20MCA243 MOBILE APPLICATION DEVELOPMENT LAB

Lab Report Submitted By

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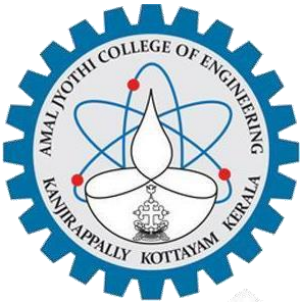
Reg. No: AJC20MCA-2044

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

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CERTIFICATE

This is to certify that the lab report, "**20MCA243 MOBILE APPLICATION DEVELOPMENT LAB"** is the bonafide work of **JISHA CHACKO(Reg.No:AJC20MCA-2044)** 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.

XML Code

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"
tools:context=".MainActivity"
android:orientation="vertical"
android:background="@drawable/a4">

<TextView
android:id="@+id/l"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:ems="10"
android:gravity="center"
android:text="Login"
android:textColor="#630DFB"
android:textSize="50dp"
tools:layout_editor_absoluteX="31dp"
tools:layout_editor_absoluteY="39dp" />

<EditText
android:id="@+id/e1"
android:layout_width="match_parent"
android:layout_height="wrap_content"

android:ems="10"
android:inputType="textPersonName"
android:minHeight="48dp"
android:text="User Name" />

<EditText
android:id="@+id/e2"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:ems="10"
android:inputType="textPassword"
android:minHeight="48dp"
android:text="Password" />

<Button
```

```
android:id="@+id/b1"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_gravity="right"

android:text="Button" />

</LinearLayout>
```

Java Code

```
package com.example.myapplication222;

import androidx.appcompat.app.AppCompatActivity;

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

public class MainActivity extends AppCompatActivity {
private TextView l;
private EditText e1;
private EditText e2;
private Button b1;

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

b1=findViewById(R.id.b1);
e1=findViewById(R.id.e1);
e2=findViewById(R.id.e2);


}
}
```

OUTPUT

Android Emulator - Pixel_5_API_30:5554
12:58
My Application222
Login
User Name
BUTTON

PROGRAM NO: 2

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

XML Code

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:orientation="vertical"
android:background="#DFF6C4">

<EditText
android:layout_width="261dp"
android:layout_height="78dp"
android:id="@+id/text1"
android:hint="Write here!"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintLeft_toLeftOf="parent"
android:background="@color/teal_700"
android:textSize="25dp"
app:layout_constraintRight_toRightOf="parent"
app:layout_constraintTop_toTopOf="parent" />

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

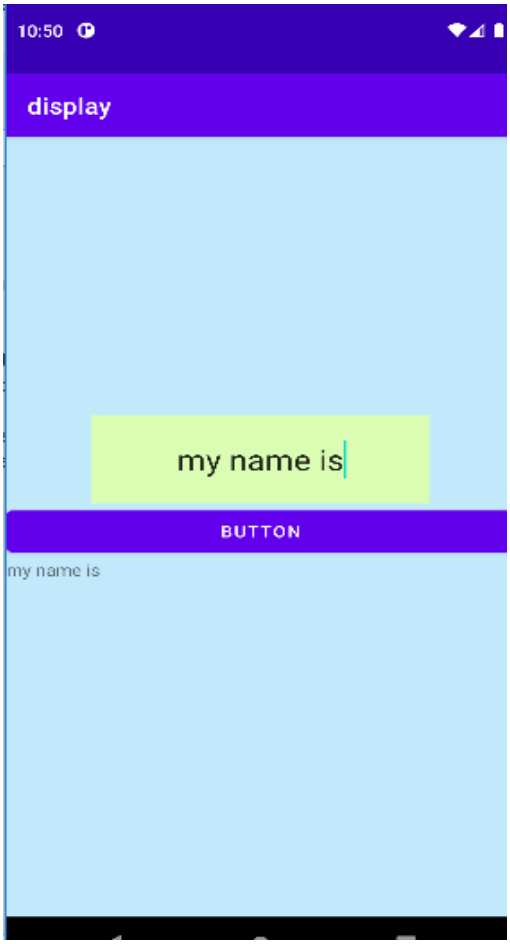
```
android:gravity="center"

android:text="Button" />

<TextView
android:id="@+id/textView2"
android:layout_width="match_parent"
android:layout_height="70dp"

android:layout_gravity="center"
android:text="Your text is" />
```

Java Code

```
package com.example.display;

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 { private EditText t1;
private TextView
t2; private Button
```

```
b1;

@Override
protected void onCreate(Bundle
savedInstanceState) {
super.onCreate(savedInstanceState);


setContentView(R.layout.activity_main);
t1=findViewById(R.id.text1);
t2=findViewById(R.id.textView2);
b1=findViewById(R.id.button);
b1.setOnClickListener(new
View.OnClickListener() { @Override
public void onClick(View v) {
String value = t1.getText().toString();
t2.setText(String.valueOf(value));
}
});

}
}
```

OUTPUT



PROGRAM NO: 3

AIM: Design a Login Form with username and password using

LinearLayout and toast valid credentials

XML Code:

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

<LinearLayoutxmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app=http://schemas.android.com/apk/res-auto
xmlns:tools="http://schemas.android.com/tools"

android:layout_width="match_parent"

android:orientation="vertical"

android:gravity="center"

android:layout_height="match_parent"

android:background="@drawable/f5"


tools:context=".MainActivity">

<TextView

android:id="@+id/t1"

android:layout_width="212dp"

android:layout_height="61dp"


android:text="LOGIN" />


<LinearLayout

android:layout_width="match_parent"

android:layout_height="wrap_content"

android:orientation="vertical"

android:layout_marginLeft="20dp"

android:layout_marginRight="20dp">

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

android:id="@+id/edturn"
```

```
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:hint="Username"
<  style="@style/Widget.MaterialComponents.TextInputLayout.OutlinedBox">
<com.google.android.material.textfield.TextInputEditText
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:inputType="text"/>
</com.google.android.material.textfield.TextInputLayout>
<com.google.android.material.textfield.TextInputLayout
android:id="@+id/edtpswd"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:hint="Password"
style="@style/Widget.MaterialComponents.TextInputLayout.OutlinedBox">
<com.google.android.material.textfield.TextInputEditText
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:inputType="text"/>
</com.google.android.material.textfield.TextInputLayout>
</LinearLayout>
<Button
android:id="@+id/btnlgn"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Login"/>


</LinearLayout>
```

Java Code

```
package com.example.a5;

import androidx.appcompat.app.AppCompatActivity;

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

import android.util.Log;

import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;
import com.google.android.material.textfield.TextInputLayout;



public class MainActivity extends AppCompatActivity {
TextView t1;
TextInputLayout e1, e2;
Button b1;
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
t1 = findViewById(R.id.t1);
e1 = findViewById(R.id.edturn);
e2 = findViewById(R.id.edtpswd);
b1 = findViewById(R.id.btnlgn);
```

```
b1.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
String username = e1.getEditText().getText().toString().trim();
String password = e2.getEditText().getText().toString().trim();
if (username.equals("")){
Toast.makeText(MainActivity.this, "Enter your username", Toast.LENGTH_LONG).show();
}
else if(password.equals("")){
Toast.makeText(MainActivity.this, "Enter your Password", Toast.LENGTH_LONG).show();
}
else{
Intent j = new Intent(MainActivity.this,Dashboard.class);
if(username.equals("admin")){
j.putExtra("usrn",username);
startActivity(j);
}else if(username.equals("patient")){
j.putExtra("usrn",username);
startActivity(j);
}else{
Toast.makeText(MainActivity.this, "Invalid user", Toast.LENGTH_SHORT).show();
}
}
}
});
}
}}
}
```

OUTPUT

PROGRAM NO: 4

AIM: Implementing basic arithmetic operations of a simple calculator

XML Code:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayoutxmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app=http://schemas.android.com/apk/res-auto
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
tools:context=".simpleCal"
android:padding="20dp"
android:orientation="vertical"
android:background="@color/bg">
<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 no1" />
```

```
<EditText
android:id="@+id/second_no"
android:layout_width="102dp"
android:layout_height="59dp"
android:ems="10"
android:hint="Enter no2" />
</LinearLayout>
<LinearLayout
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:orientation="horizontal"
android:gravity="center"
android:layout_marginBottom="20dp">
<TextView
android:textSize="35sp"
android:id="@+id/answer"
android:layout_width="wrap_content"
android:layout_height="59dp"
android:layout_marginHorizontal="50dp"
android:hint="ans" />
</LinearLayout>
<LinearLayout
android:orientation="vertical"
android:layout_marginLeft="50dp"
android:layout_width="230dp"
android:layout_height="wrap_content"
android:layout_marginBottom="30dp">
<LinearLayout
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:orientation="horizontal">
```

```
<Button
android:id="@+id/sub"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
Applicationsandroid:text="-"
android:layout_marginRight="50dp"
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" />
</LinearLayout>
<LinearLayout
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:orientation="horizontal">
<Button
android:id="@+id/div"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginRight="50dp">
```

Java Code

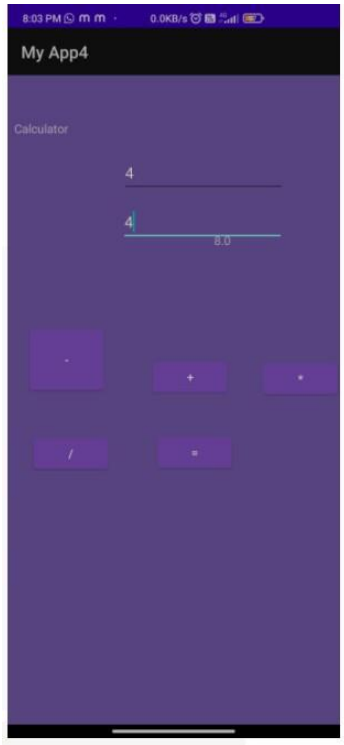
```
package com.example.My App4;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
```

```
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;
public class simpleCal 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_simple_cal);
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(),"EnterNumbers",
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(),"EnterNumbers",
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(),"EnterNumbers",
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(),"EnterNumbers",
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(),"EnterValidNumbers",
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: 05

AIM: Implement validations on various UI controls

XML Code:

```
<?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=".Ui_validation"
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" />
Applications<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/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"
Applicationsandroid:textColor="@android:color/white"
tools:ignore="ButtonStyle" />
</LinearLayout>
</LinearLayout>
```

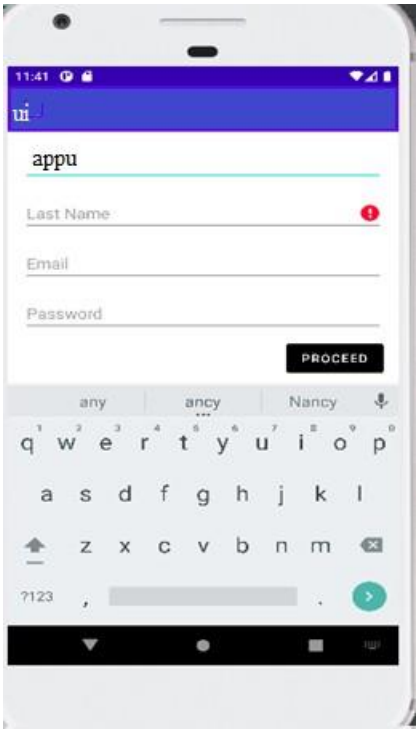
Java Code

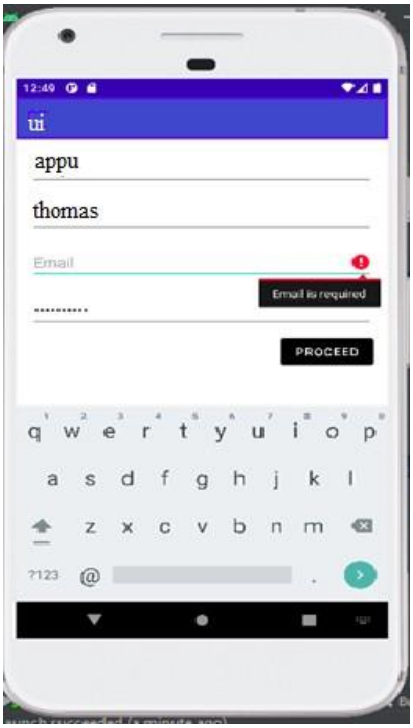
```
package com.example.ui;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
public class Ui_validation extends AppCompatActivity {
Button bCancel, bProceed;
EditText etFirstName, etLastName, etEmail, etPassword;
boolean isAllFieldsChecked = false;
```

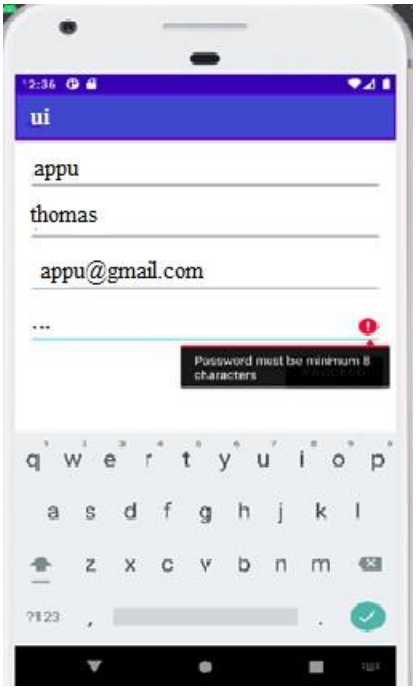
```
Applications@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_ui_validation);
bProceed = findViewById(R.id.proceedButton);
bCancel = findViewById(R.id.cancelButton);
etFirstName = findViewById(R.id.firstName);
etLastName =  findViewById(R.id.lastName);
etEmail = findViewById(R.id.email);
etPassword = findViewById(R.id.password);
bProceed.setOnClickListener(newView.OnClickListener() {
@Override
public void onClick(View v) {
isAllFieldsChecked = CheckAllFields();
if (isAllFieldsChecked) {
Intent i = new Intent(Ui_validation.this, Dashboard.class);
startActivity(i);
}
}
});
bCancel.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
Ui_validation.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;
}
}
}
```

OUTPUT


ui
appu
Last Name
Email
Password
PROCEED


ui
appu
thomas
Email
Email is required
PROCEED


ui
appu
thomas
appu@gmail.com
Password must be minimum 8 characters

PROGRAM NO :6

AIM: Design a registration activity and store registration details inlocal memory of phone using Intents and SharedPreferences

XML Code

activity.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:background="@color/teal_700"
tools:context=".MainActivity">
<Button
android:id="@+id/btnadd"
android:layout_width="87dp"
android:layout_height="52dp"
android:text="ADD"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/tv1l1"
app:layout_constraintVertical_bias="0.12" />
<TextView
android:id="@+id/tv1l1"
android:layout_width="293dp"
android:layout_height="100dp"
android:layout_marginTop="176dp"
android:textFontWeight="@integer/material_motion_duration_long_1"
app:layout_constraintEnd_toEndOf="parent"
```

```
app:layout_constraintHorizontal_bias="0.745"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

add.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:tools="http://schemas.android.com/tools"
xmlns:app="http://schemas.android.com/apk/res-auto"
android:layout_width="match_parent"
android:layout_height="match_parent"
tools:context=".add">
<Button
android:id="@+id/btnsub"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginBottom="56dp"
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_toBottomOf="@+id/editTextdta"
app:layout_constraintVertical_bias="0.241" />
<EditText
android:id="@+id/editTextdta"
android:layout_width="199dp"
```

```
android:layout_height="54dp"

android:layout_marginTop="248dp"
android:ems="10"
android:inputType="textPersonName"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent" />
<TextView
android:id="@+id/textviewname"
android:layout_width="207dp"
android:layout_height="46dp"
android:text="Name"
app:layout_constraintBottom_toTopOf="@+id/editTextdta"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.686" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

Java code

```
package com.example.todolist1;

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.TextView;
public class MainActivity extends AppCompatActivity {
```

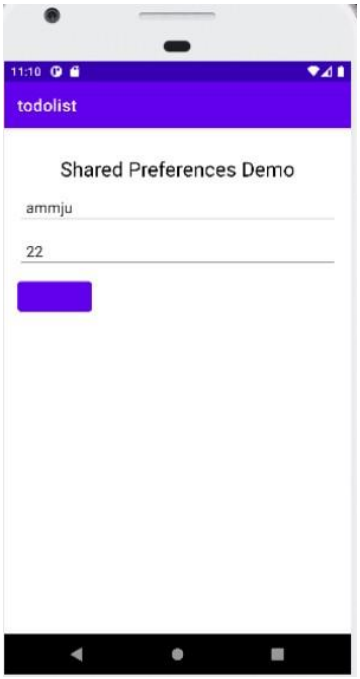
```
Button btn;
TextView tv1l;
SharedPreferences sharedPreferences;
public static final String SHARED_PREF_NAME="mypref";
public static final String KEY_NAME="";
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
addListeneronButton();
}
private void addListeneronButton() {
btn=(Button) findViewById(R.id.btnadd);
tv1l=(TextView) findViewById(R.id.tv1l1);
sharedPreferences = getSharedPreferences(SHARED_PREF_NAME,MODE_PRIVATE);
String name=sharedPreferences.getString(KEY_NAME,String.valueOf(0));
tv1l.setText("Name "+name);
btn.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View view) {
Intent intent=new Intent(MainActivity.this,add.class);
startActivity(intent);
}
});
}
}
```

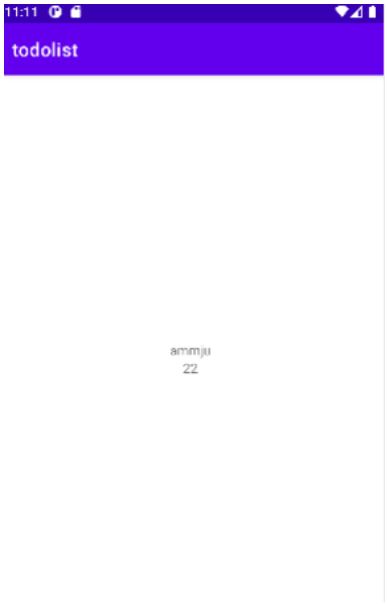
Add.java

```
package com.example.todolist;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Context;
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 add extends AppCompatActivity {
EditText tf;
TextView tv;
Button sub;
String n1;
SharedPreferences sharedPreferences;

public static final String SHARED_PREF_NAME="mypref";
public static final String KEY_NAME="";
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_add);
addButton();
}
private void addButton() {
sub = (Button) findViewById(R.id.btnsub);
tv = (TextView) findViewById(R.id.textviewname);
```

```
tf = (EditText) findViewById(R.id.editTextdta);
sharedPreferences = getSharedPreferences(SHARED_PREF_NAME,MODE_PRIVATE);
String name = sharedPreferences.getString(KEY_NAME, String.valueOf(0));
sub.setOnClickListener(newView.OnClickListener() {
@Override
public void onClick(View view) {
String n1=tf.getText().toString();
SharedPreferences.Editor editor = sharedPreferences.edit();
editor.putString(KEY_NAME,n1);
editor.commit();
Intent int1 = new Intent(add.this, MainActivity.class);
startActivity(int1);
}
});
}
}
```

OUTPUT




11:11
todolist
ammju
22

PROGRAM NO: 7

AIM: Design a simple Calculator using GridLayout and Cascaded LinearLayout

XML Code:

```
<?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="#0000000
    0"
    android:layout_gravity="bottom"
    android:gravity="bottom"
    android:orientation="vertical"
    tools:context=".Output">

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

```
<LinearLayout
    android:layout_width="match_parent
    "
    android:layout_height="wrap_conten
    t"
    android:layout_gravity="end"
    android:orientation="vertical"
    >

    <TextView
        android:layout_width="match_parent
        "
        android:layout_height="wrap_conten
        t" android:layout_marginEnd="20dp"
        android:text="18+7"
        android:textAlignment="textEnd"
        android:textColor="@color/black"
        android:textSize="40dp" />

    <TextView
        android:layout_width="match_parent
        "
        android:layout_height="wrap_conten
        t" android:layout_marginEnd="20dp"
        android:text="=25"
        android:textAlignment="textEnd"
```

```
        android:textColor="@color/black"
        android:textSize="40dp" />
</LinearLayout>


<GridLayout
    android:layout_width="wrap_content
    "
    android:layout_height="wrap_conten
    t" android:layout_margin="10dp"
    android:layout_weight="
    1"
    android:columnCount="4
    "
    android:gravity="bottom"
    android:rowCount="4">

    <Button
        android:id="@+id/b9"
        android:layout_width="50dp"
        android:layout_height="wrap_content"
        android:layout_margin="10dp"
        android:background="@drawable/bg_butto
        n"                          android:text="9"
        android:textColor="@color/white"
        android:textSize="25dp" />
```

```
<Button
    android:id="@+id/b8"
    android:layout_width="50dp"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:background="@drawable/bg_butto
    n"                          android:text="8"
    android:textColor="@color/white"
    android:textSize="25dp" />



    android:id="@+id/b7"
    android:layout_width="50dp"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:background="@drawable/bg_butto
    n"                          android:text="7"
    android:textColor="@color/white"
    android:textSize="25dp" />

<Button
    android:id="@+id/bmult"
    android:layout_width="wrap_content
    "
    android:layout_height="wrap_conten
```

```
    t"       android:layout_margin="10dp"
    android:background="#F86605"
    android:text="x"
    android:textColor="@color/white"
    android:textSize="18dp" />

<Button
    android:id="@+id/b6"
    android:layout_width="50dp"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:background="@drawable/bg_butto
    n"                          android:text="6"
    android:textColor="@color/white"
    android:textSize="25dp" />

<Button
    android:id="@+id/b5"
    android:layout_width="50dp"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:background="@drawable/bg_butto
    n"                          android:text="5"
    android:textColor="@color/white"
    android:textSize="25dp" />
```

```
<Button
    android:id="@+id/b4"
    android:layout_width="50dp"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:background="@drawable/bg_butto
    n"                              android:text="4"
    android:textColor="@color/white"
    android:textSize="25dp" />

<Button
    android:id="@+id/bdiv"
    android:layout_height="wrap_conten
    t"       android:layout_margin="10dp"
    android:background="#F86605"
    android:text="/"
    android:textColor="@color/whit
    e" android:textSize="25dp" />


<Button
    android:id="@+id/b3"
    android:layout_width="50dp"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:background="@drawable/bg_butto
```

```
n"                    android:text="3"
android:textColor="@color/white"
android:textSize="25dp" />

<Button
android:id="@+id/b2"
android:layout_width="50dp"
android:layout_height="wrap_content"
android:layout_margin="10dp"
android:background="@drawable/bg_butto
n"                    android:text="2"
android:textColor="@color/white"
android:textSize="25dp" />
<Button
android:id="@+id/b1"
android:layout_width="50"
android:layout_height="wrap_content"
android:layout_margin="10dp"
android:background="@drawable/bg_butto
n"                    android:text="1"
android:textColor="@color/white"
android:textSize="25dp" />

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

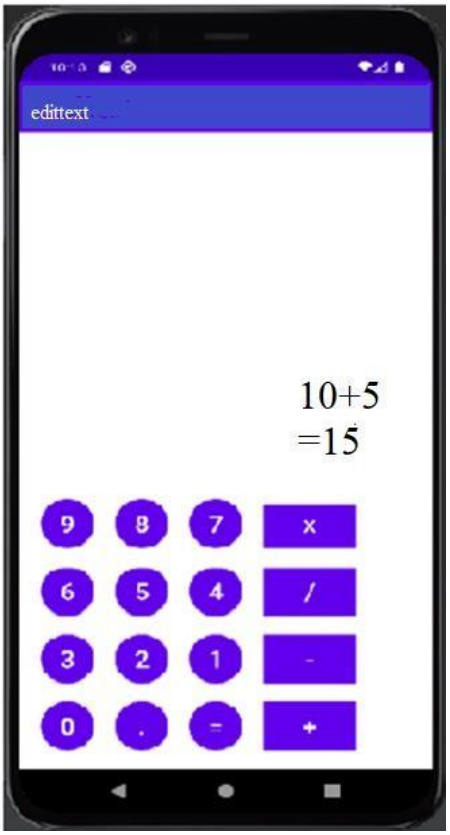
```
    "
    android:layout_height="wrap_conten
    t"       android:layout_margin="10dp"
    android:background="#F86605"
    android:text="-"
    android:textColor="@color/white"
    android:textSize="25dp" />

<Button
    android:id="@+id/b0"
    android:layout_width="50dp"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:background="@drawable/bg_butto
    n"                              android:text="0"
    android:textColor="@color/white"
    android:textSize="25dp" />
<Button
    android:id="@+id/b."
    android:layout_width="50dp"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:background="@drawable/bg_butto
    n"                               android:text="."
    android:textColor="@color/white"
    android:textSize="25dp" />
```

```
        <Button
            android:id="@+id/bequal"
            android:layout_width="50dp"
            android:layout_height="wrap_content"
            android:layout_margin="10dp"
            android:background="@drawable/bg_butto
            n"                              android:text="="
            android:textColor="@color/white"
            android:textSize="25dp" />

        <Button
            android:id="@+id/bplus"
            android:layout_width="wrap_content
            "
            android:layout_height="wrap_conten
            t"      android:layout_margin="10dp"
            android:background="#F86605"
            android:text="+"
            android:textColor="@color/whi
            te"
            android:textSize="25dp" />
    </GridLayout>
</LinearLayout>

</LinearLayout>
```

Java Code

```
package com.example.edittext;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.TextView;
public class Output extends AppCompatActivity {
TextView t1;
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_output);
}
}
```

OUTPUT


edittext
10+5
=15
9
8
7
x
6
5
4
/
3
2
1
-
0
.
=
+

PROGRAM NO: 08

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

XML Code:

```
<?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=".facebook">
    <LinearLayout
        android:layout_width="match_parent
        "
        android:layout_height="match_paren
        t"     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="100d p"
android:orientation="vertical">
    <TextView
      android:layout_width="wrap_content
      "
      android:layout_height="wrap_conten
      t" android:fontFamily="@font/arvo"
      android:padding="10dp"
      android:text="facebook"
      android:textColor="@color/white"
      android:textSize="36dp" />

  </LinearLayout>
  <LinearLayout
    android:layout_width="match_parent
    "
    android:layout_height="wrap_conten
    t"              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:layout_marginBottom="100dp"
        android:orientation="vertical">
  <TextView
    android:layout_width="wrap_content
    "
    android:layout_height="wrap_conten
    t" android:fontFamily="@font/arvo"
    android:padding="10dp"
    android:text="facebook"
    android:textColor="@color/white"
    android:textSize="36dp" />

</LinearLayout>
<LinearLayout
  android:layout_width="match_parent
  "
  android:layout_height="wrap_conten
  t"          android:padding="15dp"
  android:orientation="vertical"
  android:layout_margin="20dp">
  <EditText
    android:layout_width="match_parent
```

```
        "
        android:layout_height="wrap_conten
        t"  android:hint="Email  or  Phone"
        android:layout_marginBottom="30dp

        "
        android:textColorHint="#594F4F"/>

    <EditText
        android:layout_width="match_parent
        "
        android:layout_height="wrap_conten
        t"
        android:layout_marginBottom="30d
        p"          android:hint="password"
        android:textColorHint="#594F4F"/>

    <Button
        android:layout_width="match_parent
        "
        android:layout_height="wrap_conten
        t" android:text="Log In"
        android:background="@color/design_default_color_primar
        y" android:textAllCaps="false"/>

</LinearLayout>
<LinearLayout
```

```
    android:layout_width="match_parent"
android:layout_height="wrap_conten
    t"android:orientation="horizontal"

        android:layout_marginTop="180dp"
        android:layout_gravity="bottom"
        android:gravity="center">
        <TextView
          android:layout_width="wrap_content
          "
          android:layout_height="wrap_conten
          t"          android:gravity="end"
          android:textStyle="bold"
          android:textColor="@color/white"
          android:layout_weight="50"
          android:text="SignUp          for
          Facebook"/>
        <TextView
          android:layout_width="wrap_content
          "
          android:layout_height="wrap_conten
          t"          android:gravity="end"
          android:textColor="@color/white"
          android:layout_marginEnd="130dp"
          android:layout_weight="1"
          android:textStyle="bold"
          android:text="?"/>
```

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

Java Code

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

OUTPUT

PROGRAM NO: 09

AIM: Develop an application that toggles image using FrameLayout

XML Code:

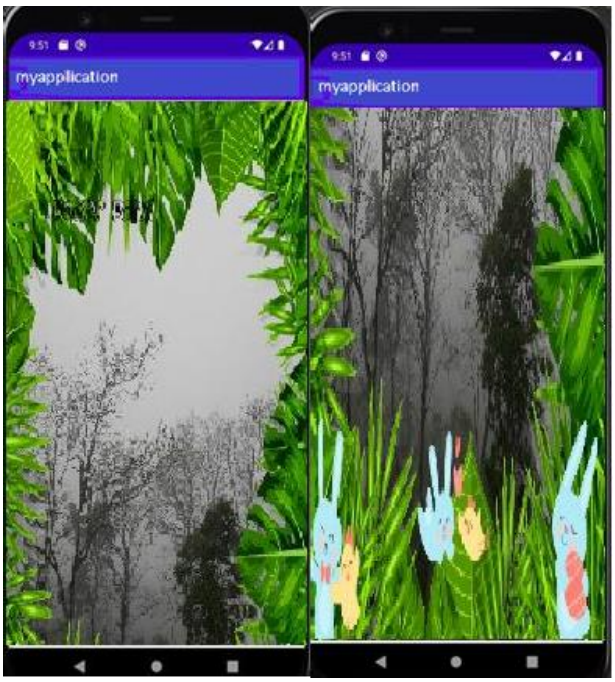
```
<?xml version="1.0" encoding="utf-8"?>
<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
android:layout_gravity="center" android:background="@color/bg2"
tools:context=".image_toogle">
<ImageView
android:id="@+id/image2"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_gravity="center"
android:src="@drawable/vd" android:visibility="gone"/>
<ImageView
android:id="@+id/image1"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_gravity="center"
android:src="@drawable/applogo" />
</FrameLayout>
```

Java Code

```
package com.example.vaidyakare;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.ImageView;
public class image_toogle extends AppCompatActivity implements View.OnClickListener
{
```

```
ImageView img1, img2;
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_image_toogle);
img1 = findViewById(R.id.image1);
img2 = findViewById(R.id.image2);
simg1.setOnClickListener(this);
img2.setOnClickListener(this);
}
public void onClick(View v) {
int id = v.getId();
switch (id) {
case R.id.image1:
img1.setVisibility(View.GONE);
img2.setVisibility(View.VISIBLE);
break;
case R.id.image2:
img1.setVisibility(View.VISIBLE);
img2.setVisibility(View.GONE);
break;
}
}
}
```

OUTPUT



PROGRAM NO: 10

AIM: Implement Adapters and perform exception handling

XML Code:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayoutxmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
android:gravity="center"
tools:context=".exception">
<TextView
android:id="@+id/textView"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="TextView"/>
</LinearLayout>
```

Java Code

```
package com.example.vaidyakare;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.TextView;
import android.widget.Toast;
public class exception extends AppCompatActivity {
TextView textView;
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_exception);
try {
textView.setText("Hello there...");
} catch (Exception e) {
```

```
Toast.makeText(this, e.getMessage(), Toast.LENGTH_SHORT).show();
}
}
}
```

OUTPUT

PROGRAM NO: 11

Aim: Implement Intent to navigate between multiple activities

XML Code:

```
<?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=".intent_activity">

<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"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.437"
app:layout_constraintStart_toStartOf="parent"
sapp: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"
android:onClick="callActivity"
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>
```

Display.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=".intent_act2">
\<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>
```

Java Code

```
package com.example.vaidyakare;
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 intent_activity extends AppCompatActivity {
Button b1;
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_intent);
}
public void callActivity(View view) {
Intent i = new  Intent(intent_activity.this, intent_act2.class);
final EditText editText1 = (EditText)findViewById(R.id.name);
String msg = editText1.getText().toString();
```

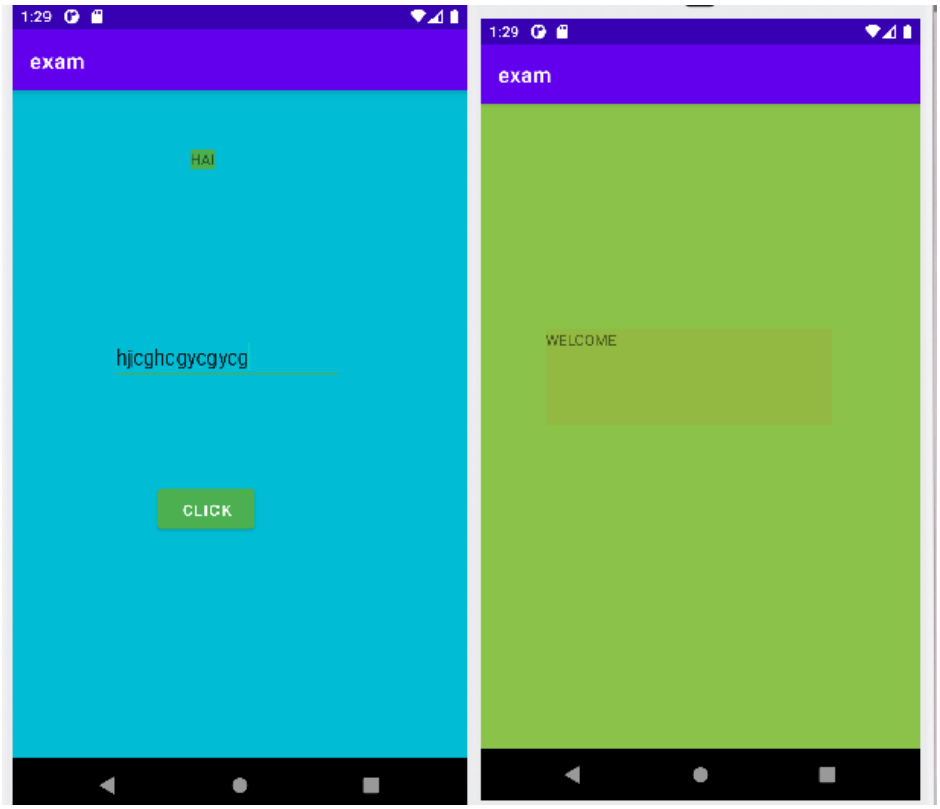
```
final EditText editText2 = (EditText)findViewById(R.id.address);
String add = editText2.getText().toString();
final EditText editText3 = (EditText)findViewById(R.id.email);
String em = editText3.getText().toString();
i.putExtra("Value1", msg);
i.putExtra("Value2", add);
i.putExtra("Value3", em);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

Display.java

```
package com.example.vaidyakare;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.TextView;
public class intent_act2 extends AppCompatActivity {
TextView view1;
TextView view2;
TextView view3;
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_intent_act2);
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 implicit intents

XML Code:

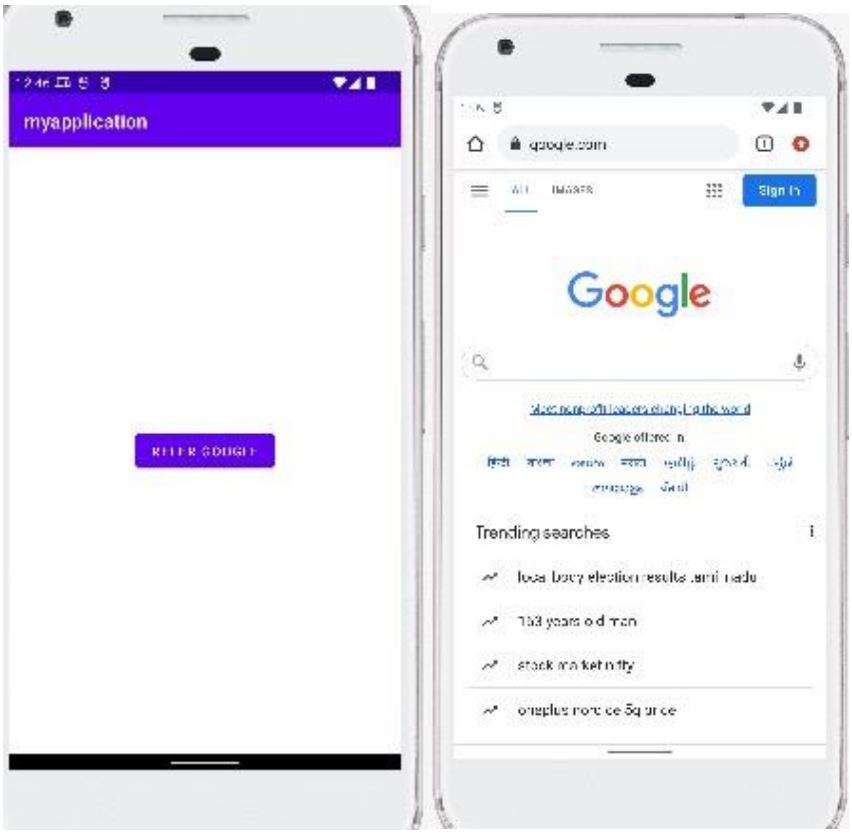
```
<?xml version="1.0" encoding="utf-8"?>

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

Java Code

```
package com.example.myapplication;
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 explicit extends AppCompatActivity {
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_explicit);
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

XML Code:

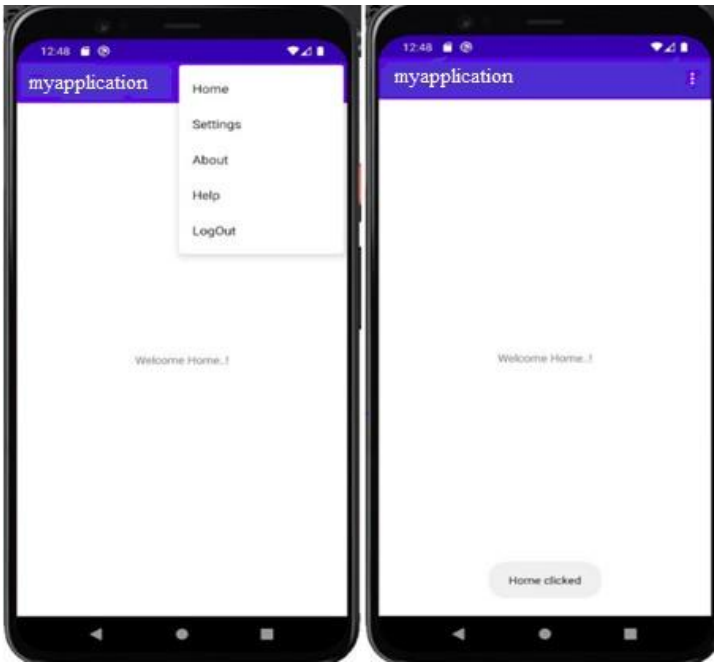
```
<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android">
<item android:id="@+id/item1" android:title="Home"/>
<item android:id="@+id/item2" android:title="Settings"/>
<item android:id="@+id/item3" android:title="About"/>
<item android:id="@+id/item4" android:title="Help"/>
<item android:id="@+id/item5" android:title="LogOut"/>
</menu>
<?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=".menu_bar">
<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Welcome Home..!"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintLeft_toLeftOf="parent"
app:layout_constraintRight_toRightOf="parent"
app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

Java Code

```
package com.example.vaidyakare;
import androidx.appcompat.app.AppCompatActivity;
import android.annotation.SuppressLint;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;
import android.widget.Toast;
public class menu_bar extends AppCompatActivity {
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_menu_bar);
}
@Override
public boolean onCreateOptionsMenu(Menu menu) {
getMenuInflater().inflate(R.menu.menu_list, menu);
return true;
}
@Override
public boolean onOptionsItemSelected(MenuItem item) {
switch (item.getItemId()) {
case R.id.item1:
Toast.makeText(getApplicationContext(),"Home clicked", Toast.LENGTH_SHORT).show();
return true;
case R.id.item2:
Toast.makeText(getApplicationContext(),"Settingsclicked",
Toast.LENGTH_SHORT).show();
return true;
case R.id.item3:
Toast.makeText(getApplicationContext(),"About clicked", Toast.LENGTH_SHORT).show();
return true;
```

```
case R.id.item4:
Toast.makeText(getApplicationContext(), "Help clicked", Toast.LENGTH_SHORT).show();
return true;
case R.id.item5:
Toast.makeText(getApplicationContext(),"Logoutclicked",
Toast.LENGTH_SHORT).show();
return true;
default:
return super.onOptionsItemSelected(item);
}
}
}
```

OUTPUT



PROGRAM NO: 14

AIM: Develop an applicationthat uses ArrayAdapter with ListViewXML

XML Code

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

<LinearLayout

xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:tools="http://schemas.android.com/tools"

xmlns:app="http://schemas.android.com/apk/res-auto"

android:layout_width="match_parent"

android:layout_height="match_parent"

tools:context=".arrayAdapter">

<ListView

android:id="@+id/mobile_list"

android:layout_width="match_parent"

android:layout_height="wrap_content" >

</ListView>

</LinearLayout>
```

Java Code:

```
package com.example.myapplication;

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.TextView;

import android.widget.Toast;

public class arrayAdapter extends AppCompatActivity implements

AdapterView.OnItemClickListener {

ListView l;

String[] days = {"Sunday", "Monday", "Tuesday", "Wednesday", "Thursday", "Friday",
"Saturday"};
```

```
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_array_adapter);
l = findViewById(R.id.mobile_list);
ArrayAdapter<String>adapter=new ArrayAdapter<String>(this,
R.layout.support_simple_spinner_dropdown_item, days);
l.setAdapter(adapter);
l.setOnItemClickListener(this);
}
@Override
public void onItemClick(AdapterView<?> adapterView, View view, int i, long l) {
TextView temp = (TextView) view;
Toast.makeText(this, "You clicked " + temp.getText() + " at " + i,
Toast.LENGTH_LONG).show();
}
}
```

OUTPUT

myapplication
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday

PROGRAM NO:15

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

XML Code:

```
<?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=".MainActivity3">

<TextView

android:id="@+id/textView4"

android:layout_width="wrap_content"

android:layout_height="wrap_content"

android:layout_marginStart="169dp"

android:layout_marginTop="94dp"

android:layout_marginEnd="140dp"

android:layout_marginBottom="618dp"

android:text="Alert And Popup"

app:layout_constraintBottom_toBottomOf="parent"
```

```
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

Java Code

```
package com.example.myapp15_12_2;
import androidx.annotation.NonNull;
import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;
import android.content.DialogInterface;
import android.content.Intent;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;
import android.view.View;
import android.widget.Button;
import android.widget.ImageView;
import android.widget.TextView;
import android.widget.Toast;
public class MainActivity3 extends AppCompatActivity {
ImageView i;
AlertDialog.Builder builder;
```

```
AlertDialog alertDialog;
Button b;
@Override
public boolean onCreateOptionsMenu(Menu menu) {
getMenuInflater().inflate(R.menu.menu,menu);
return true;
super.onCreateOptionsMenu(menu);
}
@Override
public boolean onOptionsItemSelected(@NonNull MenuItem item) {
item.setIcon(R.drawable.about);
i=findViewById(R.id.imageView);
TextView t =findViewById(R.id.textView4);
switch (item.getItemId()) {
case R.id.it3:
builder=new AlertDialog.Builder(MainActivity3.this);
builder.setMessage("Do you want to
close?").setTitle("AlertDialog").setPositiveButton("OK", new
DialogInterface.OnClickListener() {
@Override
public void onClick(DialogInterface dialog, int which) {
finish();
}
```

```
}).setNegativeButton("Cancel", new DialogInterface.OnClickListener() {
@Override
public void onClick(DialogInterface dialog, int which) {
dialog.dismiss();
}
});
alertDialog=builder.create();
alertDialog.show();
return true;
case R.id.it4:
builder=new AlertDialog.Builder(MainActivity3.this);
View popupView=getLayoutInflater().inflate(R.layout.popup1,null);
builder.setView(popupView);
alertDialog=builder.create();
alertDialog.show();
return true;
default:
return super.onOptionsItemSelected(item);
}
}
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
```

```
setContentView(R.layout.activity_main3);
}}
```

Popup1.xml

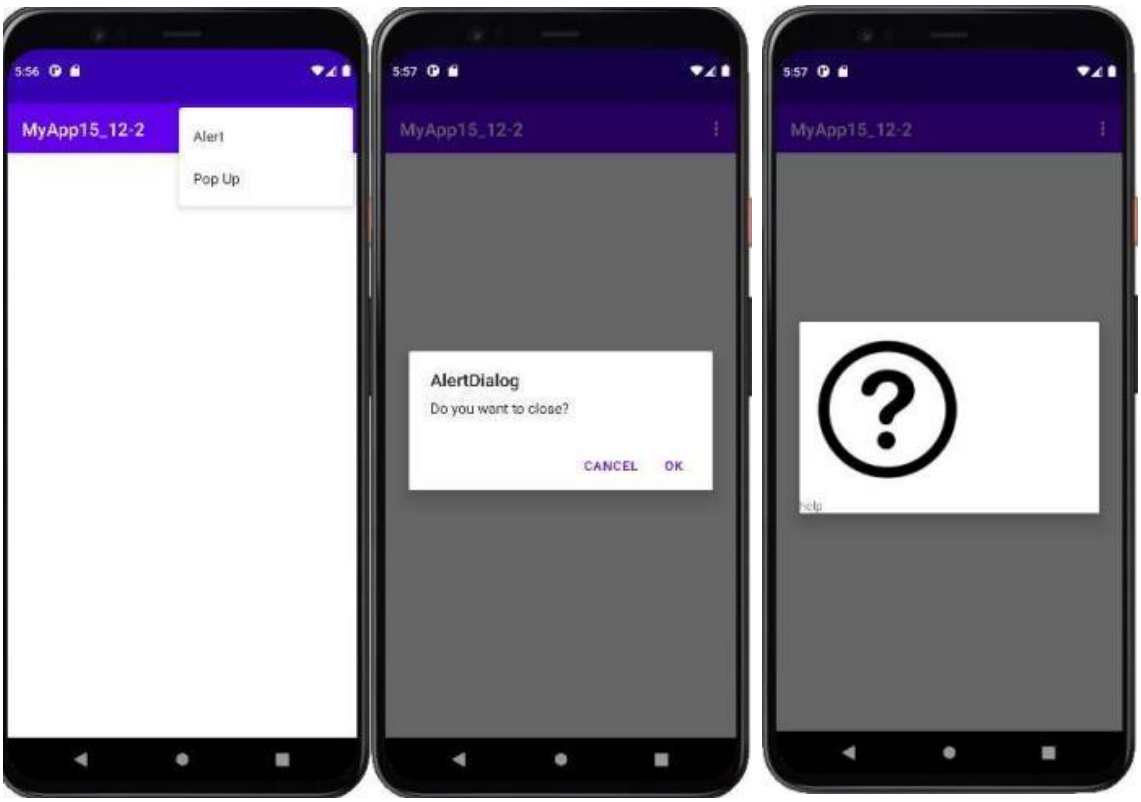
```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
android:orientation="vertical">
<ImageView
android:id="@+id/imageView2"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_weight="1"
android:src="@drawable/help" />
<TextView
android:id="@+id/textView3"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_weight="1"
android:text="help" />
```

```
</LinearLayout>
```

Menu.xml

```
<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:android="http://schemas.android.com/apk/res/android">
<item
android:id="@+id/it3"
android:title="Alert" />
<item
android:id="@+id/it4"
android:title="Pop Up" />
</menu>
```

OUTPUT


5:56
MyApp15_12-2
Alert
Pop Up
5:57
MyApp15_12-2
AlertDialog
Do you want to close?
CANCEL
OK
5:57
MyApp15_12-2

PROGRAM NO:16

AIM: Develop an application that implements spinner component and perform event handling.

XML Code:

```
<?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:gravity="center"
tools:context=".MainActivity">

<Spinner
android:id="@+id/spinner"
android:layout_width="409dp"
android:layout_height="40dp"
android:layout_marginStart="16dp"
android:layout_marginTop="8dp"
android:layout_marginBottom="8dp"
android:minHeight="48dp" />

</LinearLayout>
```

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);

Spinner spin = (Spinner) findViewById(R.id.spinner);
spin.setOnItemSelectedListener(this);

ArrayAdapter aa = new ArrayAdapter(this,android.R.layout.simple_spinner_item,country);
aa.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);

spin.setAdapter(aa);

}


@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) {

}
```

```
}


}
```

OUTPUT

PROGRAM NO :17

AIM: Apply themes vis code and manifest file

XML Code:

```
<?xmlversion="1.0"encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:tools="http://schemas.android.com/tools"
xmlns:app="http://schemas.android.com/apk/res-auto"
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:minHeight="48dp"
        android:text="avani"

app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
  app:layout_constraintStart_toStartOf="parent"

 app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

Java Code

```
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);        setCont
entView(R.layout.activity_main);
}

}
```

#colors.xml

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

<resources>

<color name="colorPrimary">#006064</color>

<color name="color_primary_dark">#00838F</color>

<color name="color_accent">#B2DFDB</color>

<color name="color_text_color_primary">#03A9F4</color>

</resources>
```

#new_style.xml

```
<resources xmlns:tools="http://schemas.android.com/tools">

<!-- Base application theme. -->

<style name="Theme.new_style"
parent="Theme.MaterialComponents.DayNight.DarkActionBar">
```

```
<item name="colorPrimary">@color/colorPrimary</item>

<item name="colorPrimaryDark">@color/color_primary_dark</item>

<item name="colorAccent">@color/color_accent</item>

<item name="android:textColorPrimary">@color/color_text_color_primary</item>

<item name="android:textSize">40dp</item>

</style>

</resources>
```

#values\themes.xml

```
<resources xmlns:tools="http://schemas.android.com/tools">

<!-- Base application theme. -->

<style name="Theme.Themes"
parent="Theme.MaterialComponents.DayNight.DarkActionBar">

<item name="colorPrimary">@color/colorPrimary</item>

<item name="colorPrimaryDark">@color/color_primary_dark</item>

<item name="colorAccent">@color/color_accent</item>

<item name="android:textColorPrimary">@color/color_text_color_primary</item>

<item name="android:textSize">40dp</item>

</style>

</resources>
```

#AndroidMainfest.xml

```
<?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" and
roid:icon="@mipmap/ic_launcher" android:label="
@string/app_name"
        android:roundIcon="@mipmap/ic_launco und"
android:supportsRtl="true"
android:theme="@style/Theme.new_style"> <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>
```

#night\themes.xml

```
<resources xmlns:tools="http://schemas.android.com/tools">
<!-- Base application theme. -->
<style name="Theme.Themes"
parent="Theme.MaterialComponents.DayNight.DarkActionBar">

<item name="colorPrimary">@color/colorPrimary</item>
<item name="colorPrimaryDark">@color/color_primary_dark</item>
```

```
<item name="colorAccent">@color/color_accent</item>

<item name="android:textColorPrimary">@color/color_text_color_primary</item>

<item name="android:textSize">40sp</item>

</style>

</resources>
```

OUTPUT

PROGRAM NO:18

AIM: Develop an application using fragments

XML Code:

```
<?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">

<FrameLayout
android:id="@+id/frameLayout"
android:layout_width="match_parent"
android:background="@color/teal_200"
android:layout_height="0dp"
android:layout_weight="4" />
<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:text="Fragment 1" />

<Button
android:id="@+id/b2"
android:layout_width="160dp"
android:layout_height="50dp"
android:layout_alignParentBottom="true"
android:layout_alignParentRight="true"
android:layout_marginStart="30dp"
android:layout_marginBottom="30dp"
android:text="Fragment 2" />

</RelativeLayout>
</LinearLayout>
```

Java Code

```
package com.example.myapp09_02_3;

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) {
replaceFragmnt(new fragment1());
}
});

b2.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
replaceFragmnt(new fragment2());

}
});
}

private void replaceFragmnt(Fragment fragment) {
FragmentManager
fragmentManager=getSupportFragmentManager();
FragmentTransaction
fragmentTransaction=fragmentManager.beginTransacti
on();
```

```
fragmentTransaction.replace(R.id.frameLayout,fragmen
t);
fragmentTransaction.commit();
}

}
```

fragment1.java

```
package com.example.myapp09_02_3;

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) {
```

```
return inflater.inflate(R.layout.fragment_fragment1,
container, false);

}

}
```

fragment2.java

```
package com.example.myapp09_02_3;


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) {

return inflater.inflate(R.layout.fragment_fragment2,
container, false);

}
```

```
}
```

fragment_fragment1.xml

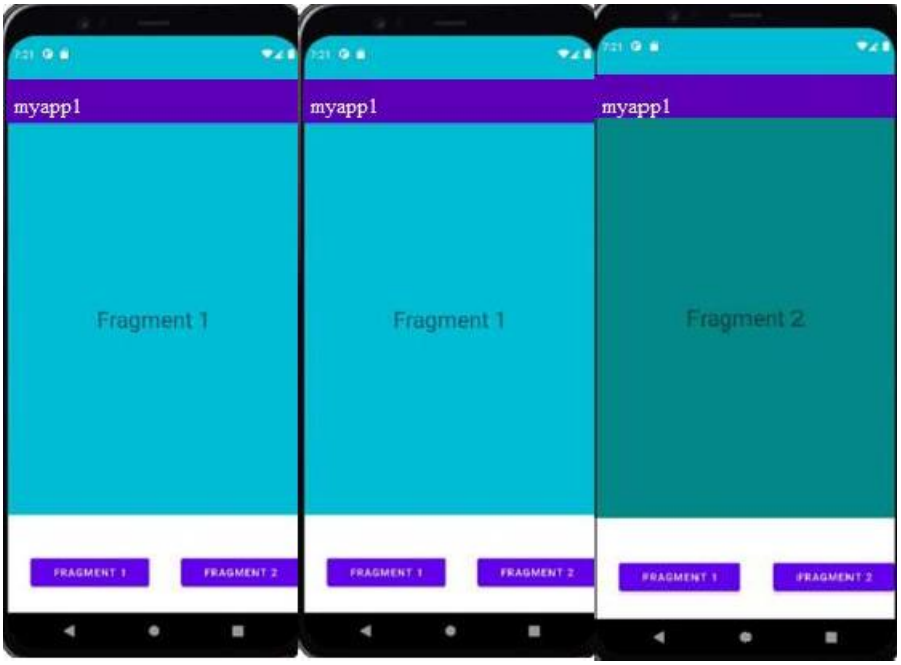
```
<?xml version="1.0" encoding="utf-8"?>

<RelativeLayout
xmlns:android="http://schemas.android.com/apk/res/an
droid"

xmlns:tools="http://schemas.android.com/tools"

android:layout_width="match_parent"

android:layout_height="match_parent"

android:background="@color/purple_700"

tools:context=".fragment1">


<TextView

android:layout_width="wrap_content"

android:layout_height="wrap_content"

android:layout_centerInParent="true"

android:textSize="30dp"

android:text="Fragment 1" />


</RelativeLayout>
```

fragment_fragment2.xml

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

```
<RelativeLayout
xmlns:android="http://schemas.android.com/apk/res/an
droid"

xmlns:tools="http://schemas.android.com/tools"

android:layout_width="match_parent"

android:layout_height="match_parent"

android:background="@color/teal_700"

tools:context=".fragment2">


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

<TextView

android:layout_width="wrap_content"

android:layout_height="wrap_content"

android:layout_centerInParent="true"

android:textSize="30dp"

android:text="Fragment 2" />


</RelativeLayout>
```

OUTPUT


myapp1
Fragment 1
FRAGMENT 1
FRAGMENT 2
myapp1
Fragment 1
FRAGMENT 1
FRAGMENT 2
myapp1
Fragment 2
FRAGMENT 1
FRAGMENT 2

PROGRAM NO:19

AIM: Implement Navigation drawer

XML Code:

```
<?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="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" />
</LinearLayout>
<com.google.android.material.navigation.NavigationView
android:layout_width="match_parent"
android:layout_height="match_parent"
android:id="@+id/navigation_view"
app:menu="@menu/navigation_menu"
android:layout_gravity="start"/>
```

```
</androidx.drawerlayout.widget.DrawerLayout>
```

Java Code

```
package com.example.drawernavigation;
import androidx.annotation.NonNull;
import androidx.appcompat.app.ActionBarDrawerToggle;
import androidx.appcompat.app.AppCompatActivity;
import androidx.drawerlayout.widget.DrawerLayout;
import android.app.ActionBar;
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.nav_account) {
Toast.makeText(this, "home", Toast.LENGTH_SHORT).show();
}
if (id == R.id.nav_settings) {
Toast.makeText(this, "settings", Toast.LENGTH_SHORT).show();
}
if (id == R.id.nav_logout) {
Toast.makeText(this, "logout", Toast.LENGTH_SHORT).show();
}
return false;
}
}
```

#navigation_menu.xml

```
<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android">
<item
android:id="@+id/nav_account"
android:title="MY Account"/>
<item
android:id="@+id/nav_settings"
android:title="Settings"/>
<item
android:id="@+id/nav_logout"
android:title="logout"/>
```

```
</menu>
```

strings.xml

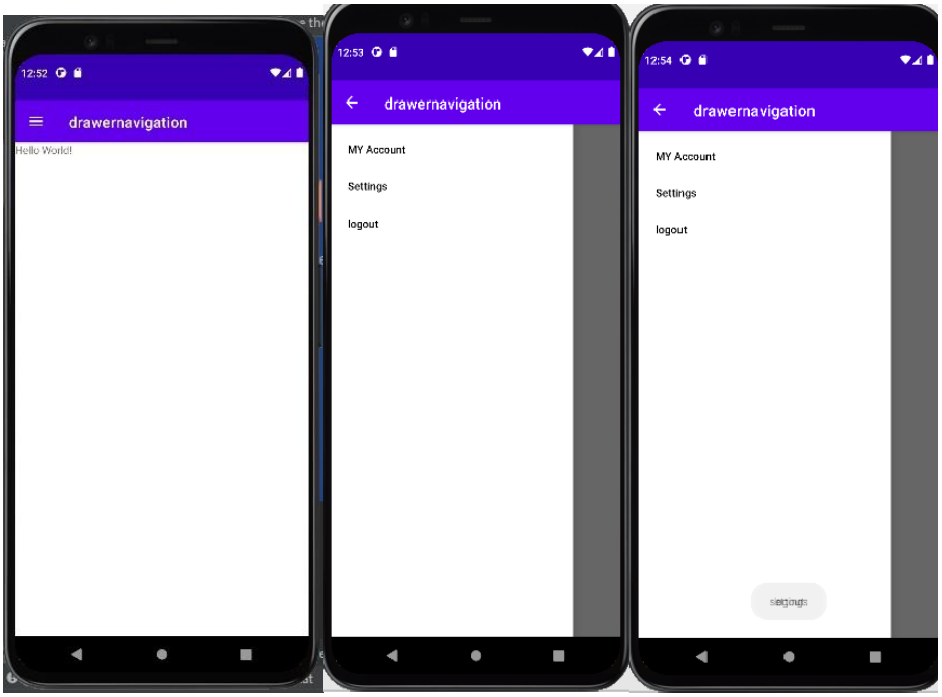
```
<resources>
<string name="app_name">drawernavigation</string>
<string name="nav_open">Open</string>
<string name="nav_close">Close</string>
</resources>
```

build.gradle(:app)

```
plugins {
id 'com.android.application'
}
android {
compileSdk 31
defaultConfig {
applicationId "com.example.drawernavigation"
minSdk 21
targetSdk 31
versionCode 1
versionName "1.0"
testInstrumentationRunner "androidx.test.runner.AndroidJUnitRunner"
}
buildTypes {
release {
minifyEnabled false
proguardFiles getDefaultProguardFile('proguard-android-optimize.txt'), 'proguard-rules.pro'
}
}
compileOptions {
sourceCompatibility JavaVersion.VERSION_1_8
targetCompatibility JavaVersion.VERSION_1_8
}
```

```
}
dependencies {
implementation 'androidx.appcompat:appcompat:1.4.1'
implementation 'com.google.android.material:material:1.5.0'
implementation 'androidx.constraintlayout:constraintlayout:2.1.3'
implementation 'androidx.drawerlayout:drawerlayout:1.1.1'
testImplementation 'junit:junit:4.+'
androidTestImplementation 'androidx.test.ext:junit:1.1.3'
androidTestImplementation 'androidx.test.espresso:espresso-core:3.4.0'
implementation "com.google.android.material:material:1.4.1"
}
```

OUTPUT



PROGRAM NO:20

Aim: Write a program that demonstrates Activity Lifecycle.

XML Code:

```
<?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>
```

Java Code

```
package com.example.myapplication;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.util.Log;
import com.example.myapplication.R;

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

```
2022-03-03 11:51:50.642 7632-7644/com.example.myapplication I/e.myapplicatio: Background young concurrent copying GC freed 14816(1328KB) AllocSpace objec
2022-03-03 11:51:50.953 7632-7653/com.example.myapplication I/OpenGLRenderer: Davey! duration=713ms; Flags=1, IntendedVsync=30119275487723, Vsync=3011927
2022-03-03 11:51:54.248 7632-7644/com.example.myapplication I/e.myapplicatio: WaitForGcToComplete blocked RunEmptyCheckpoint on ProfileSaver for 5.591ms
2022-03-03 11:52:55.797 7632-7632/com.example.myapplication I/State: onCreate
2022-03-03 11:52:56.821 7632-7632/com.example.myapplication I/State: onStop
2022-03-03 11:52:56.828 7632-7632/com.example.myapplication I/State: onDestroy
2022-03-03 11:53:50.852 7632-7632/com.example.myapplication I/State: onCreate
2022-03-03 11:53:50.861 7632-7632/com.example.myapplication I/State: onStart
2022-03-03 11:53:50.862 7632-7632/com.example.myapplication I/State: onResume
2022-03-03 11:53:57.002 7632-7632/com.example.myapplication I/State: onCreate
2022-03-03 11:53:57.912 7632-7632/com.example.myapplication I/State: onStop
2022-03-03 11:54:07.265 7632-7632/com.example.myapplication I/State: onRestart
2022-03-03 11:54:07.274 7632-7632/com.example.myapplication I/State: onStart
2022-03-03 11:54:07.275 7632-7632/com.example.myapplication I/State: onResume
2022-03-03 11:54:10.704 7632-7632/com.example.myapplication I/State: onCreate
2022-03-03 11:54:11.651 7632-7632/com.example.myapplication I/State: onStop
2022-03-03 11:54:11.653 7632-7632/com.example.myapplication I/State: onDestroy
2022-03-03 11:54:17.578 7632-7632/com.example.myapplication I/State: onCreate
2022-03-03 11:54:17.587 7632-7632/com.example.myapplication I/State: onStart
2022-03-03 11:54:17.588 7632-7632/com.example.myapplication I/State: onResume
```

PROGRAM NO:21

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

XML Code:

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

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

xmlns:app="http://schemas.android.com/apk/res-auto"

xmlns:tools="http://schemas.android.com/tools"

android:layout_width="match_parent"

android:layout_height="match_parent"

android:padding="10dp"

tools:context=".MainActivity">


<TextView

android:id="@+id/texttitle"

android:layout_width="wrap_content"

android:layout_height="wrap_content"

android:layout_marginTop="20dp"

android:text="Please enter the details below"

android:textSize="24dp" />


<EditText

android:id="@+id/name"
```

```
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:hint="Name"
android:textSize="24dp"
android:layout_below="@+id/texttitle"
android:inputType="textPersonName"
/>
<EditText
android:id="@+id/contact"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:hint="Contact"
android:textSize="24dp"
android:layout_below="@+id/name"
android:inputType="number"
/>
<EditText
android:id="@+id/dob"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:hint="Date of birth"
android:textSize="24dp"
android:layout_below="@+id/contact"
android:inputType="number"
/>
```

```
<Button
android:id="@+id/buttonInsert"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:textSize="24dp"
android:text="Insert new Data"
android:layout_marginTop="30dp"
android:layout_below="@+id/dob"
/>
<Button
android:id="@+id/buttonUpdate"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:textSize="24dp"
android:text="Update Data"
android:layout_below="@+id/buttonInsert"
/>
<Button
android:id="@+id/buttondelete"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:textSize="24dp"
android:text="Delete existing data"
android:layout_below="@+id/buttonUpdate"
/>
```

```
<Button
android:id="@+id/buttonView"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:textSize="24dp"
android:text="View data"
android:layout_below="@+id/buttondelete"
/>

</RelativeLayout>
```

Java Code

```
package com.example.sqlite_app;

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, contact, dob;
Button insert, update, delete, view;
DBHelper DB;

@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
name=findViewById(R.id.name);
contact=findViewById(R.id.contact);
dob=findViewById(R.id.dob);
insert=findViewById(R.id.buttonInsert);
update=findViewById(R.id.buttonUpdate);
delete=findViewById(R.id.buttondelete);
view=findViewById(R.id.buttonView);
DB=new DBHelper(this);

insert.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
String nameTXT=name.getText().toString();
String contactTXT=contact.getText().toString();
String dobTXT=dob.getText().toString();
```

```
Boolean checkinsertdata=DB.insertuserdata(nameTXT,contactTXT,dobTXT);
if(checkinsertdata==true)
Toast.makeText(MainActivity.this,"NewEntryInserted", Toast.LENGTH_SHORT).show();
else
Toast.makeText(MainActivity.this,"unabletoinsert", Toast.LENGTH_SHORT).show();
}
});
update.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
String nameTXT=name.getText().toString();
String contactTXT=contact.getText().toString();
String dobTXT=dob.getText().toString();

Boolean checkupdatedata=DB.updateuserdata(nameTXT,contactTXT,dobTXT);
if(checkupdatedata==true)
Toast.makeText(MainActivity.this, "Entry updated", Toast.LENGTH_SHORT).show();
else
Toast.makeText(MainActivity.this, "Not updated", Toast.LENGTH_SHORT).show();
}
});
delete.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
String nameTXT=name.getText().toString();
```

```
Boolean checkdeletedata=DB.deletedata(nameTXT);
if(checkdeletedata==true)
Toast.makeText(MainActivity.this, "Entry deleted", Toast.LENGTH_SHORT).show();
else
Toast.makeText(MainActivity.this, "Not deleted", Toast.LENGTH_SHORT).show();
}
});
view.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
Cursor res=DB.getdata();
if(res.getCount()==0){
Toast.makeText(MainActivity.this, "No entry exists", Toast.LENGTH_SHORT).show();
return;
}
StringBuffer buffer=new StringBuffer();
while(res.moveToNext()){
buffer.append("Name:"+res.getString(0)+"\n");
buffer.append("Contact:"+res.getString(1)+"\n");
buffer.append("Date of Birth:"+res.getString(2)+"\n");
}
AlertDialog.Builder builder=new AlertDialog.Builder(MainActivity.this);
builder.setCancelable(true);
builder.setTitle("User Entries");
```

```
builder.setMessage(buffer.toString());
builder.show();

}
});


}
}
```

DBhelper

```
package com.example.sqlite_app;

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 DBHelper extends SQLiteOpenHelper {
public DBHelper(Context context) {
super(context, "Userdata", null, 1);
```

```
}

@Override
public void onCreate(SQLiteDatabase DB) {
DB.execSQL("create Table Userdetails(name TEXT primary key, contact TEXT, dob TEXT)");

}

@Override
public void onUpgrade(SQLiteDatabase DB, int oldVersion, int newVersion) {
DB.execSQL("drop Table if exists Userdetails");
}
public Boolean insertuserdata(String name, String contact, String dob){
SQLiteDatabase DB=this.getWritableDatabase();
ContentValues contentValues=new ContentValues();
contentValues.put("name",name);
contentValues.put("contact",contact);
contentValues.put("dob",dob);
long result=DB.insert("Userdetails", null, contentValues);
if(result==-1){
return false;
}else{
return true;
}
```

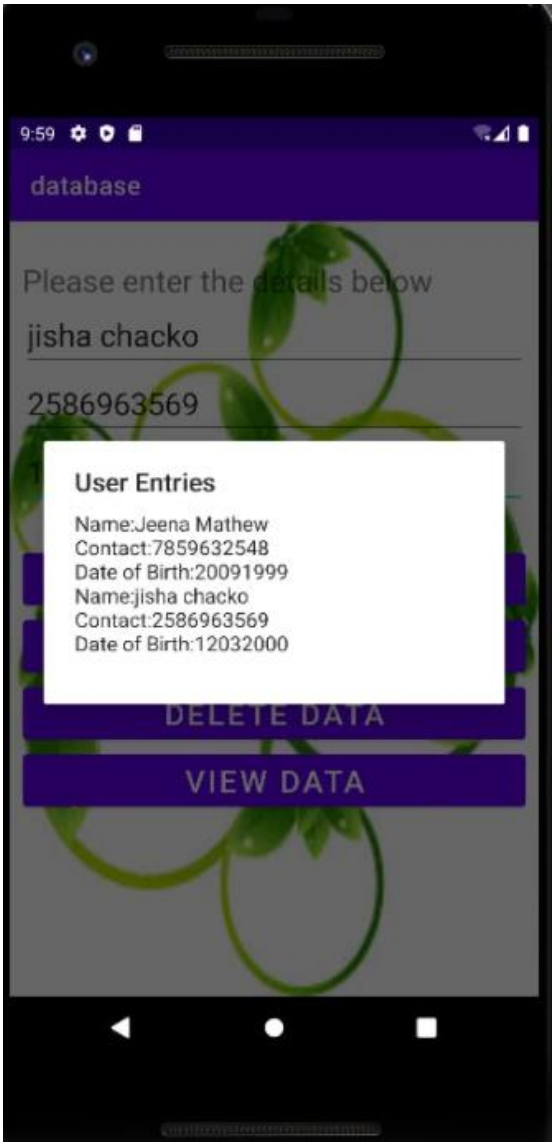
```
}

public Boolean updateuserdata(String name, String contact, String dob){

SQLiteDatabase DB=this.getWritableDatabase();

ContentValues contentValues=new ContentValues();

contentValues.put("contact",contact);

contentValues.put("dob",dob);

Cursor cursor=DB.rawQuery("Select * from Userdetails where name=?", new String[]{name});

if(cursor.getCount()>0) {

long result = DB.update("Userdetails", contentValues, "name=?", new String[]{name});

if (result == -1) {

return false;

} else {

return true;

}

}else{

return false;

}

}

public Boolean deletedata(String name){

SQLiteDatabase DB=this.getWritableDatabase();

Cursor cursor=DB.rawQuery("Select * from Userdetails where name=?", new String[]{name});

if(cursor.getCount()>0) {

long result = DB.delete("Userdetails", "name=?", new String[]{name});

if (result == -1) {
```

```
return false;
} else {
return true;
}
}else{
return false;
}
}
public Cursor getdata (){
SQLiteDatabase DB=this.getWritableDatabase();
Cursor cursor=DB.rawQuery("Select * from Userdetails",null);
return cursor;
}
}
```

OUTPUT

9:59
database
Please enter the details below
FullName
Contact No
Date of birth
INSERT NEW DATA
UPDATE DATA
DELETE DATA
VIEW DATA

9:59
database
Please enter the details below
Jisha Chacko
7859632548
26091999
INSERT NEW DATA
UPDATE DATA
DELETE DATA
VIEW DATA


9:59
database
Please enter the details below
jisha chacko
2586963569
User Entries
Name:Jeena Mathew
Contact:7859632548
Date of Birth:20091999
Name:jisha chacko
Contact:2586963569
Date of Birth:12032000
DELETE DATA
VIEW DATA