**20MCA243 MOBILE APPLICATION DEVELOPMENT LAB**

*Lab Report Submitted By*

**ALEX THOMAS**

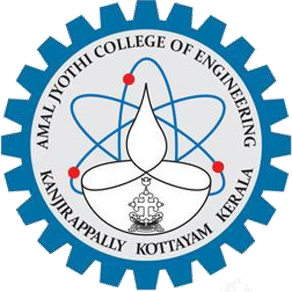
**Reg. No.: AJC20MCA-2009**

*In Partial fulfillment for the Award of the Degree Of*

**MASTER OF COMPUTER APPLICATIONS (2 Year)**

**(MCA)**

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**



**AMAL JYOTHI COLLEGE OF ENGINEERING KANJIRAPPALLY**

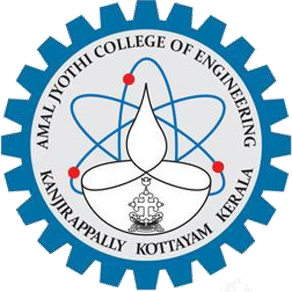
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# 2021-2022

## DEPARTMENT OF COMPUTER APPLICATIONS

### AMAL JYOTHI COLLEGE OF ENGINEERING

**KANJIRAPPALLY**



**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.

Ms. Meera Rose Mathew

Staff In-Charge

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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**

**A picture containing text, monitor, electronics, screenshot

Description automatically generated**

**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:**

**A picture containing text, monitor, screenshot, electronics

Description automatically generated**

**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();

}

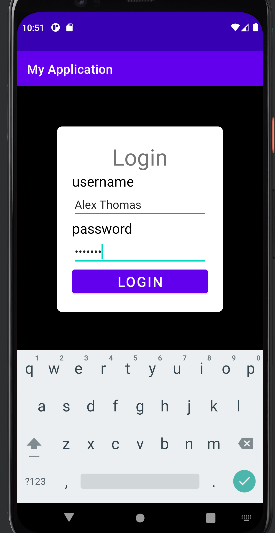
}

});

}

}

**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);

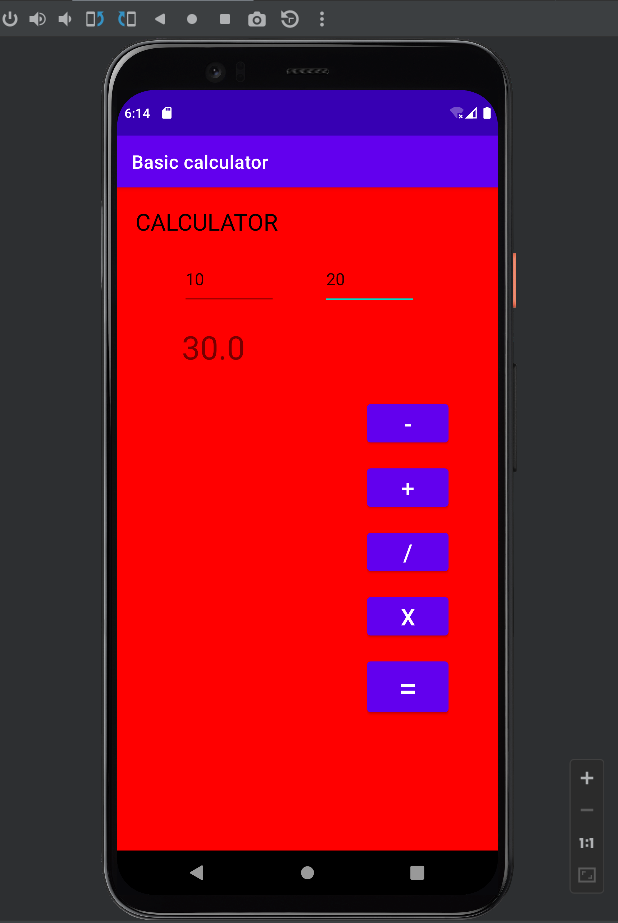
ans= 0;

}

});

}}

**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;

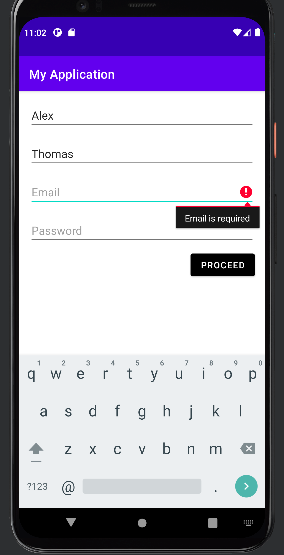
}

return true;

}

}

**Output:**

****

**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");

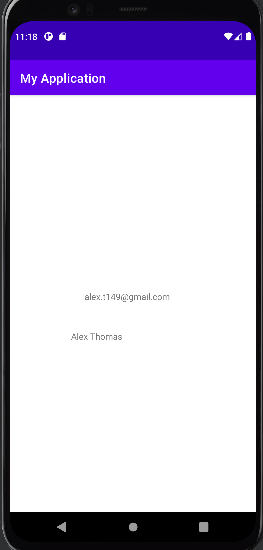
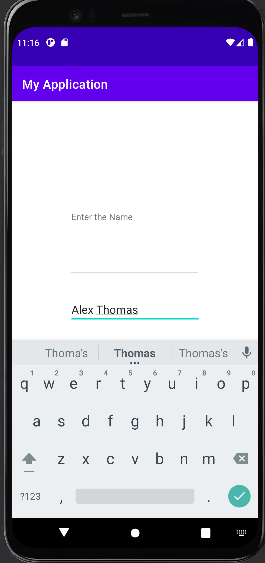
t1.setText(sesval);

t2.setText(sesvall);

}

}

**Output:**

****

**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**

**A screenshot of a cell phone

Description automatically generated with medium confidence**

**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);

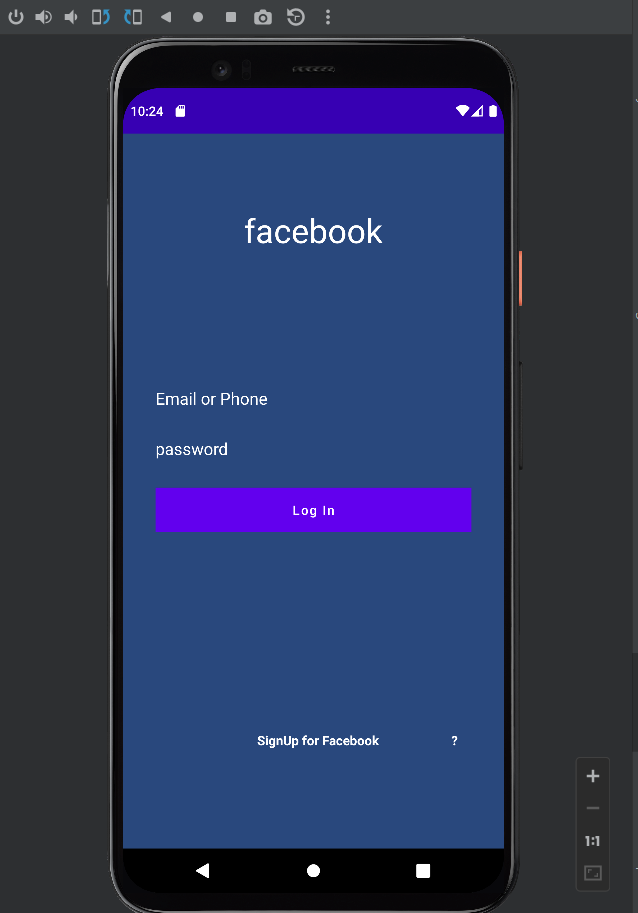
setContentView(R.layout.activity\_main);

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);

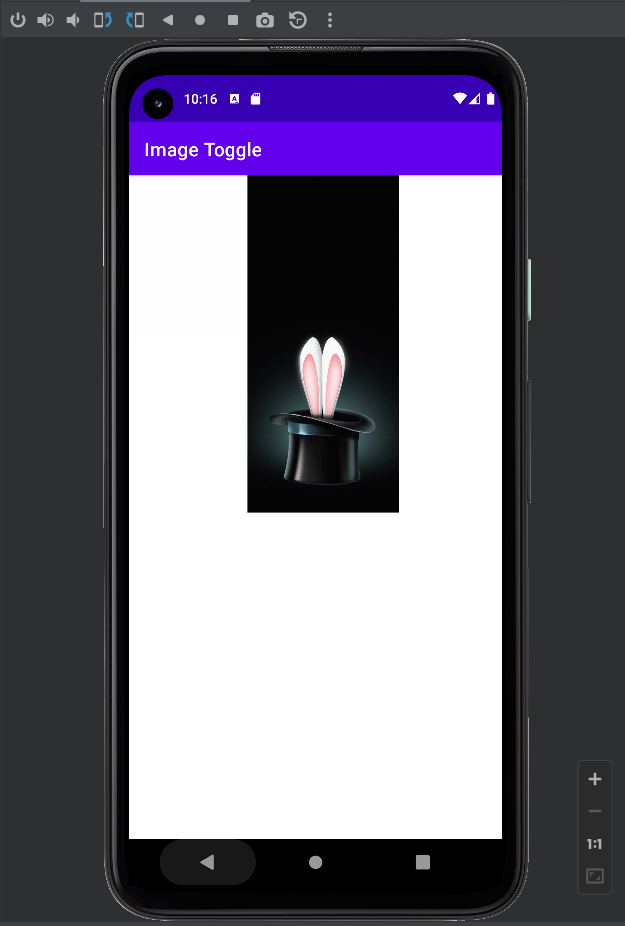
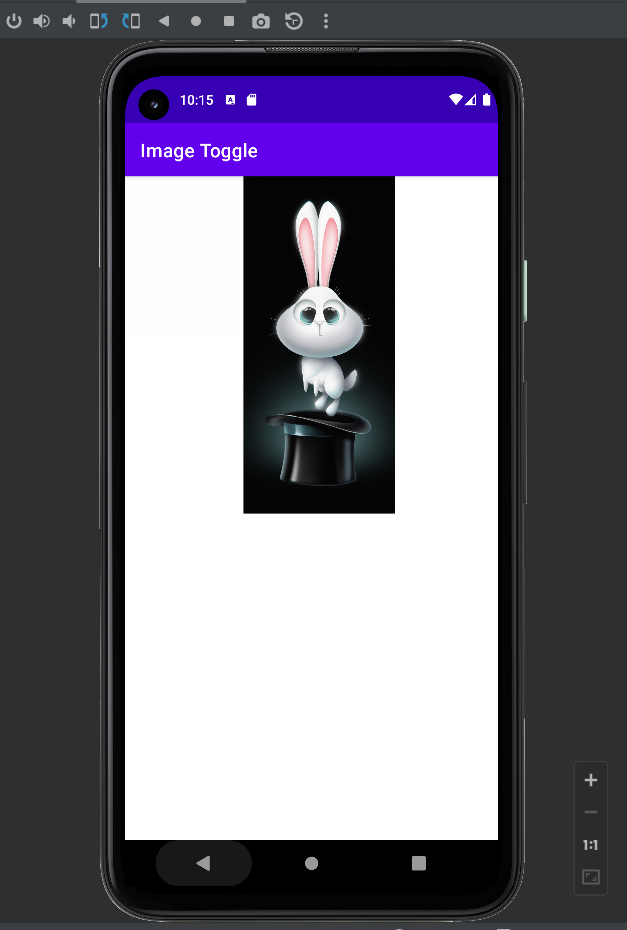
view.setVisibility(View.GONE);

}});

}

}

**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)

{

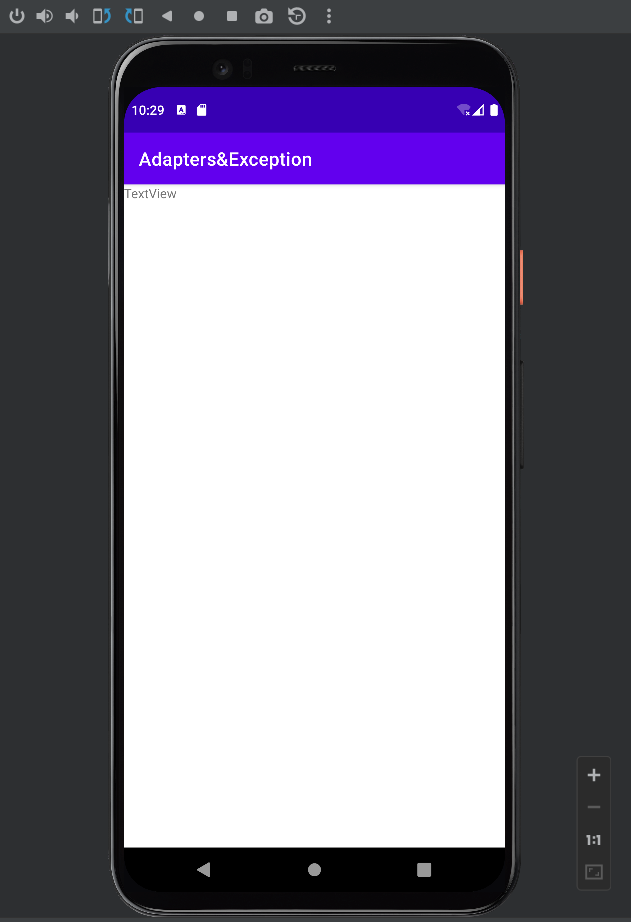
Toast.makeText(this,e.getMessage(),Toast.LENGTH\_SHORT).show();

}

}

}

**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);

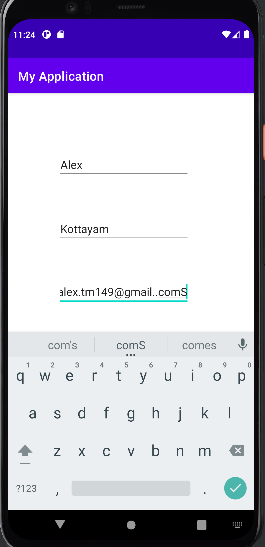
view2.setText(value2);

view3.setText(value3);

}

}

**Output:**

****

**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);

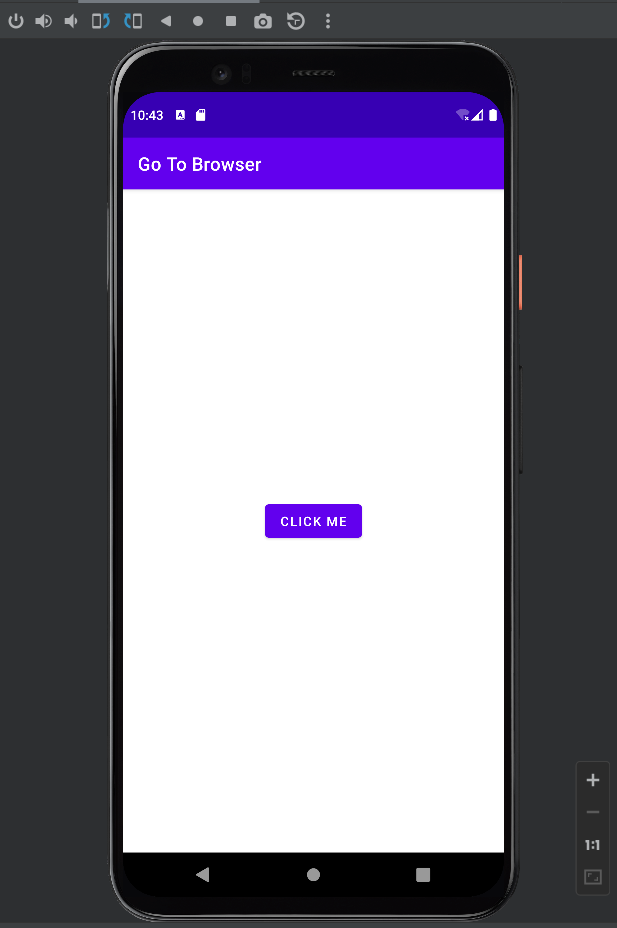
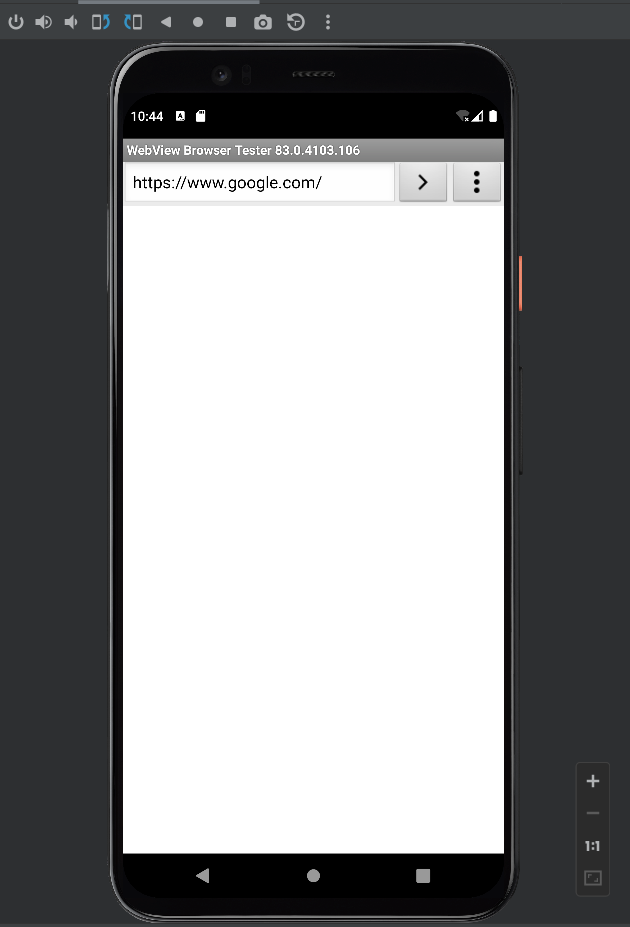
}

});

}

}

**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:**

A picture containing text

Description automatically generated

**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();

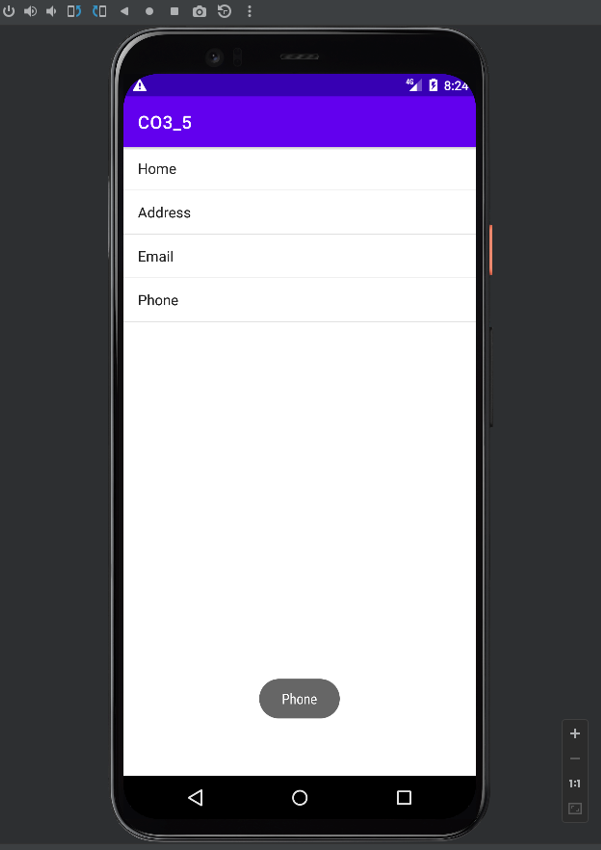
}

});

}

}

**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,

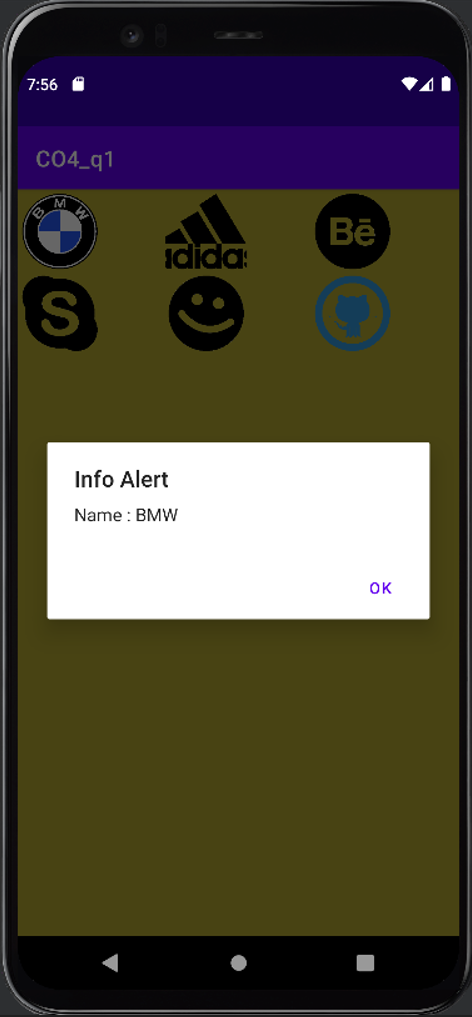
R.drawable.cl5,

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:**

 Text

Description automatically generated

**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) {

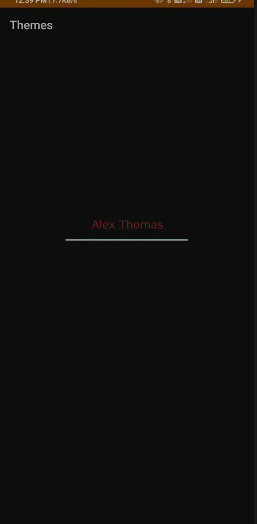
super.onCreate(savedInstanceState);

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:**

A screenshot of a phone

Description automatically generated with low confidence A screenshot of a cell phone

Description automatically generated with medium confidence A screenshot of a phone

Description automatically generated with low confidence

**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:**

Shape

Description automatically generated with medium confidence A picture containing shape

Description automatically generated

**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:**

Text

Description automatically generated

A picture containing chart

Description automatically generated

**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{

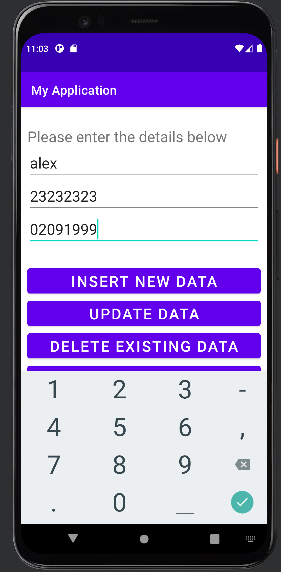
return false;

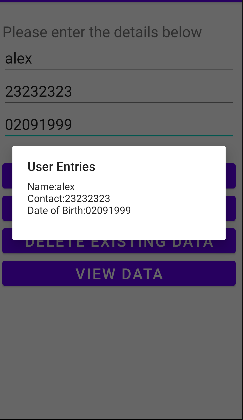
}

}

}

**Output:**

****

****