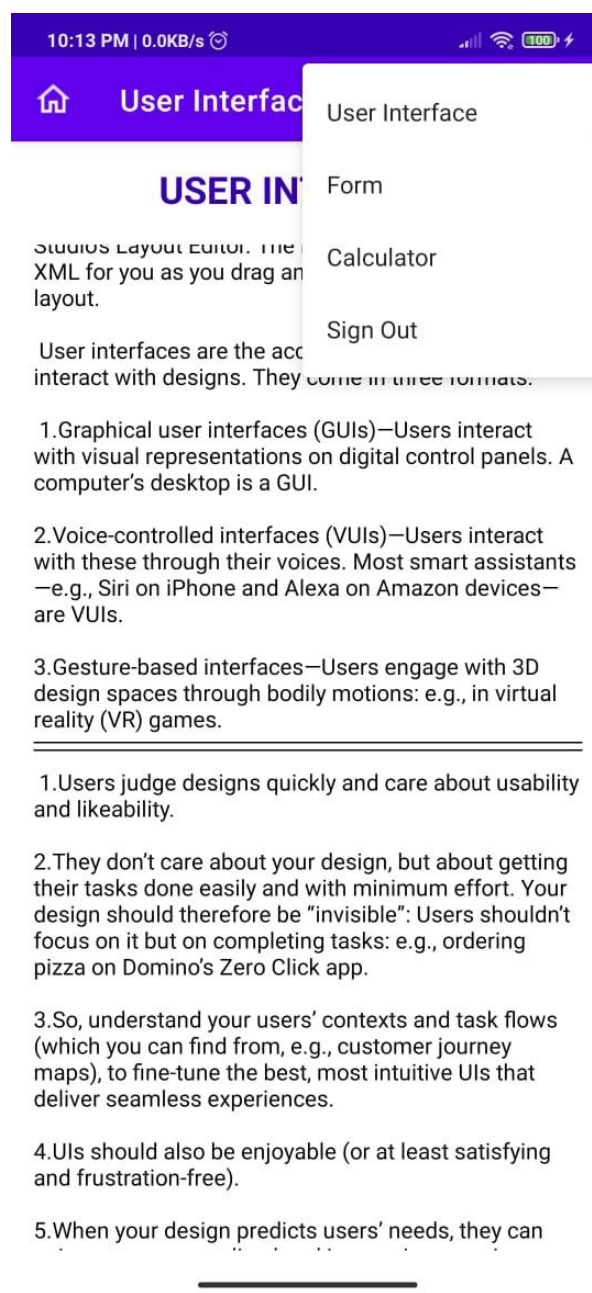"

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


        </LinearLayout>

    </ScrollView>



    </LinearLayout>


</LinearLayout>
```

Task-4 Create the form using all the UI i.e Check Button, Radio Button, TextView etc.

activity_form.xml

```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:text="User Profile"
        android:textAppearance="?android:attr/textAppearanceMedium"
        android:textColor="@color/black"
        android:textSize="25dp"
        android:textStyle="bold" />

    <ImageView
        android:layout_width="100dp"
        android:layout_height="100dp"
        android:layout_gravity="center"
        android:layout_marginTop="20dp"
        android:src="@drawable/user" />

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


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

```xml
            android:checked="true"
            android:text="Male" />

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


    </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:layout_marginTop="5dp"
        android:padding="8dp"
        android:text="Choose Your Language"
        android:textColor="@color/black"></TextView>

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

    <CheckBox
        android:id="@+id/cb2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
```

```xml
            android:layout_below="@+id/cb1"
            android:layout_centerHorizontal="true"
            android:checked="false"
            android:text="Hindi" />

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

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


    <ImageButton
            android:id="@+id/btnSubmit"
            android:layout_width="100dp"
            android:layout_height="100dp"
            android:layout_below="@+id/radioGroup"
            android:layout_centerHorizontal="true"
            android:layout_gravity="center"
            android:layout_marginTop="10dp"
            android:background="@color/cardview_dark_background"
            android:src="@drawable/submit" />


</LinearLayout>
```

Form.java

```java
package com.example.practicalday_2;

import androidx.annotation.RequiresApi;
import androidx.appcompat.app.AppCompatActivity;

import android.app.DatePickerDialog;
import android.content.Intent;
import android.os.Build;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuInflater;
import android.view.MenuItem;
import android.view.View;
import android.widget.AutoCompleteTextView;
import android.widget.DatePicker;

import com.google.android.material.textfield.MaterialAutoCompleteTextView;
```

```java
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("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(DatePicker view, 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()) {
```

```java
        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);    }
}
```

Form

User Profile

Ishvir Singh

⦿ Male   ◯ Female

Date of Birth   29/1/1999

Choose Your Language

☑ English

☐ Hindi

☐ French

☑ Punjabi

SUBMIT

Task-5 Design a form using all layouts

colors.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <color name="purple_200">#FFBB86FC</color>
    <color name="purple_500">#FF6200EE</color>
    <color name="purple_700">#FF3700B3</color>
    <color name="teal_200">#FF03DAC5</color>
    <color name="teal_700">#FF018786</color>
    <color name="black">#FF000000</color>
    <color name="white">#FFFFFFFF</color>
    <color name="red">#ED0707</color>
    <color name="blue">#2196F3</color>
    <color name="yellow">#FD9613</color>
    <color name="orange_dark">#FF7700</color>
    <color name="green">#5EDD64</color>
    <color name="grey">#D1CFCF</color>
    <color name="pink_red">#F14343</color>
    <color name="green_light">#29F612</color>


</resources>
```
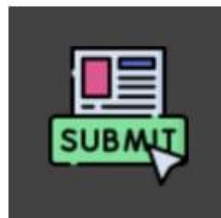
activity_linear.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android: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"
        app:iconGravity="start"
        android:onClick="layout1"
        app:iconTint="@color/green"
        android:paddingBottom="8dp"/>

    <com.google.android.material.button.MaterialButton
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
```

```xml
            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"
            app:iconGravity="start"
            android:onClick="layout2"
            app:iconTint="@color/green"
            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_dialog_info"
            app:iconSize="38dp"
            android:onClick="layout3"
            app:iconGravity="start"
            app:iconTint="@color/green"
            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_map"
            app:iconSize="38dp"
            app:iconGravity="start"
            android:onClick="layout4"
            app:iconTint="@color/green"
            android:paddingBottom="8dp"/>

</LinearLayout>
```

Linear.java

```java
package com.example.practicalday_2;

import androidx.appcompat.app.AppCompatActivity;

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

```java
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,FrameLayoutActivity.class);
        startActivity(intent);
    }

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

activity_linear2.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    tools:context=".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/red"
        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="34dp"
        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="34dp"
        android:layout_marginTop="10dp"
        android:layout_marginStart="20dp"
        android:layout_marginEnd="20dp"
        android:background="@drawable/edit_text_border"/>
```

```xml
    <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/yellow"
        android:textColor="@color/black"/>

</LinearLayout>
```

Linear2.java

```java
package com.example.practicalday_2;

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");
    }
}
```
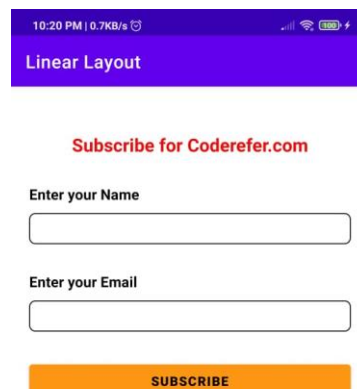
activity_relative_layout.xml

```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/yellow"
    tools:context=".RelativeLayout">

    <EditText
        android:id="@+id/etxt1"
        android:layout_width="180dp"
        android:layout_height="40dp"
        android:layout_marginStart="10dp"
        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:layout_marginEnd="10dp"
        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_marginStart="10dp"
        android:layout_marginTop="20dp"
        android:layout_marginEnd="10dp"
        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_marginStart="10dp"
        android:layout_marginTop="20dp"
        android:layout_marginEnd="10dp"
        android:background="@color/white"
        android:gravity="top"
        android:hint="Message"
```

```xml
        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="20dp"
        android:textColor="@color/black"
        android:backgroundTint="@color/grey"
        android:text="Submit" />


</RelativeLayout>
```

RelativeLayout.java

```java
package com.example.practicalday_2;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

public class RelativeLayout extends AppCompatActivity {

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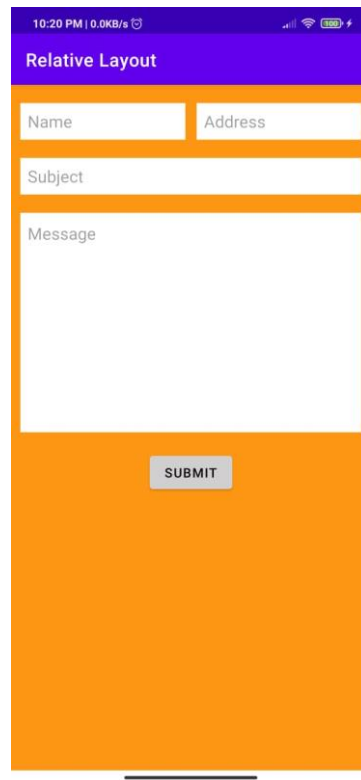
activity_frame_layout.xml

```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:animateLayoutChanges="true"
    tools:context=".FrameLayoutActivity">

    <FrameLayout
        android:id="@+id/layoutOne"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:background="@color/orange_dark">

        <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:text="Frame Layout 1" />
    </FrameLayout>

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

        <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:text="Frame Layout 2" />
    </FrameLayout>

    <FrameLayout
        android:id="@+id/layoutThree"
        android:layout_width="match_parent"
```

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

        <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:text="Frame Layout 3" />
    </FrameLayout>
</FrameLayout>
```

FrameLayoutActivity.java

```java
package com.example.practicalday_2;

import androidx.appcompat.app.AppCompatActivity;

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

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

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

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

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

activity_constraint_layout.xml

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

```xml
        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"
```

```xml
        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"
```

```xml
            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>
```
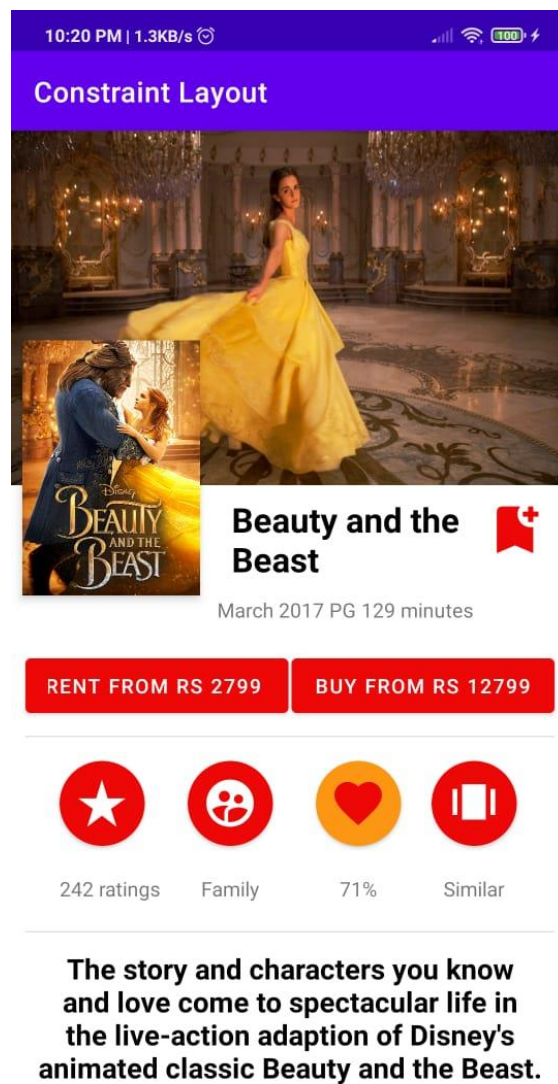
```java
package com.example.practicalday_2;

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

activity_fragment_task.xml

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

33

```
            >


        </LinearLayout>



</LinearLayout>
```

fragment1.xml

```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_500"
    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>
```

fragment2.xml

```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/teal_700"
    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>
```

<u>FragmentTask.java</u>

```java
package com.example.practicalday_2;

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.practicalday_2.Fragments.FirstFragment;
import com.example.practicalday_2.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");

        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) {

                FirstFragment firstFragment = 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) {

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


    }
}
```

FirstFragment.java

```java
package com.example.practicalday_2.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.practicalday_2.R;

/**
 * A simple {@link Fragment} subclass.
 * Use the {@link FirstFragment#newInstance} factory method to
 * create an instance of this fragment.
 */
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

```java
package com.example.practicalday_2.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.practicalday_2.R;

/**
 * A simple {@link Fragment} subclass.
 * Use the {@link SecondFragment#newInstance} factory method to
 * create an instance of this fragment.
```
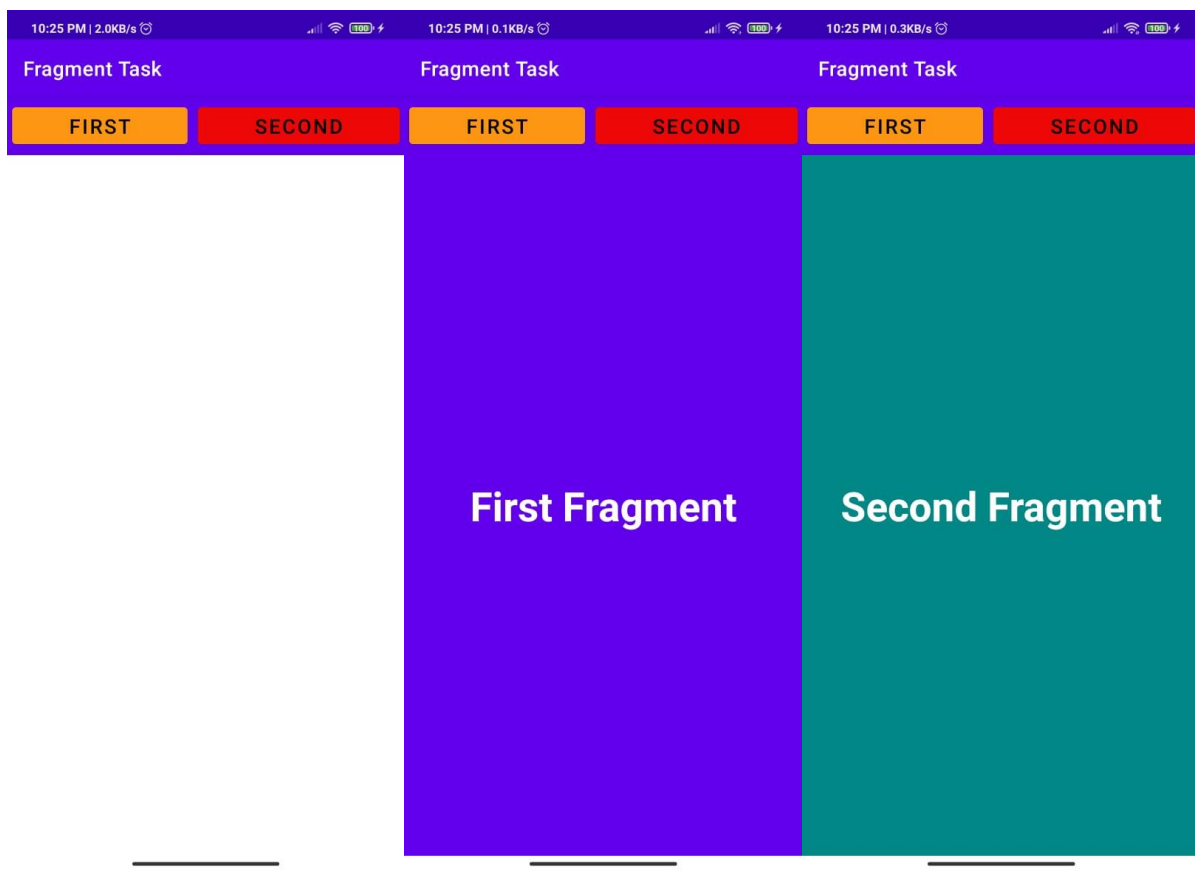
```
    */
public class SecondFragment extends Fragment {

    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;
    }
}
```

Task-7 Demonstration on Activities and Intents

<u>activity_register_page.xml</u>

```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/user1"
                android:drawablePadding="8dp"
                android:hint="Name"
                android:textSize="20dp">

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

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

    </LinearLayout>

    <LinearLayout
```

```xml
        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"
```

```xml
            android:text="Register"
            android:textColor="@color/white"
            android:textSize="20dp"


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

RegisterPage.java

```java
package com.example.practicalday_2;

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("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);

            }
        });

    }
}
```

activity_login_page.xml

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

```xml
        <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/llogin"
        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

```java
package com.example.practicalday_2;

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 lemail, lpassword;
    Button login;
    String rcv1,rcv2;
```

```java
@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.llogin);

    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, Home.class);
            startActivity(intent);

        }
    });

}
}
```
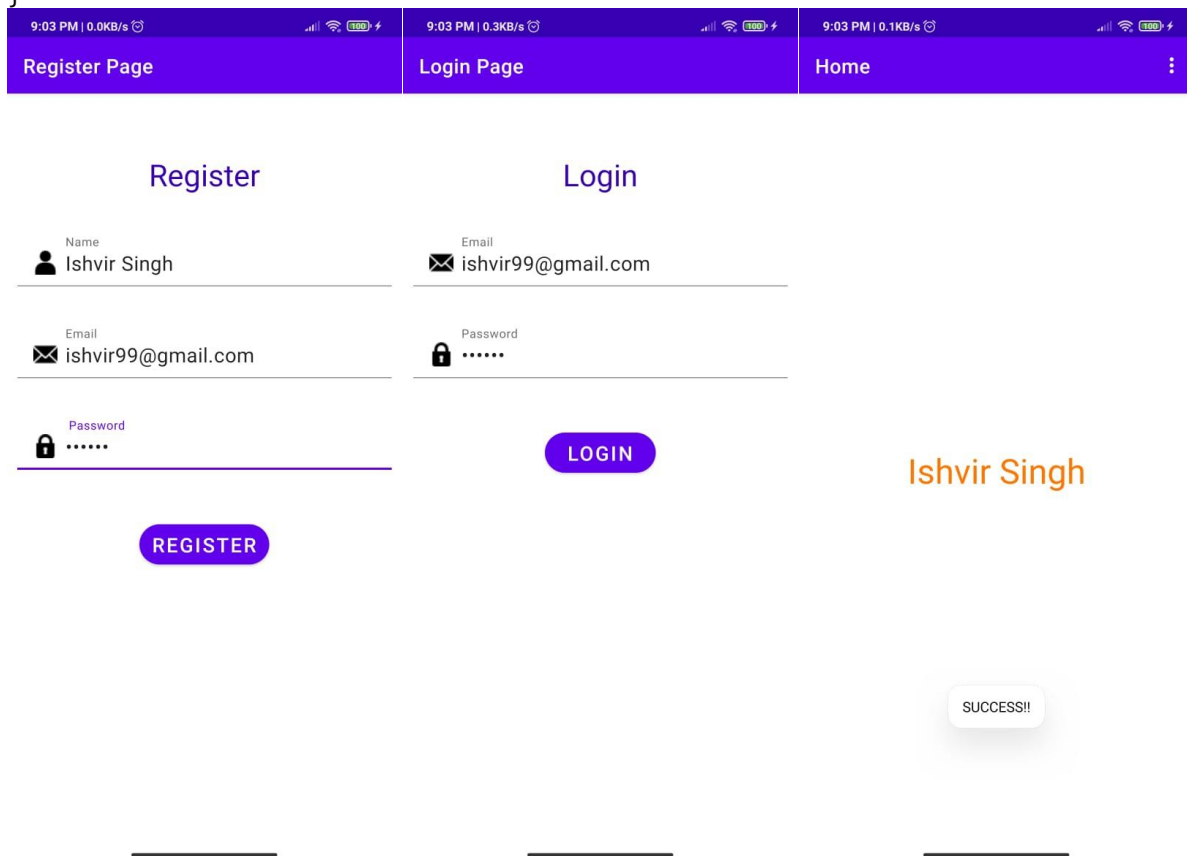
Task-8 Demonstration on SQLite

activity_s_q_lite_task.xml

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

    <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
```

```xml
            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>
```

SQLiteTask.java

```java
package com.example.practicalday_2;

import androidx.appcompat.app.AppCompatActivity;

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

import com.example.practicalday_2.db.MySqlLiteHelper;
import com.google.android.material.textfield.TextInputEditText;

public class SQLiteTask extends AppCompatActivity {

    TextInputEditText etxtStudentName,etxtCollege;
    MySqlLiteHelper mSqlLiteHelper;

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

MySqlLiteHelper.java

```java
package com.example.practicalday_2.db;

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 MySqlLiteHelper extends SQLiteOpenHelper {
    private static final String TAG = "MySqlLiteHelper";
    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 MySqlLiteHelper(@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
autoincrement,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();
```
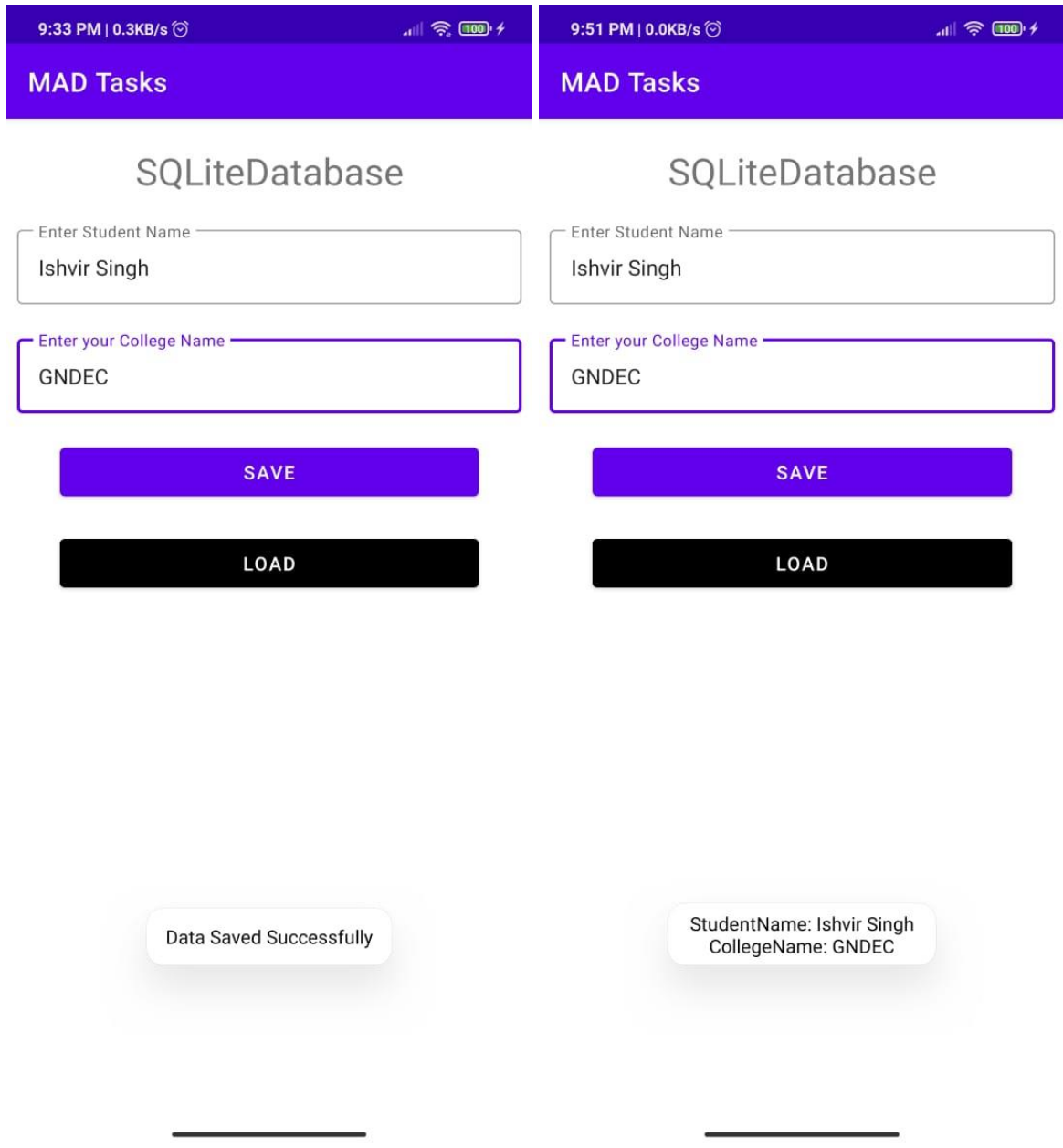
```
        }
}
```

Task-9 Content Providers

content_provider.xml

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

```xml
        ></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

```java
package com.example.practicalday_2;

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.practicalday_2;

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() {
    }
```

```java
    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);
```

```java
        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");

    }
}
```
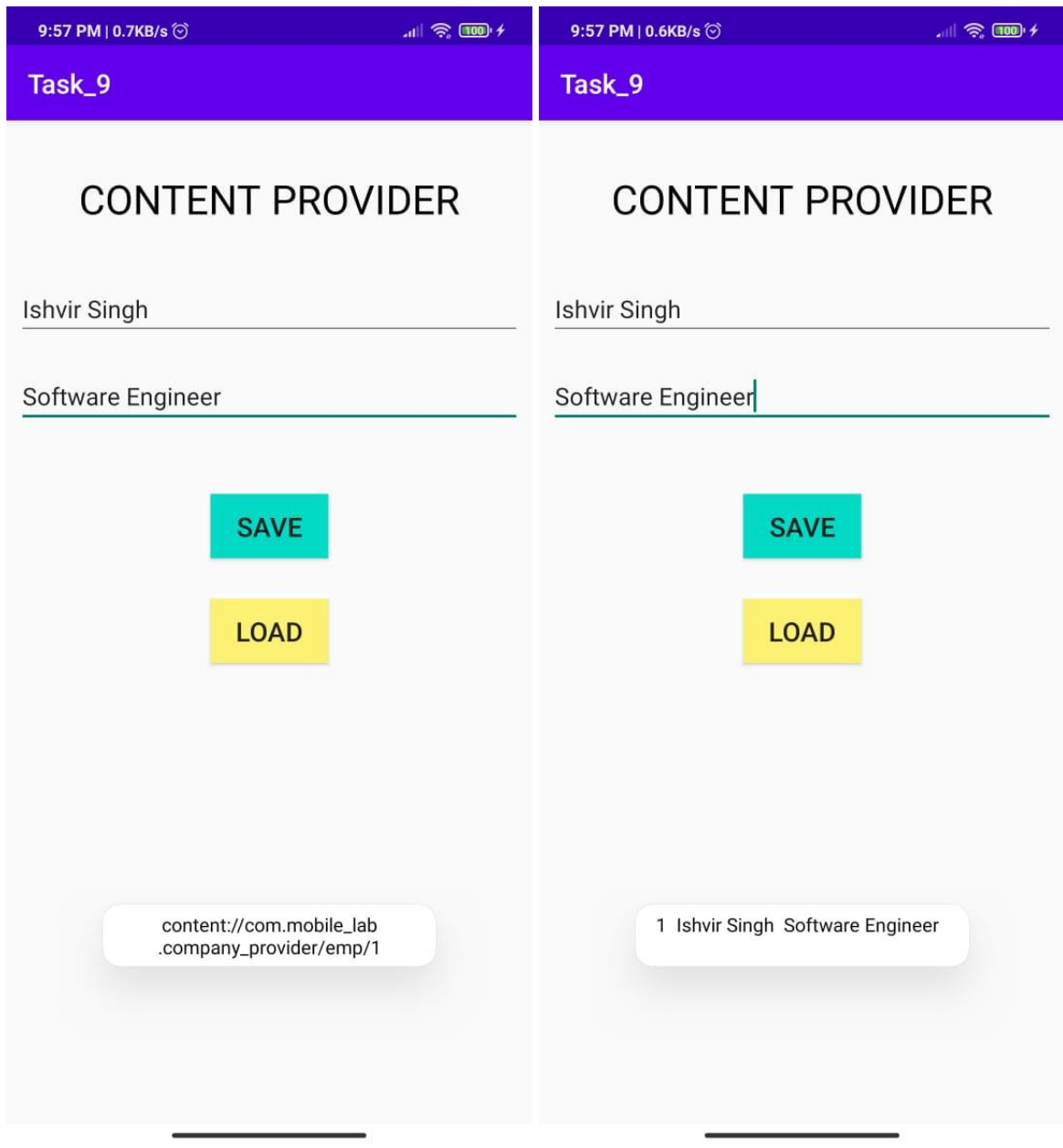
Task-10 Demonstration on Services

activity_service_task.xml

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

    <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>
```

ServiceTask.java

```java
package com.example.practicalday_2;

import androidx.appcompat.app.AppCompatActivity;

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

import com.example.practicalday_2.services.MyService;

public class ServiceTask extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
```

54

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

    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

```java
package com.example.practicalday_2.services;

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");
    }
}
```
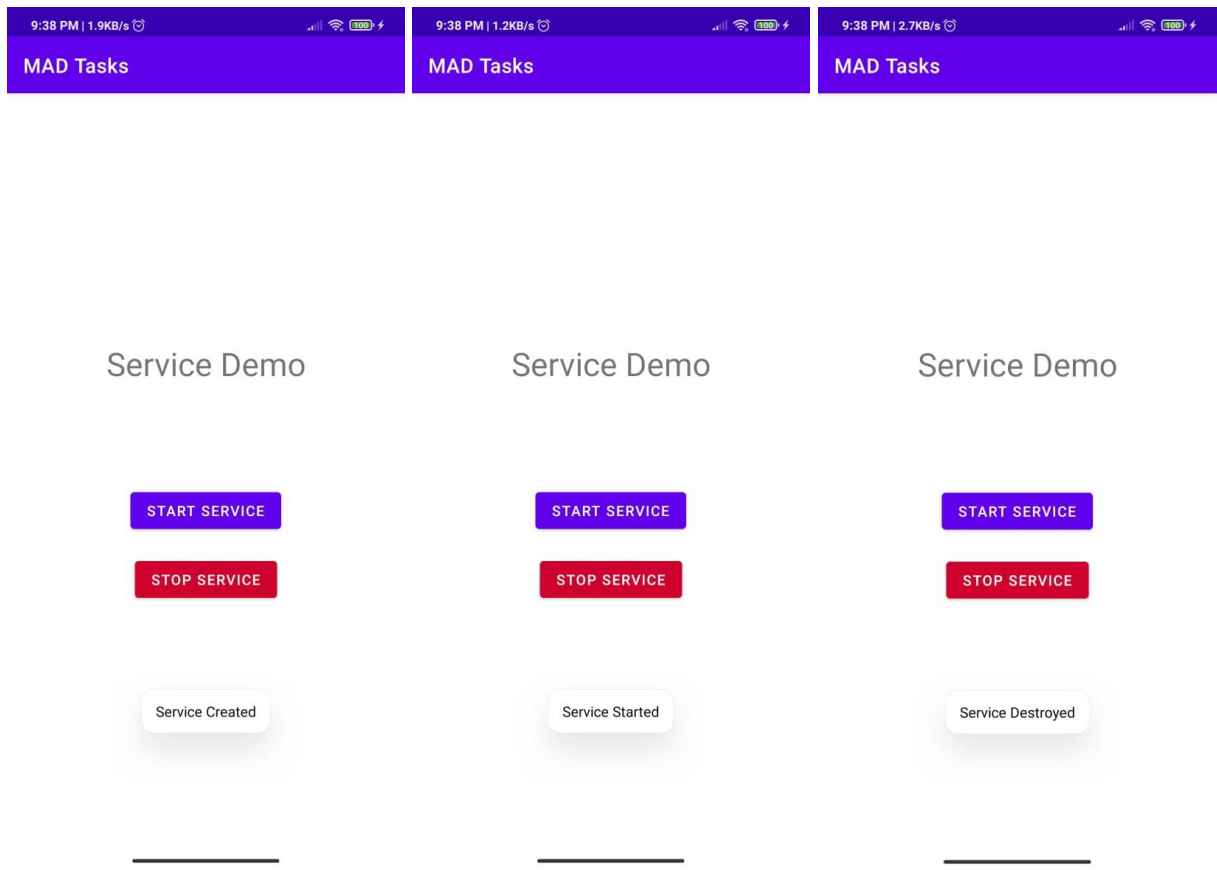
Service Demo

START SERVICE

STOP SERVICE

Service Created

Service Demo

START SERVICE

STOP SERVICE

Service Started

Service Demo

START SERVICE

STOP SERVICE

Service Destroyed

Task-11 Android Security and Debugging

activity_debugging.xml

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

```java
package com.example.practicalday_2;

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 {

    EditText e1, e2;
    TextView v1;
    @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", "Executed 1");
        int n1 = Integer.parseInt(e1.getText().toString());
        Log.i("Debugging", "Executed 2");
        int n2 = Integer.parseInt(e2.getText().toString());
        Log.i("Debugging", "Executed 3");
        int result = n1 + n2;
        Log.i("Debugging", "Executed 4");
```

```
            v1.setText("Result = "+result);
            Log.i("Debugging", "Executed 5");
    }
}
```

```
2021-06-07 22:33:39.153 8056-8056/com.example.practicalday_2 I/Debugging: Executed 1
2021-06-07 22:33:39.153 8056-8056/com.example.practicalday_2 I/Debugging: Executed 2
2021-06-07 22:33:39.153 8056-8056/com.example.practicalday_2 I/Debugging: Executed 3
2021-06-07 22:33:39.153 8056-8056/com.example.practicalday_2 I/Debugging: Executed 4
2021-06-07 22:33:39.155 8056-8056/com.example.practicalday_2 I/Debugging: Executed 5
```

10:33 PM | 0.0KB/s

Task 11_Debugging

Enter Number 1
55

Enter Number 2
45

ADD NUMBERS

Result = 100