20MCA243 MOBILE APPLICATION DEVELOPMENT LAB

Lab Report Submitted By

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AMAL JYOTHI COLLEGE OF ENGINEERING
KANJIRAPPALLY

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DEPARTMENT OF COMPUTER APPLICATIONS

AMAL JYOTHI COLLEGE OF ENGINEERING

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CERTIFICATE

This is to certify that the lab report, "**20MCA243 MOBILE APPLICATION DEVELOPMENT LAB"** is the bonafide work of **ALEX THOMAS (Reg.No:AJC20MCA-2009)** in partial fulfillment of the requirements for the award of the Degree of Master of Computer Applications under APJ Abdul Kalam Technological University during the year 2021-22.

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Program No:1

Aim: Program to develop the android mobile application which consist of GUI components for Login page creation.

activity_main.xml

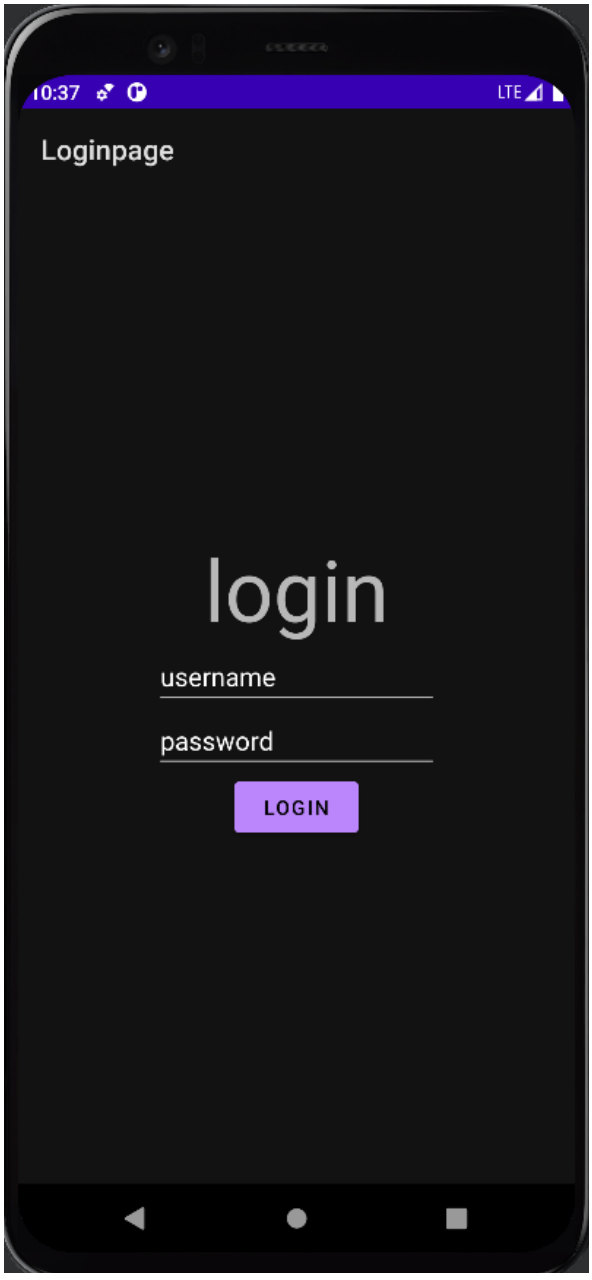
```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
android:orientation="vertical"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

<TextView
android:id="@+id/textView"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="login"
android:textSize="60dp"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintHorizontal_bias="0.434"
app:layout_constraintLeft_toLeftOf="parent"
app:layout_constraintRight_toRightOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.324" />

<EditText
android:id="@+id/editText1"
android:layout_width="200dp"
android:layout_height="wrap_content"
android:text="username"
tools:layout_editor_absoluteX="82dp"
tools:layout_editor_absoluteY="334dp" />

<EditText
android:id="@+id/editText2"
android:layout_width="200dp"
android:layout_height="wrap_content"
android:text="password"
tools:layout_editor_absoluteX="92dp"
tools:layout_editor_absoluteY="427dp" />

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

```
android:layout_height="wrap_content"
android:text="login"
tools:layout_editor_absoluteX="141dp"
tools:layout_editor_absoluteY="514dp" />

</LinearLayout>
```

MainActivity.java

```
package com.example.login;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {
Button b1;
TextView t1;
EditText e1;
EditText e2;
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
b1=findViewById(R.id.button);
t1=findViewById(R.id.textView);
e1=findViewById(R.id.editText1);
e2=findViewById(R.id.editText2);

b1.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
String val1 = e1.getText().toString();
String val2 = e2.getText().toString();
}

});
}
}
```

Output



Program No:2

Aim: Program to display the content of EditText in TextView on button click**.**

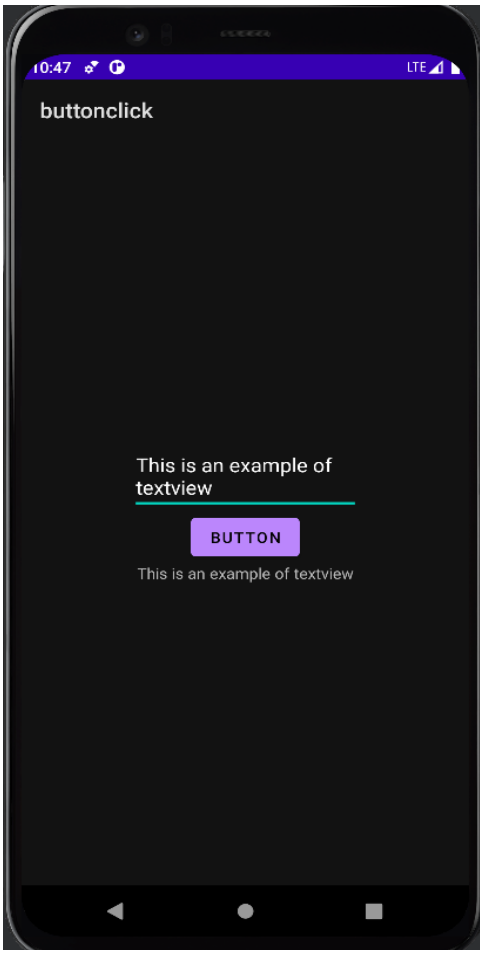
Activity.xml

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

<EditText
android:id="@+id/editText"
android:layout_width="200dp"
android:layout_height="wrap_content" />
<Button
android:id="@+id/button"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Button"
app:layout_constraintBottom_toTopOf="@+id/textView"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/editText" />

<TextView
android:id="@+id/textView"
android:layout_width="wrap_content"
android:layout_height="wrap_content"

app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintLeft_toLeftOf="parent"
app:layout_constraintRight_toRightOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.592" />

</LinearLayout>
```

MainActivity.java

```
package com.example.button_click;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {
Button b1;
TextView t1;
EditText e2;
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
b1=findViewById(R.id.button);
t1=findViewById(R.id.textView);
e2=findViewById(R.id.editText);
b1.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
String val1 = e2.getText().toString();
t1.setText(val1);
}
});
}}
```

Output:


10:47
LTE
buttonclick
This is an example of textview
BUTTON
This is an example of textview

Program No:3

Aim: Design login form with username and password using linear layout and toast valid credentials.

activity_main.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"
xmlns:card_view="http://schemas.android.com/apk/res-auto"
tools:context=".MainActivity"
android:orientation="vertical"
android:background="#000">

<androidx.cardview.widget.CardView
android:layout_margin="64dp"
android:layout_width="match_parent"
android:layout_height="wrap_content"
card_view:cardCornerRadius="8dp"
card_view:cardElevation="8dp"
android:background="#fff">

<LinearLayout
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:orientation="vertical"
android:padding="24dp">


<TextView
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:text="Login"
android:textSize="36sp"
android:textAlignment="center"
android:layout_gravity="center_horizontal" />

<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:textSize="22sp"
android:text="username"
android:textColor="@color/black"/>

<EditText
android:layout_width="match_parent"
```

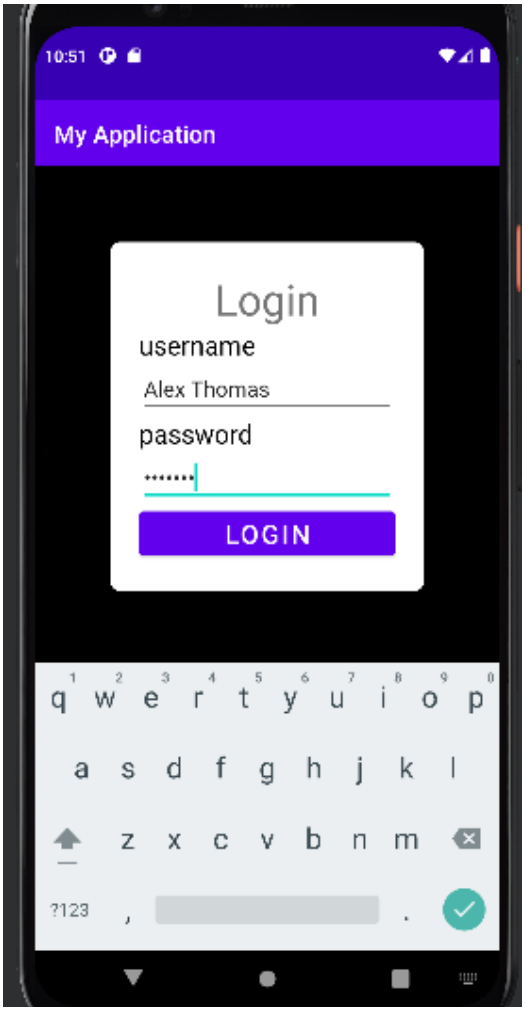
```
android:layout_height="wrap_content"
android:inputType="text"
android:id="@+id/activity_main_usernameEditText" />

<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:textSize="22sp"
android:text="password"
android:textColor="@color/black"/>

<EditText
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:inputType="textPassword"
android:id="@+id/activity_main_passwordEditText" />

<Button
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:id="@+id/activity_main_loginButton"
android:text="login"
android:textSize="22sp"/>
</LinearLayout>
</androidx.cardview.widget.CardView>
</LinearLayout>
```

MainActivity.java

```
package com.example.loginwithcredentials;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
private EditText usernameEditText;
private EditText passwordEditText;
private Button loginButton;

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

usernameEditText = findViewById(R.id.activity_main_usernameEditText);
passwordEditText = findViewById(R.id.activity_main_passwordEditText);
```

```
loginButton = findViewById(R.id.activity_main_loginButton);

loginButton.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
if(usernameEditText.getText().length()>0&&passwordEditText.getText().length() > 0)
{
StringtoastMessage="Username:"+usernameEditText.getText().toString() + ",
Password: " + passwordEditText.getText().toString();
Toast.makeText(getApplicationContext(),toastMessage,Toast.LENGTH_SHORT).show
();
} else {
String toastMessage = "Username or Password are not populated";
Toast.makeText(getApplicationContext(),toastMessage,Toast.LENGTH_SHORT).show
();
}
}
});
}
}
```

Output



Program No:4

Aim: Implementing basic arithmetic operations of a simple calculator.

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"
tools:context=".MainActivity"
android:padding="20dp"
android:orientation="vertical"
android:background="@color/pastel">

<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="CALCULATOR"
android:textSize="25sp"
android:layout_marginBottom="16dp"
android:textColor="@android:color/black" />

<LinearLayout
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:orientation="horizontal"
android:layout_marginBottom="20dp">

<EditText
android:id="@+id/first_no"
android:layout_width="102dp"
android:layout_height="59dp"
android:ems="10"
android:layout_marginHorizontal="50dp"
android:hint="Enter" />

<EditText
android:id="@+id/second_no"
android:layout_width="102dp"
android:layout_height="59dp"
android:ems="10"
android:hint="Enter" />

</LinearLayout>

<LinearLayout
```

```
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:orientation="horizontal"
android:layout_marginBottom="20dp">

<TextView
android:textSize="35sp"
android:id="@+id/answer"
android:layout_width="102dp"
android:layout_height="59dp"
android:layout_marginHorizontal="50dp"
android:hint="ans" />

</LinearLayout>

<LinearLayout
android:orientation="vertical"
android:layout_marginLeft="250dp"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginBottom="30dp">

<Button
android:id="@+id/sub"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="-"
android:textSize="25sp"
android:layout_marginBottom="16dp" />

<Button
android:id="@+id/add"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginBottom="16dp"
android:text="+"
android:textSize="25sp"
tools:ignore="OnClick" />

<Button
android:id="@+id/div"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="/"
android:textSize="25sp"
android:layout_marginBottom="16dp" />

<Button
```

```
android:id="@+id/mul"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginBottom="16dp"
android:text="X"
android:textSize="25sp"/>

<Button
android:id="@+id/equals"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginBottom="16dp"
android:text="="
android:textSize="35sp"/>
</LinearLayout>

</LinearLayout>
```

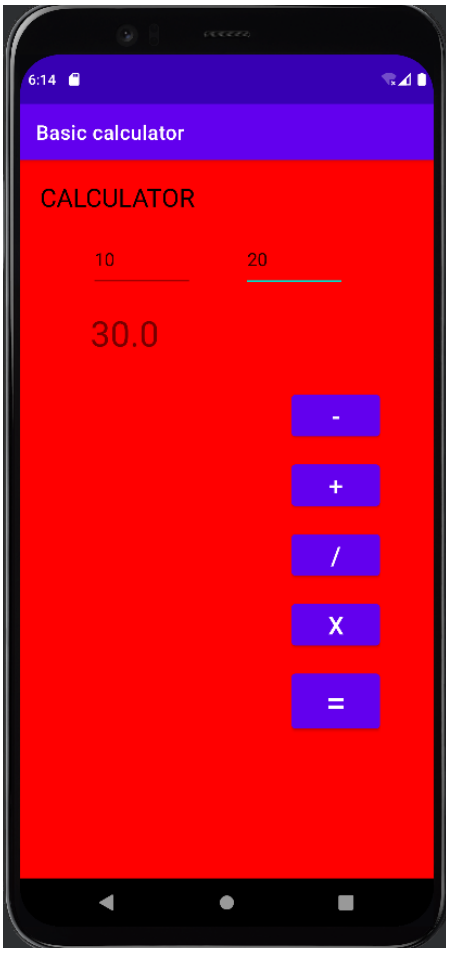
MainActivity.java

```
package com.example.basiccalculator;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
EditText no1 , no2;
Button add ,mul ,div , sub,equal;
TextView answer;
double ans = 0;
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
no1 = findViewById(R.id.first_no);
no2 = findViewById(R.id.second_no);

add = findViewById(R.id.add);
mul = findViewById(R.id.mul);
div = findViewById(R.id.div);
sub = findViewById(R.id.sub);
equal = findViewById(R.id.equals);
answer = findViewById(R.id.answer);
add.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
```

```
String num1 = no1.getText().toString();
String num2 = no2.getText().toString();
if (num1.isEmpty() || num2.isEmpty()) {
Toast.makeText(getApplicationContext(),"Enter
Numbers",Toast.LENGTH_SHORT).show();
}
else {
double a = Double.parseDouble(no1.getText().toString());
double b = Double.parseDouble(no2.getText().toString());
ans = a + b;
}
}
});
sub.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
String num1 = no1.getText().toString();
String num2 = no2.getText().toString();
if (num1.isEmpty() || num2.isEmpty()) {
Toast.makeText(getApplicationContext(),"Enter
Numbers",Toast.LENGTH_SHORT).show();
}
else {
double a = Double.parseDouble(no1.getText().toString());
double b = Double.parseDouble(no2.getText().toString());
ans = a - b;
}
}
});

mul.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
String num1 = no1.getText().toString();
String num2 = no2.getText().toString();

if (num1.isEmpty() || num2.isEmpty()) {
Toast.makeText(getApplicationContext(),"Enter
Numbers",Toast.LENGTH_SHORT).show();
}
else {
double a = Double.parseDouble(no1.getText().toString());
double b = Double.parseDouble(no2.getText().toString());
ans = a * b;
}
}
});
```

```
div.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
String num1 = no1.getText().toString();
String num2 = no2.getText().toString();
if (num1.isEmpty() || num2.isEmpty()) {
Toast.makeText(getApplicationContext(), "Enter Numbers",
Toast.LENGTH_SHORT).show();
} else {
double a = Double.parseDouble(no1.getText().toString());
double b = Double.parseDouble(no2.getText().toString());
if (b != 0)
ans = a / b;
else
Toast.makeText(getApplicationContext(), "Enter Valid Numbers",
Toast.LENGTH_SHORT).show();
}
}
});
equal.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
String ans1 = String.valueOf(ans);
answer.setText(ans1);
ans= 0;
}
});
}}
```

Output:



Program No:5

Aim: Implement validations on various UI controls.

activity_main.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"
tools:context=".MainActivity"
tools:ignore="HardcodedText">

<EditText
android:id="@+id/firstName"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_marginStart="16dp"
android:layout_marginTop="16dp"
android:layout_marginEnd="16dp"
android:hint="First Name"
android:inputType="text" />

<EditText
android:id="@+id/lastName"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_marginStart="16dp"
android:layout_marginTop="16dp"
android:layout_marginEnd="16dp"
android:hint="Last Name"
android:inputType="text" />

<EditText
android:id="@+id/email"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_marginStart="16dp"
android:layout_marginTop="16dp"
android:layout_marginEnd="16dp"
android:hint="Email"
android:inputType="textEmailAddress" />

<EditText
android:id="@+id/password"
android:layout_width="match_parent"
```

```
android:layout_height="wrap_content"
android:layout_marginStart="16dp"
android:layout_marginTop="16dp"
android:layout_marginEnd="16dp"
android:hint="Password"
android:inputType="textPassword" />

<LinearLayout
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_marginTop="8dp"
android:gravity="end"
android:orientation="horizontal">

<Button
android:id="@+id/cancelButton"
style="@style/Widget.AppCompat.Button.Borderless"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginEnd="4dp"
android:text="CANCEL"
android:textColor="@color/white" />

<Button
android:id="@+id/proceedButton"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginEnd="16dp"
android:backgroundTint="@color/black"
android:text="PROCEED"
android:textColor="@android:color/white"
tools:ignore="ButtonStyle" />

</LinearLayout>
</LinearLayout>
```

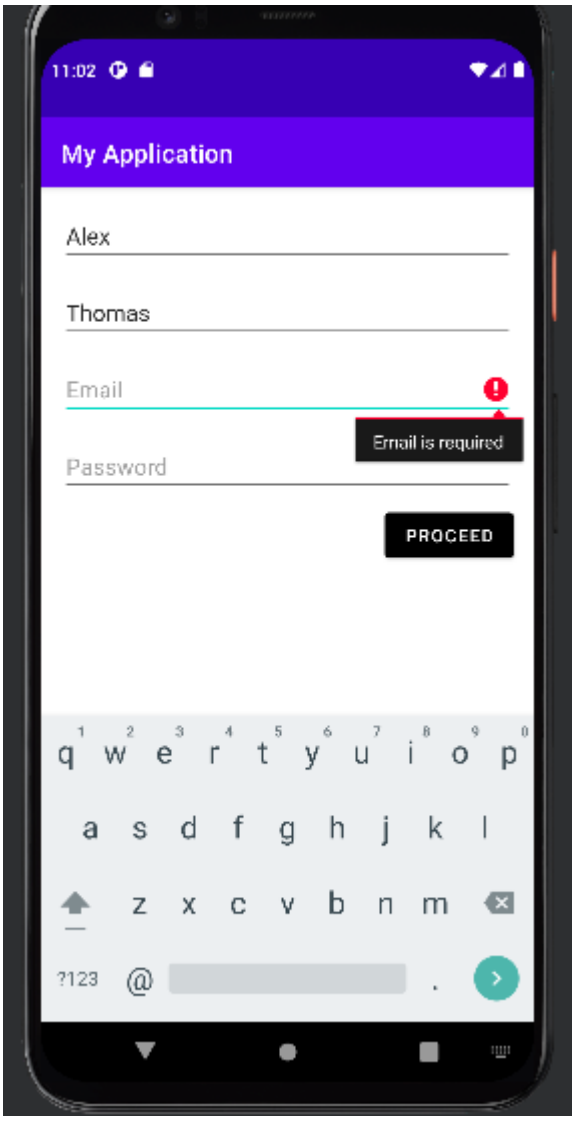
MainActivity.java

```
package com.example.uicontrolvalidation;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;

public class MainActivity extends AppCompatActivity {
```

```
Button bCancel, bProceed;

EditText etFirstName, etLastName, etEmail, etPassword;

boolean isAllFieldsChecked = false;

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

bProceed = findViewById(R.id.proceedButton);
bCancel = findViewById(R.id.cancelButton);

etFirstName = findViewById(R.id.firstName);
etLastName = findViewById(R.id.lastName);
etEmail = findViewById(R.id.email);
etPassword = findViewById(R.id.password);
bProceed.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {

isAllFieldsChecked = CheckAllFields();

if (isAllFieldsChecked) {
Intent i = new Intent(MainActivity.this, MainActivity2.class);
startActivity(i);
}
}
});

bCancel.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
MainActivity.this.finish();
System.exit(0);
}
});
}

private boolean CheckAllFields() {
if (etFirstName.length() == 0) {
etFirstName.setError("This field is required");
return false;
}

if (etLastName.length() == 0) {
etLastName.setError("This field is required");
```

```
return false;
}

if (etEmail.length() == 0) {
etEmail.setError("Email is required");
return false;
}

if (etPassword.length() == 0) {
etPassword.setError("Password is required");
return false;
} else if (etPassword.length() < 8) {
etPassword.setError("Password must be minimum 8 characters");
return false;
}
return true;
}
}
```

Output:


11:02
My Application
Alex
Thomas
Email
Email is required
Password
PROCEED

Program No:6

Aim: Design a registration activity and store registration details in local memory of phone using Intents and SharedPreferences.

activity_main.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:id="@+id/t1"
android:layout_width="202dp"
android:layout_height="42dp"
android:text="Enter the Name"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.497"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.28" />

<EditText
android:id="@+id/et1"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:ems="10"
android:inputType="textPersonName"

app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.497"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.381" />

<Button
android:id="@+id/b1"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Save"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
```

```
app:layout_constraintHorizontal_bias="0.498"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.828" />

<EditText
android:id="@+id/et5"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:ems="10"
android:inputType="textPersonName"
android:text="Name"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

activity_shared.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=".shared">

<TextView
android:id="@+id/textView2"
android:layout_width="155dp"
android:layout_height="42dp"
android:text="TextView"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent" />

<TextView
android:id="@+id/textView3"
android:layout_width="172dp"
android:layout_height="63dp"
android:text="TextView"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.441"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
```

```
app:layout_constraintVertical_bias="0.623" />

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

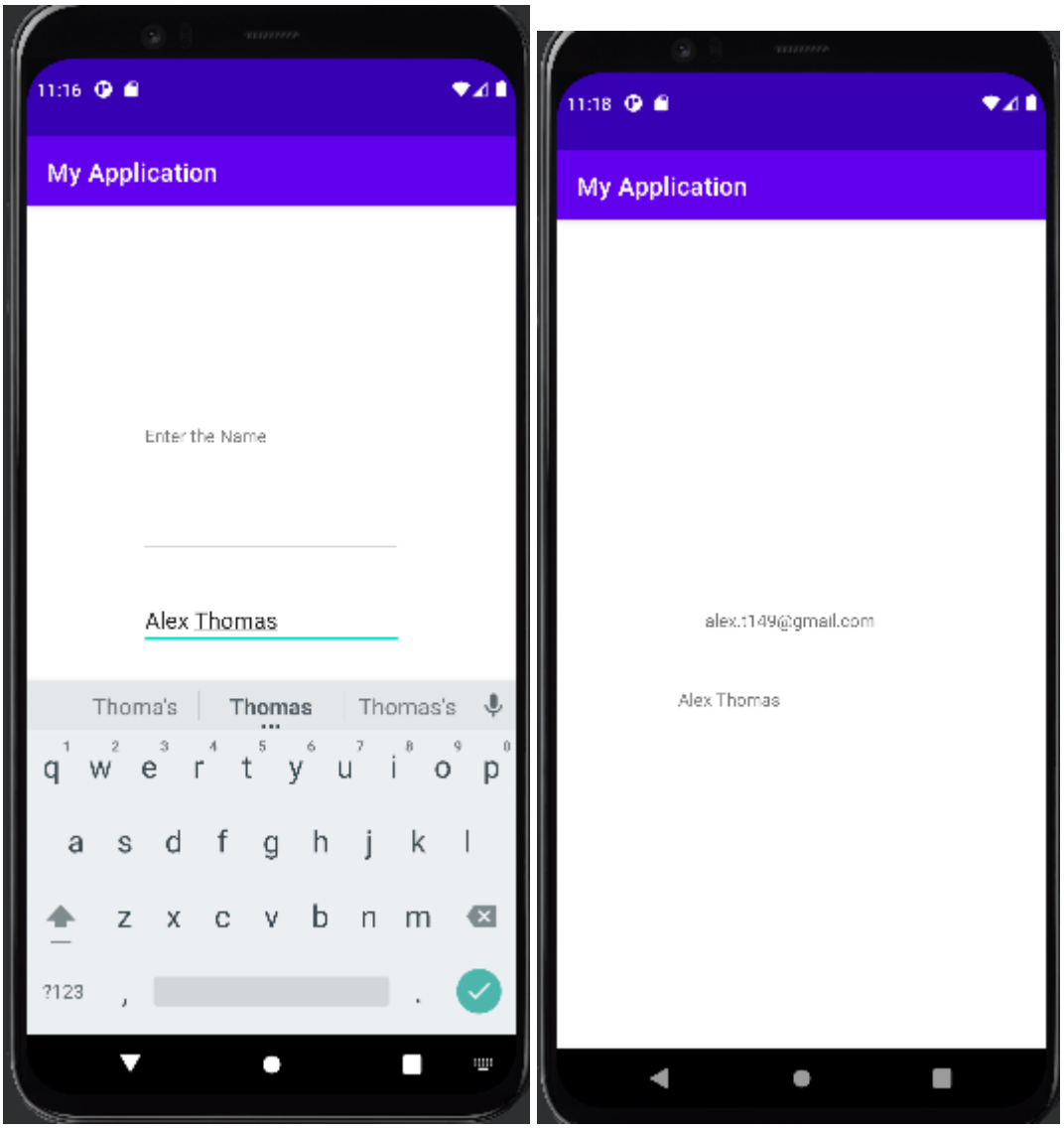
MainActivity.java

```
package com.example.sharedpreference;

import androidx.appcompat.app.AppCompatActivity;

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


public class MainActivity extends AppCompatActivity {
TextView t1;
EditText e1,e2;
Button b1;
SharedPreferences sp;

@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
e1=findViewById(R.id.et1);
e2=findViewById(R.id.et5);
b1=findViewById(R.id.b1);
sp= getSharedPreferences("Share",MODE_PRIVATE);//session start

b1.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
String val=e1.getText().toString();
String valu=e2.getText().toString();
sp.edit().putString("mykey",val).commit();//saving we use commit
sp.edit().putString("mykeyy",valu).commit();
Intent i=new Intent(MainActivity.this , shared.class);//shared is nex activity
startActivity(i);
}
});
}
}
```

shared.java

```
package com.example.sharedpreference;
import androidx.appcompat.app.AppCompatActivity;
import android.content.SharedPreferences;
import android.os.Bundle;
import android.widget.TextView;
public class shared extends AppCompatActivity {
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_shared);
SharedPreferences sp=getSharedPreferences("Share",MODE_PRIVATE);
TextView t1=findViewById(R.id.textView2);
TextView t2=findViewById(R.id.textView3);
String sesval= sp.getString("mykey","no data found");
String sesvall= sp.getString("mykeyy","no data found");
t1.setText(sesval);
t2.setText(sesvall);
}
}
```

Output:


11:16
My Application
Enter the Name
Alex Thomas
Thoma's
Thomas
Thomas's
11:18
My Application
alex.1149@gmail.com
Alex Thomas

Program No:7

Aim: Design a simple Calculator using GridLayout and Cascaded LinearLayout.

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
android:background="#323030"
android:layout_gravity="bottom"
android:gravity="bottom"
android:orientation="vertical"
tools:context=".MainActivity">

<LinearLayout
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:orientation="vertical">
<LinearLayout
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_gravity="end"
android:orientation="vertical">
<TextView
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_marginEnd="20dp"
android:text="9+10"
android:textAlignment="textEnd"
android:textColor="@color/white"
android:textSize="40dp"/>
<TextView
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_marginEnd="20dp"
android:text="=19"
android:textAlignment="textEnd"
android:textColor="@color/white"
android:textSize="40dp"/>
</LinearLayout>
<GridLayout
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_margin="10dp"
```

```
android:layout_weight="1"
android:columnCount="4"
android:layout_gravity="bottom"
android:rowCount="4">
<Button
android:id="@+id/b7"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_margin="10dp"
android:background="@drawable/bg_button"
android:text="7"
android:textColor="@color/white"
android:textSize="25dp"/>
<Button
android:id="@+id/b8"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_margin="10dp"
android:background="@drawable/bg_button"
android:text="8"
android:textColor="@color/white"
android:textSize="25dp"/>
<Button
android:id="@+id/b9"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_margin="10dp"
android:background="@drawable/bg_button"
android:text="9"
android:textColor="@color/white"
android:textSize="25dp"/>
<Button
android:id="@+id/bmul"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_margin="10dp"
android:background="@drawable/bg_button"
android:text="X"
android:textColor="@color/white"
android:textSize="25dp"/>
<Button
android:id="@+id/b4"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_margin="10dp"
android:background="@drawable/bg_button"
android:text="4"
android:textColor="@color/white"
```

```
android:textSize="25dp"/>
<Button
android:id="@+id/b5"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_margin="10dp"
android:background="@drawable/bg_button"
android:text="5"
android:textColor="@color/white"
android:textSize="25dp"/>
<Button
android:id="@+id/b6"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_margin="10dp"
android:background="@drawable/bg_button"
android:text="6"
android:textColor="@color/white"
android:textSize="25dp"/>
<Button
android:id="@+id/bdiv"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_margin="10dp"
android:background="@drawable/bg_button"
android:text="/"
android:textColor="@color/white"
android:textSize="25dp"/>
<Button
android:id="@+id/b1"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_margin="10dp"
android:background="@drawable/bg_button"
android:text="1"
android:textColor="@color/white"
android:textSize="25dp"/>
<Button
android:id="@+id/b2"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_margin="10dp"
android:background="@drawable/bg_button"
android:text="2"
android:textColor="@color/white"
android:textSize="25dp"/>
<Button
android:id="@+id/b3"
```

```
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_margin="10dp"
android:background="@drawable/bg_button"
android:text="3"
android:textColor="@color/white"
android:textSize="25dp"/>
<Button
android:id="@+id/bpls"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_margin="10dp"
android:background="@drawable/bg_button"
android:text="+"
android:textColor="@color/white"
android:textSize="25dp"/>
<Button
android:id="@+id/b0"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_margin="10dp"
android:background="@drawable/bg_button"
android:text="0"
android:textColor="@color/white"
android:textSize="25dp"/>
<Button
android:id="@+id/bpt"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_margin="10dp"
android:background="@drawable/bg_button"
android:text="."
android:textColor="@color/white"
android:textSize="25dp"/>
<Button
android:id="@+id/beq"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_margin="10dp"
android:background="@drawable/bg_button"
android:text="="
android:textColor="@color/white"
android:textSize="25dp"/>
<Button
android:id="@+id/bdiff"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_margin="10dp"
```

```
android:background="@drawable/bg_button"
android:text="-"
android:textColor="@color/white"
android:textSize="25dp"/>
</GridLayout>
</LinearLayout>
</LinearLayout>
```

MainActivity.java

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

Output

Program No:8

Aim: Create a Facebook page using RelativeLayout; set properties using .xml file

Activity_main.xml

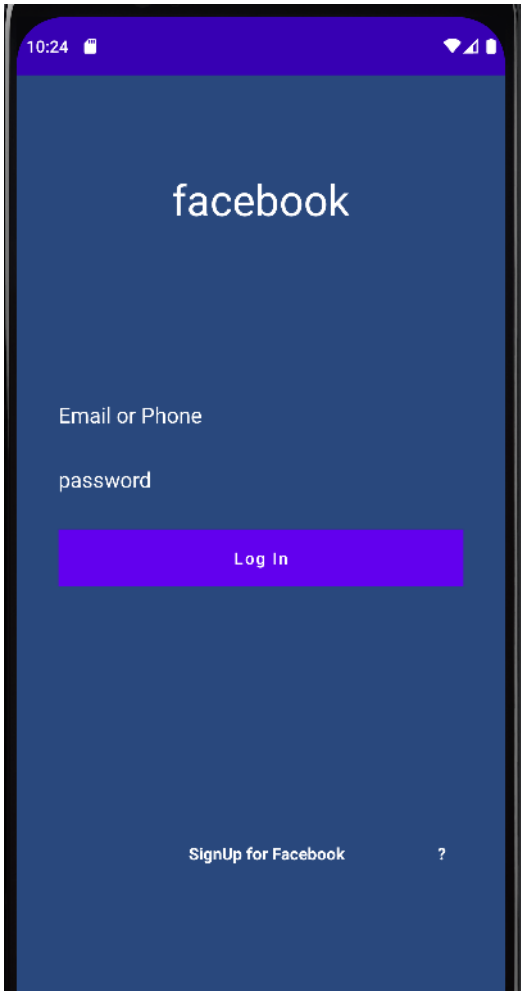
```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
android:background="@color/white"
tools:context=".MainActivity">
<LinearLayout
android:layout_width="match_parent"
android:layout_height="match_parent"
android:background="#29487D"
android:gravity="center|top"
android:orientation="vertical">

<LinearLayout
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginTop="70dp"
android:layout_marginBottom="100dp"
android:orientation="vertical">

<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:fontFamily="@font/fb"
android:text="facebook"
android:textSize="36dp"
android:padding="10dp"
android:textColor="@color/white" />

</LinearLayout>
<LinearLayout
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:padding="15dp"
android:orientation="vertical"
android:layout_margin="20dp">
<EditText
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:hint="Email or Phone"
android:layout_marginBottom="30dp"
```

```
android:textColorHint="#594F4F"
android:background="@drawable/bg_box"/>

<EditText
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_marginBottom="30dp"
android:background="@drawable/bg_box"
android:hint="password"
android:textColorHint="#594F4F"/>

<Button
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:text="Log In"
android:background="@color/design_default_color_primary"
android:textAllCaps="false"/>

</LinearLayout>
<LinearLayout
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:orientation="horizontal"
android:layout_marginTop="180dp"
android:layout_gravity="bottom"
android:gravity="center">
<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:gravity="end"
android:textStyle="bold"
android:textColor="@color/white"
android:layout_marginRight="75dp"
android:layout_weight="50"
android:text="SignUp for Facebook"/>

<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:gravity="end"
android:textColor="@color/white"
android:layout_marginEnd="50dp"
android:layout_weight="1"
android:textStyle="bold"
android:text="?"/>
</LinearLayout>
</LinearLayout>
</LinearLayout>
```

MainActivity.java

```
package com.example.facebook;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;

public class MainActivity extends AppCompatActivity {

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

Output:



Program No:9

Aim: Develop an application that toggles image using FrameLayout.

activity_main.xml

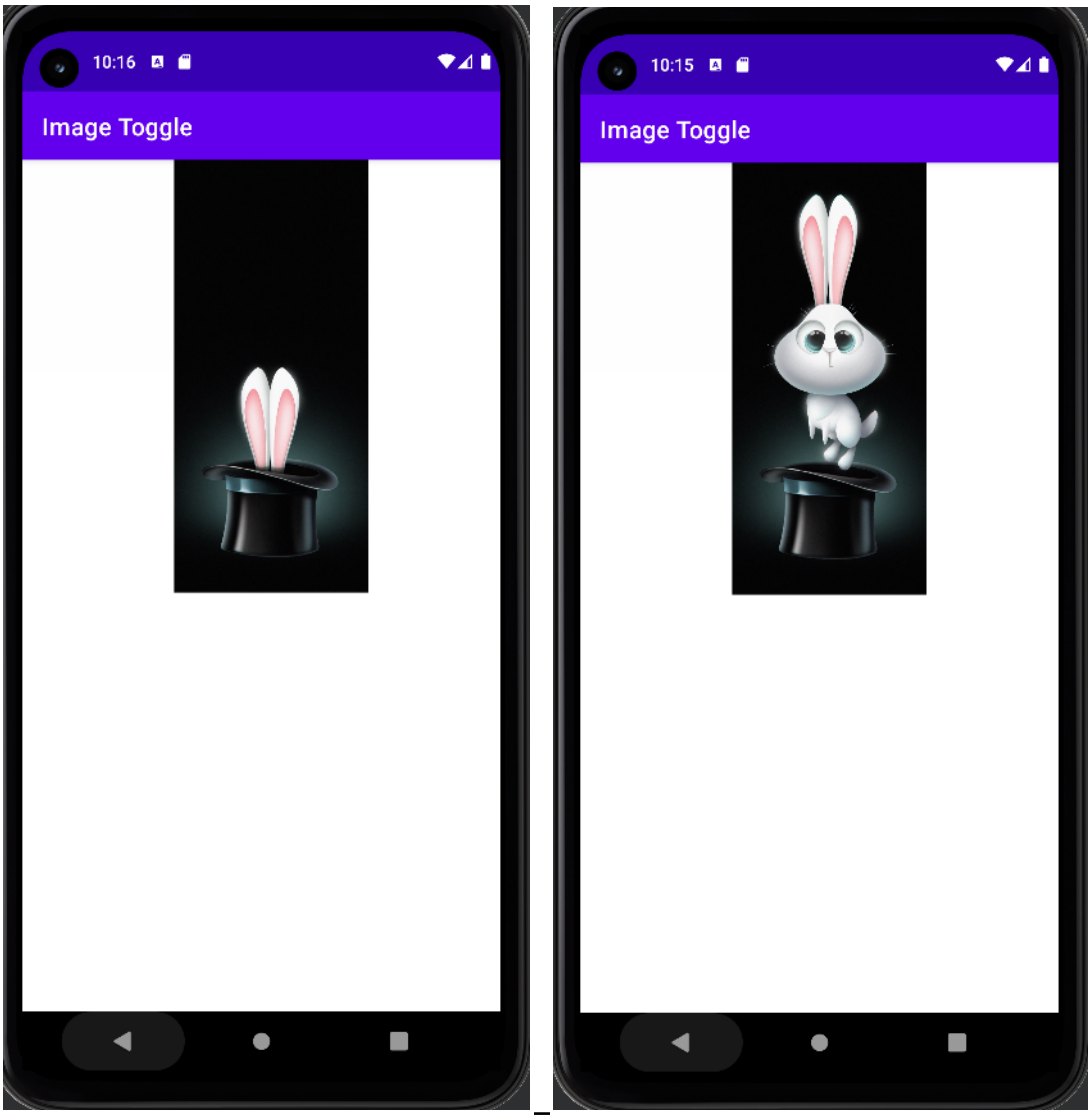
```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"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

<FrameLayout
android:layout_width="409dp"
android:layout_height="354dp"
tools:layout_editor_absoluteX="1dp"
tools:layout_editor_absoluteY="131dp"
tools:ignore="MissingConstraints">

<ImageView
android:id="@+id/f2"
android:layout_width="match_parent"
android:layout_height="match_parent"
app:srcCompat="@drawable/f1" />


<ImageView
android:id="@+id/f1"
android:layout_width="match_parent"
android:layout_height="match_parent"
app:srcCompat="@drawable/f2" />
</FrameLayout>

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

MainActivity.java

```
package com.example.imagetoggle;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.ImageView;

public class MainActivity extends AppCompatActivity {

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

```
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
final ImageView first_image = (ImageView)this.findViewById(R.id.f1);
final ImageView second_image = (ImageView)this.findViewById(R.id.f2);
first_image.setOnClickListener(new View.OnClickListener(){
public void onClick(View view) {
first_image.setVisibility(View.VISIBLE);
view.setVisibility(View.GONE);
} });
second_image.setOnClickListener(new View.OnClickListener(){
public void onClick(View view) {
second_image.setVisibility(View.VISIBLE);
view.setVisibility(View.GONE);
}});
}
}
```

Output:



Program No:10

Aim: Implement Adapters and perform exception handlings.

activity_main.xml

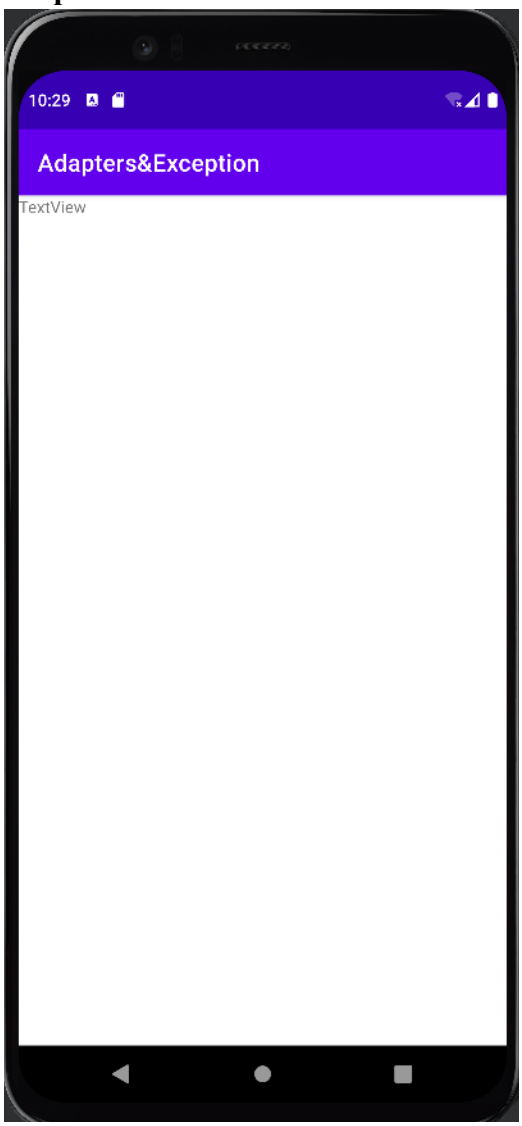
```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"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

<TextView
android:id="@+id/textView"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="TextView"
tools:layout_editor_absoluteX="181dp"
tools:layout_editor_absoluteY="363dp"
tools:ignore="MissingConstraints" />

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

MainActivity.java

```
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.TextView;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
TextView textView;
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
try {
textView.setText("Welcome");
}
catch (Exception e)
{
Toast.makeText(this,e.getMessage(),Toast.LENGTH_SHORT).show();
```

```
}
}
}
```

Output:



Program No:11

Aim: Implement Intent to navigate between multiple activities.

activity_main.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"
android:onClick="callActivity"
tools:context=".MainActivity">

<EditText
android:id="@+id/name"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:ems="10"
android:hint="Name"
android:inputType="textPersonName"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.437"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.148" />

<EditText
android:id="@+id/address"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:ems="10"
android:hint="Address"
android:inputType="textPersonName"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.437"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.313" />

<EditText
android:id="@+id/email"
```

```
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:ems="10"
android:hint="Email"
android:inputType="textPersonName"
android:onClick="callActivity"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.437"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.475" />

<Button
android:id="@+id/button"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Submit"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.454"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.609" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

activity_main2.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=".MainActivity2">

<TextView
android:id="@+id/view3"
android:layout_width="189dp"
android:layout_height="36dp"
android:textAlignment="center"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.459"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.398" />
```

```
<TextView
android:id="@+id/view1"
android:layout_width="189dp"
android:layout_height="36dp"
android:textAlignment="center"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.459"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.22" />

<TextView
android:id="@+id/view2"
android:layout_width="189dp"
android:layout_height="36dp"
android:textAlignment="center"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.459"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.306" />

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

MainActivity.java

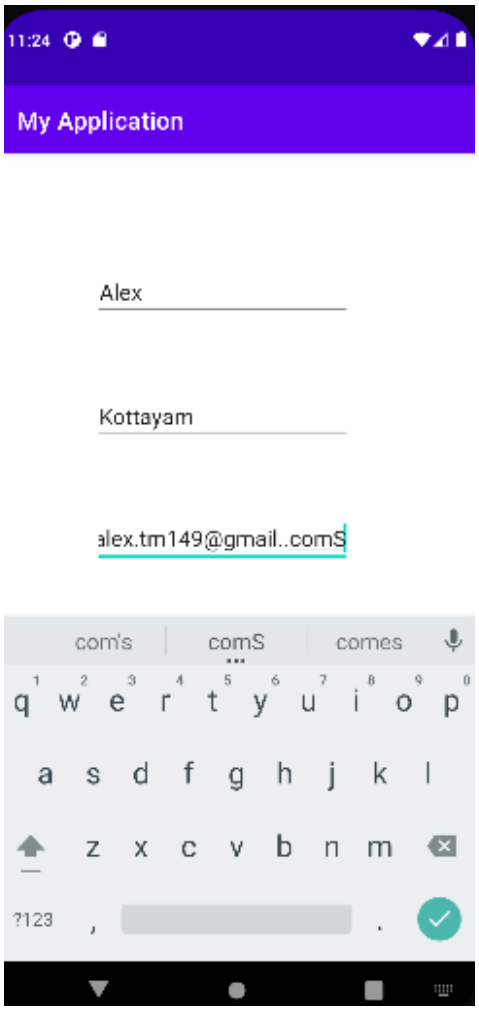
```
package com.example.implicitintents;

import androidx.appcompat.app.AppCompatActivity;

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

public class MainActivity extends AppCompatActivity {

@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
}
public void callActivity(View view) {
Intent i = new Intent(getApplicationContext(), MainActivity2.class);
final EditText editText1 = (EditText)findViewById(R.id.name);
String msg = editText1.getText().toString();
```

```
final EditText editText2 = (EditText)findViewById(R.id.address);
String add = editText2.getText().toString();
final EditText editText3 = (EditText)findViewById(R.id.email);
String em = editText3.getText().toString();
i.putExtra("Value1", msg);
i.putExtra("Value2", add);
i.putExtra("Value3", em);
startActivity(i);
}
}
```

MainActivity2.java

```
package com.example.implicitintents;

import androidx.appcompat.app.AppCompatActivity;

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

public class MainActivity2 extends AppCompatActivity {

TextView view1;
TextView view2;
TextView view3;
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main2);
view1 = (TextView) findViewById(R.id.view1);
view2 = (TextView) findViewById(R.id.view2);
view3 = (TextView) findViewById(R.id.view3);
Bundle extras = getIntent().getExtras();
String value1 = extras.getString("Value1");
String value2 = extras.getString("Value2");
String value3 = extras.getString("Value3");
view1.setText(value1);
view2.setText(value2);
view3.setText(value3);
}

}
```

Output:


11:24
My Application
Alex
Kottayam
alex.tm149@gmail..comS
com's
comS
comes
q w e r t y u i o p
a s d f g h j k l
z x c v b n m
?123

Program No:12

Aim: Develop an application that works with explicit intents.

activity_main.xml

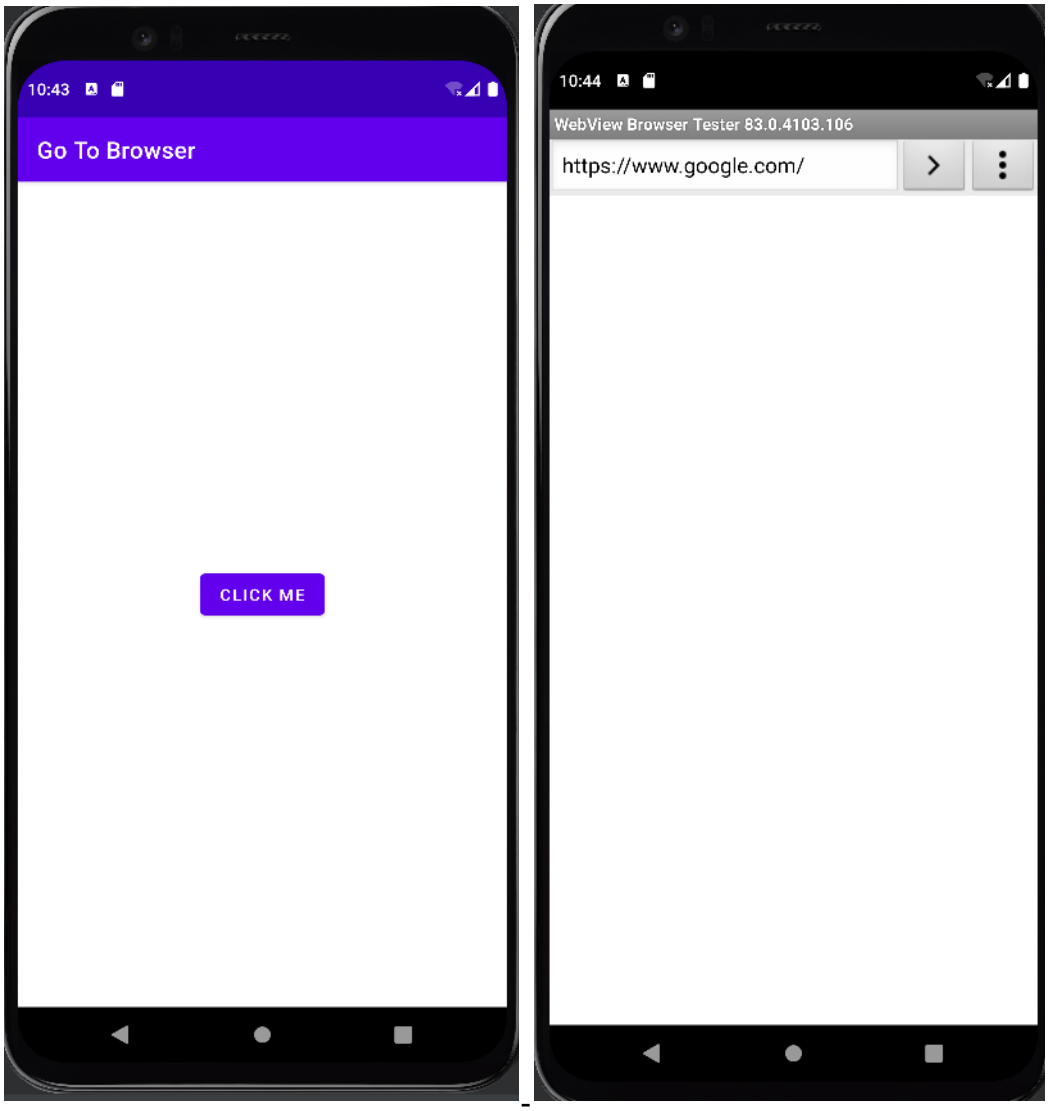
```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"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

<Button
android:id="@+id/cm"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="CLICK ME"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```
package com.example.explicitintents;
import androidx.appcompat.app.ActionBar;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.net.Uri;
import android.net.UrlQuerySanitizer;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

public class MainActivity extends AppCompatActivity {

@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
ActionBar b=getSupportActionBar();
b.setTitle("Go To Browser");
```

```
Button click=findViewById(R.id.cm);
click.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View view) {
Intent j=new Intent(Intent.ACTION_VIEW, Uri.parse("https://www.google.com/"));
startActivity(j);
}
});
}
}
```

Output:



Program No:13

Aim: Implement Options Menu to navigate to activities.

activity_main.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="Hello World!"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintLeft_toLeftOf="parent"
app:layout_constraintRight_toRightOf="parent"
app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

menu.xml

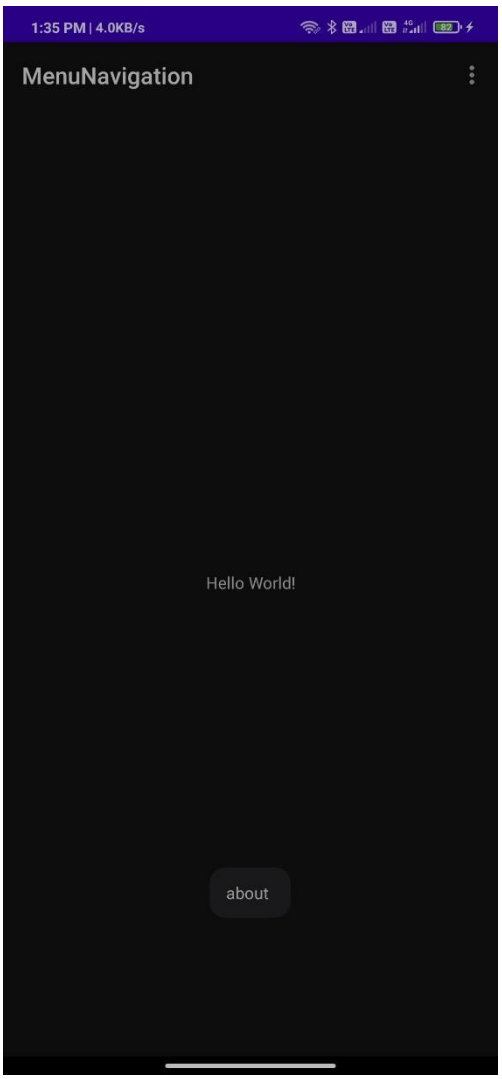
```
<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android">
<item android:id="@+id/item1" android:title="about"
android:icon="@drawable/download"/>
<item android:id="@+id/item2" android:title="help"/>
</menu>
```

MainActivity.java

```
package com.example.menunavigation;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
```

```
}
@Override
public boolean onCreateOptionsMenu(Menu menu) {
getMenuInflater().inflate(R.menu.menu, menu);
return true;
}
@Override
public boolean onOptionsItemSelected(MenuItem item){
switch (item.getItemId()){
case R.id.item1:
Toast.makeText(getApplicationContext(), "about", Toast.LENGTH_SHORT).show();
return true;
case R.id.item2:
Toast.makeText(getApplicationContext(), "help", Toast.LENGTH_SHORT).show();
return true;
default:
return super.onOptionsItemSelected(item);
}
}
}
```

Output:



Program No:14

Aim: Develop an application that uses ArrayAdapter with ListView.

activity_main.xml

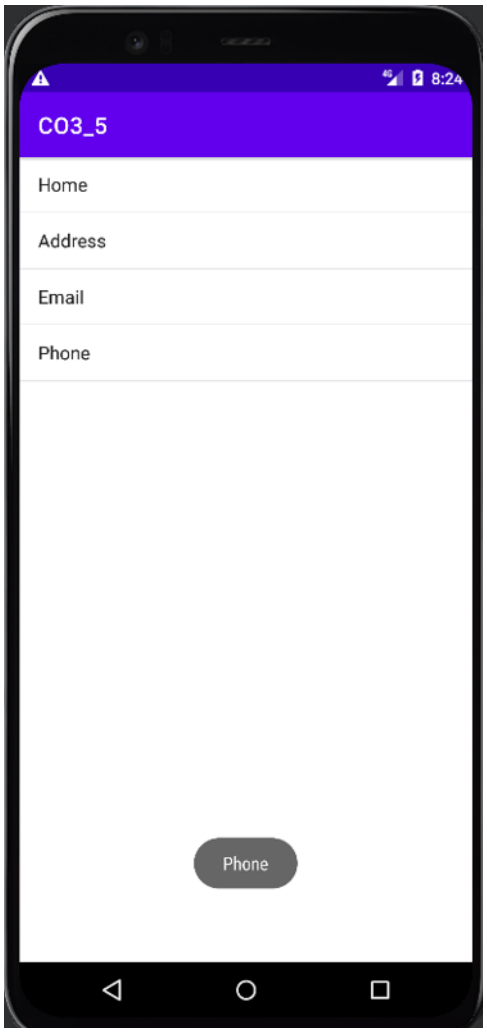
```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"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

<ListView
android:id="@+id/List1"
android:layout_width="409dp"
android:layout_height="729dp"
tools:layout_editor_absoluteX="1dp"
```

```
tools:layout_editor_absoluteY="1dp" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

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

import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.ListView;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

ListView l1;
String[] listItems = {"Home","Address","Email","Phone"};

@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
l1 = (ListView) findViewById(R.id.List1);
ArrayAdapter<String> myAdapter=new ArrayAdapter<String>(MainActivity.this,
android.R.layout.simple_list_item_1,listItems);
l1.setAdapter(myAdapter);
l1.setOnItemClickListener(new AdapterView.OnItemClickListener() {


@Override
public  void  onItemClick(AdapterView<?> parent, View view, int position, long id) {
String item_name=listItems[position];
Toast.makeText(MainActivity.this,item_name, Toast.LENGTH_SHORT).show();
}
});
}
}
```

Output:



Program no: 15

Aim: Develop an application that use GridView with images and display Alert box on selection

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:background="#B5A830"
tools:context=".MainActivity">

<GridView
android:id="@+id/gridView"
android:layout_width="fill_parent"
android:layout_height="wrap_content"
android:footerDividersEnabled="false"
android:numColumns="3"
android:padding="1dp" />
</LinearLayout>
```

MainActivity.java:

```
package com.example.co4_q1;

import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;

import android.app.Dialog;
import android.content.Context;
import android.content.DialogInterface;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.GridView;
import android.widget.ListAdapter;
import android.widget.SimpleAdapter;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
```

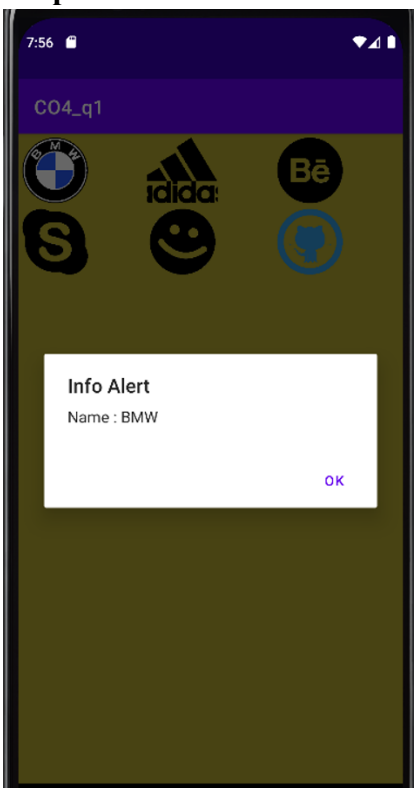
```
GridView gd;
int logos[] = {R.drawable.cl1, R.drawable.cl2, R.drawable.cl3, R.drawable.cl4};
String[] names ={"BMW","addidas","Be","S","Smile","Github",};
final Context context = this;
AlertDialog.Builder builder;

@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
GridView gv = (GridView) findViewById(R.id.gridView);
gv.setAdapter(new ImageAdapter(this));
builder = new AlertDialog.Builder(this);

gv.setOnItemClickListener(new AdapterView.OnItemClickListener() {
public void onItemClick(AdapterView<?> parent, View v, int position, long id) {

builder.setMessage("Name : "+String.valueOf(names[position]))
.setCancelable(false)
.setPositiveButton("Ok", new DialogInterface.OnClickListener() {
public void onClick(DialogInterface dialog, int id) {
}
});

AlertDialog alert = builder.create();

alert.setTitle("Info Alert");
alert.show();
}


});

}
}
```

ImageAdapter.java

```
package com.example.co4_q1;
import android.content.Context;
import android.view.View;
import android.view.ViewGroup;
import android.widget.BaseAdapter;
import android.widget.GridView;
import android.widget.ImageView;

public class ImageAdapter extends BaseAdapter {
private Context mContext;
```

```
public ImageAdapter(Context c) {
mContext = c;
}
public int getCount() {
return thumbImages.length;
}
public Object getItem(int position) {
return null;
}
public long getItemId(int position) {
return 0;
}
public View getView(int position, View convertView, ViewGroup parent) {
ImageView imageView = new ImageView(mContext);
imageView.setLayoutParams(new GridView.LayoutParams(200, 200));
imageView.setScaleType(ImageView.ScaleType.CENTER_CROP);
imageView.setPadding(8, 8, 8, 8);
imageView.setImageResource(thumbImages[position]);
return imageView;
}
public Integer[] thumbImages = {
R.drawable.cl1,
R.drawable.cl2,
R.drawable.cl3,
R.drawable.cl4,
R.drawable.cl5,
R.drawable.cl6
};
}
```

Output:



Program no:16

Aim: Develop an application that implements Spinner component and perform event handling.

Activity_main.xml:

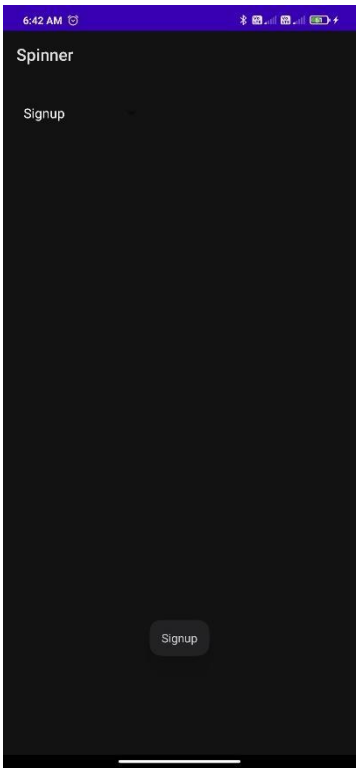
```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"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

<Spinner
android:id="@+id/spinner"
android:layout_height="50dp"
android:layout_width="160dp"
android:layout_marginEnd="10dp"
android:layout_marginStart="10dp"
android:layout_marginBottom="10dp"
android:layout_marginTop="10dp"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"/>

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

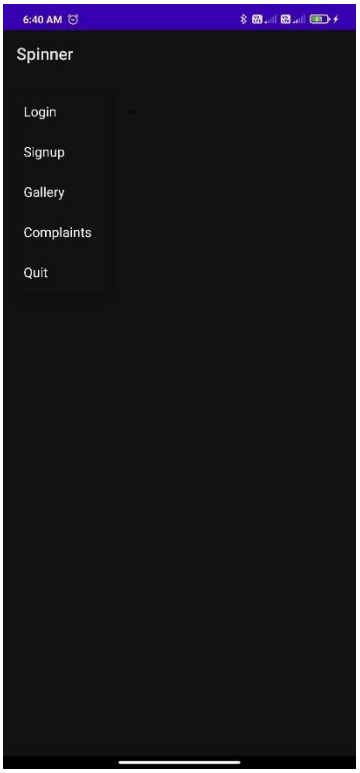
Java Code:

```
package com.example.spinner;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.Spinner;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity implements
AdapterView.OnItemSelectedListener {
String[] country = { "India", "USA", "China", "Japan", "Other"};

@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
//Getting the instance of Spinner and applying OnItemSelectedListener on it
Spinner spin = (Spinner) findViewById(R.id.spinner);
```

```
spin.setOnItemSelectedListener(this);

//Creating the ArrayAdapter instance having the country list
ArrayAdapter aa = new
ArrayAdapter(this,android.R.layout.simple_spinner_item,country);
aa.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);
//Setting the ArrayAdapter data on the Spinner
spin.setAdapter(aa);

}

//Performing action onItemSelected and onNothing selected
@Override
public void onItemSelected(AdapterView<?> arg0, View arg1, int position, long id) {
Toast.makeText(getApplicationContext(),country[position] ,
Toast.LENGTH_LONG).show();
}
@Override
public void onNothingSelected(AdapterView<?> arg0) {
// TODO Auto-generated method stub
}
}
```

Output:





Program no:17

Aim: Apply themes via code and manifest file

activity_main.xml

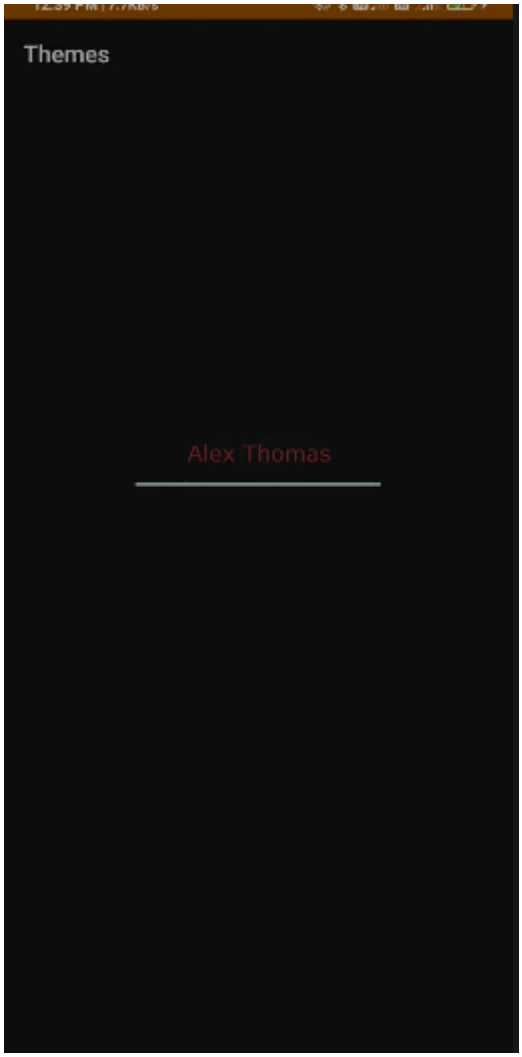
```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"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

<EditText
android:id="@+id/editTextTextPersonName"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:ems="10"
android:inputType="textPersonName"
android:text="Name"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintTop_toTopOf="parent"
tools:layout_editor_absoluteX="100dp" />
</androidx.constraintlayout.widget.ConstraintLayout>

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

<application
android:allowBackup="true"
android:icon="@mipmap/ic_launcher"
android:label="@string/app_name"
android:roundIcon="@mipmap/ic_launcher_round"
android:supportsRtl="true"
android:theme="@style/Theme.newstyle">
<activity
android:name=".MainActivity"
android:exported="true">
<intent-filter>
<action android:name="android.intent.action.MAIN" />

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

```
</manifest>


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

<color name="teal">#FF018786</color>
<color name="black">#FF000000</color>
<color name="yellow">#EC971B</color>
<color name="red">#F80F0F</color>
</resources>

<resources xmlns:tools="http://schemas.android.com/tools">
<!-- Base application theme. -->
<style name="Theme.newstyle"parent="Theme.MaterialComponents.
DayNight.DarkActionBar">
<item name="colorPrimary">@color/black</item>
<item name="colorPrimaryDark">@color/yellow</item>
<item name="colorAccent">@color/teal</item>
<item name="android:textColorPrimary">@color/red</item>
</style>
</resources>
```

MainActivity.java:

```
package com.example.themes;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
public class MainActivity extends AppCompatActivity {
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
}
}
```

Output:



Program no:18

Aim: Develop application using Fragments

activity_main:

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

<RelativeLayout
android:layout_width="match_parent"
android:layout_height="0dp"
android:layout_weight="1">

<Button
android:id="@+id/b1"
android:layout_width="160dp"
android:layout_height="50dp"
android:layout_alignParentBottom="true"
android:layout_marginStart="30dp"
android:layout_marginBottom="30dp"
android:backgroundTint="#2196F3"
android:text="Fragment1" />

<Button
android:id="@+id/b2"
android:layout_width="160dp"
android:layout_height="50dp"
android:layout_alignParentRight="true"
android:layout_alignParentBottom="true"
android:layout_marginStart="30dp"
android:layout_marginBottom="30dp"
android:backgroundTint="#FFC107"
android:text="Fragment2" />

</RelativeLayout>

<FrameLayout
android:id="@+id/frameLayout"
android:layout_width="match_parent"
android:layout_height="0dp"
```

```
android:layout_weight="4"
android:background="@color/purple_200"/>

</LinearLayout>
```

Fragment1.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/teal_200"
tools:context=".Fragment1">

<!-- TODO: Update blank fragment layout -->
<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_centerInParent="true"
android:background="#FFEB3B"
android:text="Fragment1"
android:textSize="30dp" />

</RelativeLayout>
```

Fragment2.xml:

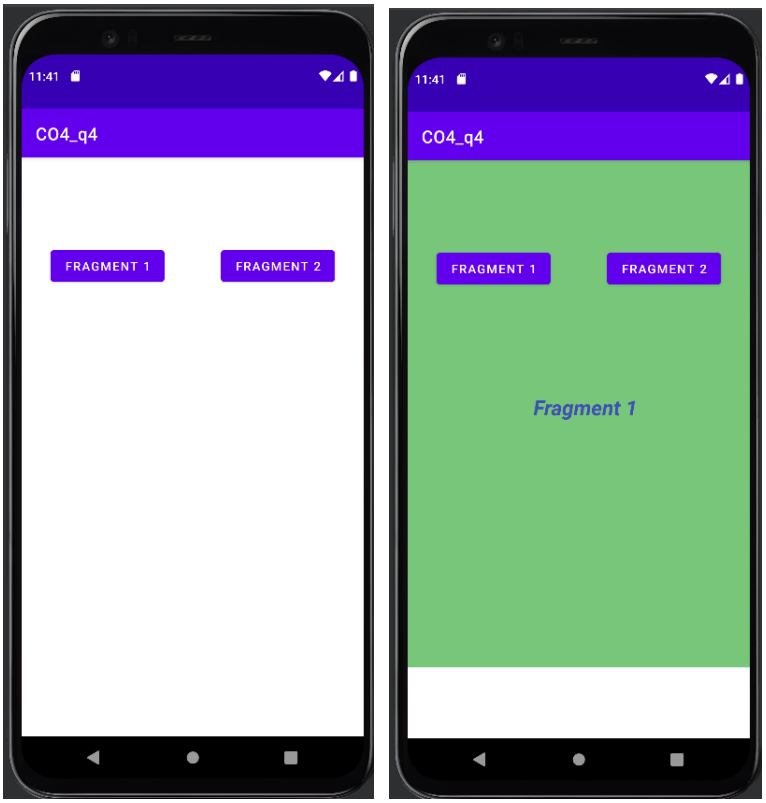
```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
android:background="#FFEB3B"
tools:context=".Fragment2">


<!-- TODO: Update blank fragment layout -->
<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_centerInParent="true"
android:background="#FAA3C1"
android:text="Fragment2"
android:textSize="30dp" />

</RelativeLayout>
```

Java Code:

```
package com.example.fragment;

import androidx.appcompat.app.AppCompatActivity;
import androidx.fragment.app.Fragment;
import androidx.fragment.app.FragmentManager;
import androidx.fragment.app.FragmentTransaction;

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

public class MainActivity extends AppCompatActivity {
Button b1,b2;

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

b1=findViewById(R.id.b1);
b2=findViewById(R.id.b2);

b1.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
replaceFragment(new Fragment1());
}
});
b2.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
replaceFragment(new Fragment2());
}
});
}

private void replaceFragment(Fragment fragment) {
FragmentManager fragmentManager=getSupportFragmentManager();
FragmentTransaction fragmentTransaction=fragmentManager.beginTransaction();
fragmentTransaction.replace(R.id.frameLayout,fragment);
fragmentTransaction.commit();
}
```

```
}

package com.example.fragment;
import android.os.Bundle;
import androidx.fragment.app.Fragment;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;

public class Fragment1 extends Fragment {


@Override
public View onCreateView(LayoutInflater inflater, ViewGroup container,
Bundle savedInstanceState) {
// Inflate the layout for this fragment
return inflater.inflate(R.layout.fragment_1, container, false);
}
}

package com.example.fragment;

import android.os.Bundle;
import androidx.fragment.app.Fragment;

import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
public class Fragment2 extends Fragment {

@Override
public View onCreateView(LayoutInflater inflater, ViewGroup container,
Bundle savedInstanceState) {
// Inflate the layout for this fragment
return inflater.inflate(R.layout.fragment_2, container, false);
}
}
```

Output:


11:41
CO4_q4
FRAGMENT 1
FRAGMENT 2
11:41
CO4_q4
FRAGMENT 1
FRAGMENT 2
Fragment 1

11:42
CO4_q4
FRAGMENT 1
FRAGMENT 2
Fragment 2

Program no:19

Aim: Implement Navigation drawer

Activity_main.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.drawerlayout.widget.DrawerLayout
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"
android:id="@+id/drawer">
<LinearLayout
android:layout_width="match_parent"
android:layout_height="match_parent">
<TextView
android:layout_width="match_parent"
android:layout_height="match_parent"
android:text="Welcome"
android:textSize="30dp">
</TextView>
</LinearLayout>
<com.google.android.material.navigation.NavigationView
android:layout_width="match_parent"
android:layout_height="match_parent"
app:menu="@menu/menu"
android:id="@+id/navigation_view"
android:layout_gravity="start">
</com.google.android.material.navigation.NavigationView>
</androidx.drawerlayout.widget.DrawerLayout>
```

Menu.xml:

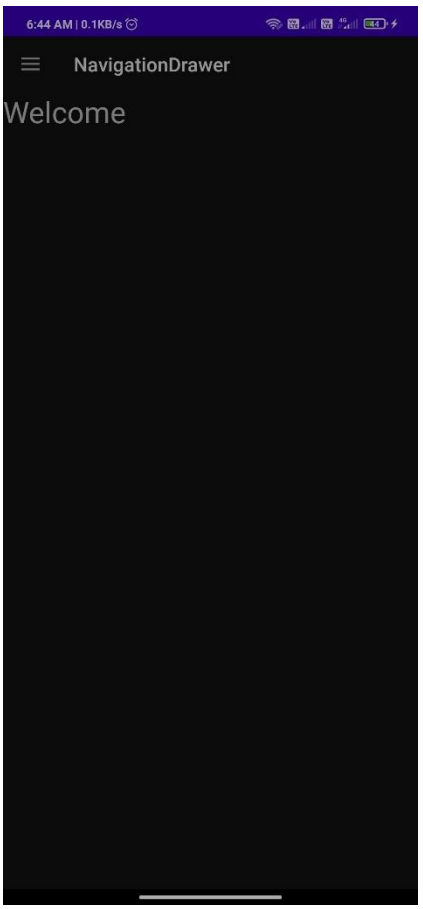
```
<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android">
<item
android:id="@+id/account"
android:title="My account"/>
<item
android:id="@+id/profile"
android:title="My profile"/>
<item
android:id="@+id/logout"
android:title="log out"/>
</menu>
```

MainActivity.java:

```
package com.example.navigation;

import androidx.annotation.NonNull;
import androidx.appcompat.app.ActionBarDrawerToggle;
import androidx.appcompat.app.AppCompatActivity;
import androidx.drawerlayout.widget.DrawerLayout;
import android.os.Bundle;
import android.view.MenuItem;
import android.widget.Toast;
import com.google.android.material.navigation.NavigationView;
public class MainActivity extends AppCompatActivity implements
NavigationView.OnNavigationItemSelectedListener {
public DrawerLayout drawerLayout;
public ActionBarDrawerToggle actionBarDrawerToggle;
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
drawerLayout = findViewById(R.id.drawer);
actionBarDrawerToggle = new ActionBarDrawerToggle(this,drawerLayout,
R.string.nav_open, R.string.nav_close);
drawerLayout.addDrawerListener(actionBarDrawerToggle);
actionBarDrawerToggle.syncState();
getSupportActionBar().setDisplayHomeAsUpEnabled(true);
NavigationView navigationView = findViewById(R.id.navigation_view);
navigationView.setNavigationItemSelectedListener(this);
}
@Override
public boolean onOptionsItemSelected(@NonNull MenuItem item) {
if (actionBarDrawerToggle.onOptionsItemSelected(item)){
return true;
}
return super.onOptionsItemSelected(item);
}
@Override
public boolean onNavigationItemSelected(@NonNull MenuItem item) {
int id=item.getItemId();
if(id == R.id.account){
Toast.makeText(this, "Home Page", Toast.LENGTH_SHORT).show();
}
if(id == R.id.profile){
Toast.makeText(this, "Settings Page",
```

```
Toast.LENGTH_SHORT).show();
}
if(id == R.id.logout){
Toast.makeText(this, "Logout", Toast.LENGTH_SHORT).show();
}
return false;
}
}
```

Output:



Program no:20

Aim: Program to implement activity life cycle

activity_main.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="Welcome"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintLeft_toLeftOf="parent"
app:layout_constraintRight_toRightOf="parent"
app:layout_constraintTop_toTopOf="parent" />

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

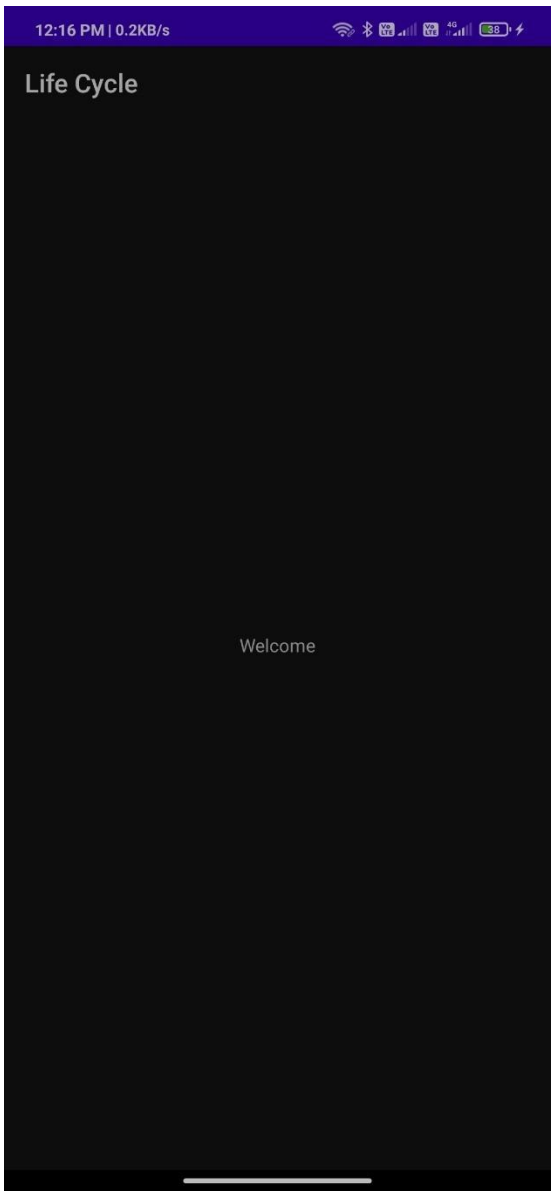
MainActivity.Java:

```
package com.example.lifecycle;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.util.Log;

public class MainActivity extends AppCompatActivity {

@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
Log.i("State","onCreate");
```

```
}

@Override
protected void onStart() {
super.onStart();
Log.i("State","onStart");
}

@Override
protected void onResume() {
super.onResume();
Log.i("State","onResume");
}

@Override
protected void onPause() {
super.onPause();
Log.i("State","onCreate");
}

@Override
protected void onRestart() {
super.onRestart();
Log.i("State","onRestart");
}

@Override
protected void onStop() {
super.onStop();
Log.i("State","onStop");
}

@Override
protected void onDestroy() {
super.onDestroy();
Log.i("State","onDestroy");
}
}
```

Output:

```
2022-02-26 12:12:02.730 5490-5490/com.example.lifecycle W/ActivityThread: S
2022-02-26 12:12:02.733 5490-5490/com.example.lifecycle I/State: onCreate
2022-02-26 12:12:02.792 5490-5490/com.example.lifecycle I/State: onStop
2022-02-26 12:12:07.536 5490-5490/com.example.lifecycle I/State: onRestart
2022-02-26 12:12:07.547 5490-5490/com.example.lifecycle I/State: onStart
2022-02-26 12:12:07.556 5490-5490/com.example.lifecycle I/State: onResume
2022-02-26 12:12:13.827 5490-5490/com.example.lifecycle W/ActivityThread: S
2022-02-26 12:12:13.828 5490-5490/com.example.lifecycle I/State: onCreate
2022-02-26 12:12:13.878 5490-5490/com.example.lifecycle I/State: onStop
2022-02-26 12:12:16.326 5490-5490/com.example.lifecycle I/State: onDestroy
```


12:16 PM | 0.2KB/s
Life Cycle
Welcome

Program no:21

Aim: Program to implement various SQLite operations : (INSERT, UPDATE ,DELETE ,SELECT

activity_main.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:id="@+id/textView"
android:layout_width="162dp"
android:layout_height="40dp"
android:text="DB Operations"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintLeft_toLeftOf="parent"
app:layout_constraintRight_toRightOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.082" />

<EditText
android:hint="Name"
android:id="@+id/name"
android:layout_width="278dp"
android:layout_height="56dp"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.496"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.254" />

<EditText
android:hint="Place"
android:id="@+id/place"
android:layout_width="278dp"
android:layout_height="56dp"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
```

```
app:layout_constraintHorizontal_bias="0.496"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.357" />

<EditText
android:hint="Email"
android:id="@+id/email"
android:layout_width="278dp"
android:layout_height="56dp"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.496"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.46" />

<EditText
android:hint="Mobile"
android:id="@+id/mobile"
android:layout_width="278dp"
android:layout_height="56dp"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.496"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.568" />

<Button
android:id="@+id/btnins"
android:layout_width="267dp"
android:layout_height="46dp"
android:text="Insert"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.705" />

<Button
android:id="@+id/btnupdt"
android:layout_width="267dp"
android:layout_height="46dp"
android:text="Update"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
```

```
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.772" />

<Button
android:id="@+id/btnview"
android:layout_width="267dp"
android:layout_height="46dp"
android:text="View"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.839" />

<Button
android:id="@+id/btndel"
android:layout_width="267dp"
android:layout_height="46dp"
android:text="Delete"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.906" />

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

MainActivity.Java:

```
package com.example.databaseoperations;

import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;

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

public class MainActivity extends AppCompatActivity {
EditText name,place,email,mobile;
Button btnins,btnupdt,btnview,btndel;
operations op;

@Override
```

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

name = findViewById(R.id.name);
place = findViewById(R.id.place);
email = findViewById(R.id.email);
mobile = findViewById(R.id.mobile);

btnins = findViewById(R.id.btnins);
btnupdt = findViewById(R.id.btnupdt);
btnview = findViewById(R.id.btnview);
btndel = findViewById(R.id.btndel);
op=new operations(this);

btnins.setOnClickListener(new View.OnClickListener() {

@Override
public void onClick(View v) {
String Name = name.getText().toString();
String Place = place.getText().toString();
String Email = email.getText().toString();
String Mobile = mobile.getText().toString();

boolean insertion = op.onInsert(Name, Place, Email, Mobile);
if (insertion == true) {
Toast.makeText(MainActivity.this,"InsertionSucessfull",
Toast.LENGTH_SHORT).show();
} else {
Toast.makeText(MainActivity.this,"InsertionFailed", Toast.LENGTH_SHORT).show();
}
}
});

btnupdt.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
String Name = name.getText().toString();
String Place = place.getText().toString();
String Email = email.getText().toString();
String Mobile = mobile.getText().toString();

boolean updation = op.onUpdate(Name, Place, Email, Mobile);
if (updation == true) {
Toast.makeText(MainActivity.this,"UpdatedSucessfully",
Toast.LENGTH_SHORT).show();
} else {
Toast.makeText(MainActivity.this,"UpdationFailed", Toast.LENGTH_SHORT).show();
```

```
}
}
});

btnview.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
Cursor res=op.onView();
if(res.getCount()==0){
Toast.makeText(MainActivity.this,"Noentryexists", Toast.LENGTH_SHORT).show();
return;
}
StringBuffer buffer=new StringBuffer();
while(res.moveToNext()){
buffer.append("Name:"+res.getString(0)+"\n");
buffer.append("Place:"+res.getString(1)+"\n");
buffer.append("Email:"+res.getString(2)+"\n");
buffer.append("Mobile:"+res.getString(3)+"\n");
}
AlertDialog.Builder builder=new AlertDialog.Builder(MainActivity.this);
builder.setCancelable(true);
builder.setTitle("User Entries");
builder.setMessage(buffer.toString());
builder.show();
}
});

btndel.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
String Name = name.getText().toString();
boolean deletion = op.onDelete(Name);
if (deletion == true) {
Toast.makeText(MainActivity.this,"DeletionSucessfully",
Toast.LENGTH_SHORT).show();
} else {
Toast.makeText(MainActivity.this,"DeletionFailed", Toast.LENGTH_SHORT).show();
}
}
});
}
}
```

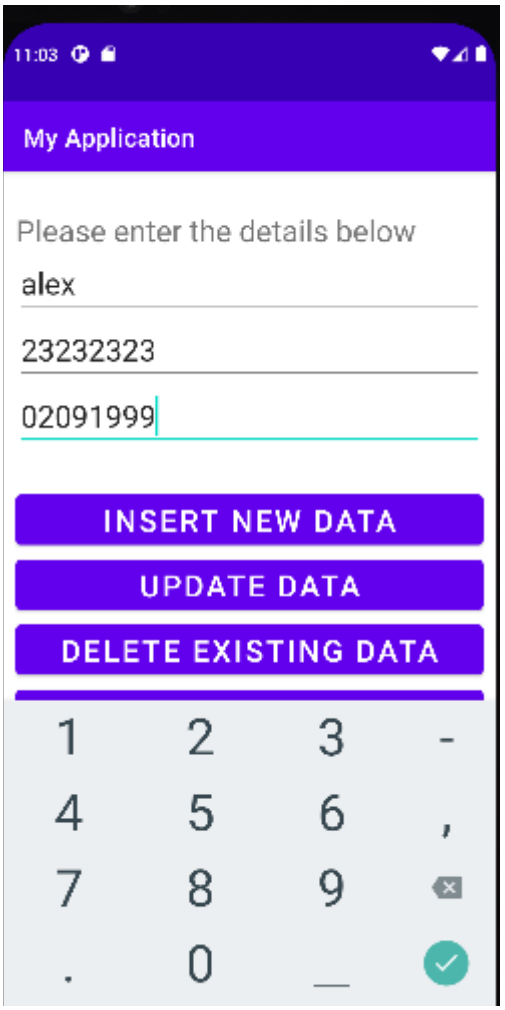
operations.java:

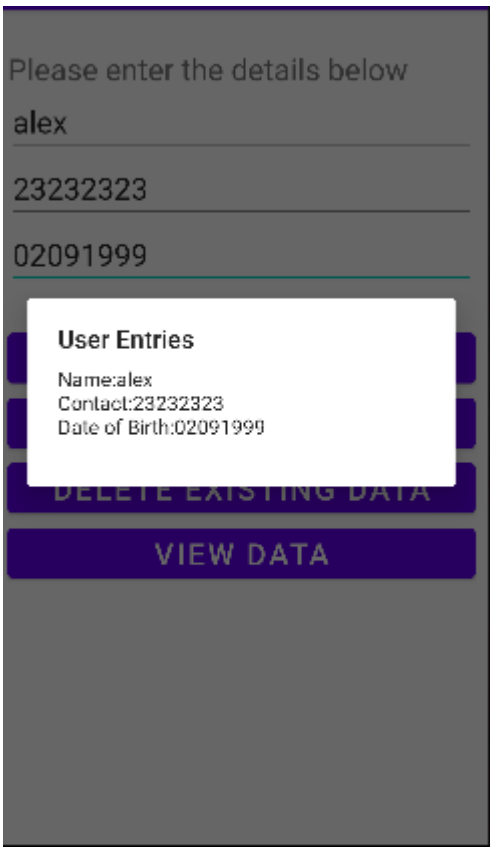
```
package com.example.databaseoperations;

import android.content.ContentValues;
```

```
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;

import androidx.annotation.Nullable;

public class operations extends SQLiteOpenHelper {
public operations(Context context) {
super(context, "DBpersons", null, 1);
}

@Override
public void onCreate(SQLiteDatabase db) {
db.execSQL("create table tblpersons (Name varchar(20) primary key,Place
varchar(30),Email varchar(20),Mobile varchar(10))");

}

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

public boolean onInsert(String Name,String Place,String Email,String Mobile){
SQLiteDatabase sdb=this.getWritableDatabase();
ContentValues cv=new ContentValues();
cv.put("Name",Name);
cv.put("Place",Place);
cv.put("Email",Email);
cv.put("Mobile",Mobile);
long result = sdb.insert("tblpersons",null,cv);
if(result==-1){
return false;
}
else{
return true;
}
}

public boolean onUpdate(String Name,String Place,String Email,String Mobile){
SQLiteDatabase sdb=this.getWritableDatabase();
ContentValues cv=new ContentValues();
cv.put("Place",Place);
cv.put("Email",Email);
cv.put("Mobile",Mobile);
Cursor cr =sdb.rawQuery("select * from tblpersons where Name=?",new
String[]{Name});
```

```
if(cr.getCount()>0){
long result = sdb.delete("tblpersons","Name=?", new String[]{Name});
if(result==-1){
return false;
}
else{
return true;
}
}
else{
return false;
}
}

public Cursor onView(){
SQLiteDatabase sdb=this.getWritableDatabase();
Cursor cursor=sdb.rawQuery("Select * from tblpersons",null);
return cursor;
}

public boolean onDelete(String Name){
SQLiteDatabase sdb=this.getWritableDatabase();
Cursor cr =sdb.rawQuery("select * from tblpersons where Name=?",new
String[]{Name});
if(cr.getCount()>0){
long result = sdb.delete("tblpersons","Name=?", new String[]{Name});
if(result==-1){
return false;
}
else{
return true;
}
}
else{
return false;
}
}
}
```

Output:


11:03
My Application
Please enter the details below
alex
23232323
02091999
INSERT NEW DATA
UPDATE DATA
DELETE EXISTING DATA
1 2 3 -
4 5 6 ,
7 8 9
. 0 _


Please enter the details below
alex
23232323
02091999
User Entries
Name:alex
Contact:23232323
Date of Birth:02091999
VIEW DATA