20MCA243 - MOBILE APPLICATION DEVELOPMENT LAB

*Lab Report Submitted By*

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**Reg. No.: AJC21MCA-2112**

*In Partial fulfilment 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**

[Affiliated to APJ Abdul Kalam Technological University, Kerala. Approved by AICTE, Accredited by NAAC with ‘A’ grade. Koovapally, Kanjirappally, Kottayam, Kerala – 686518]

**2022-2023**

**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 **VISHNU SADASIVAN (AJC21MCA-2112)** in partial fulfilment of the requirements for the award of the Degree of Master of Computer Applications under APJ Abdul Kalam Technological University during the year **2022-23.**

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|  |  |  |  |
| --- | --- | --- | --- |
| **Course Code** | **Course Name** | **Syllabus Year** | **L-T-P-C** |
| 20MCA243 | Mobile Application Development Lab | 2020 | 0-1-3-2 |

**VISION**

To promote an academic and research environment conducive for innovation centric technical education.

**MISSION**

MS1 - Provide foundations and advanced technical education in both theoretical and applied ComputerApplications in-line with Industry demands.

MS2 - Create highly skilled computer professionals capable of designing and innovating real life solutions.

MS3 - Sustain an academic environment conducive to research and teaching focused to generate up- skilledprofessionals with ethical values.

MS4 - Promote entrepreneurial initiatives and innovations capable of bridging and contributing with sustainable, socially relevant technology solutions.

**COURSE OUTCOME**

|  |  |  |
| --- | --- | --- |
| **CO** | **Outcome** | **Target** |
| CO1 | Design and develop user interfaces for mobile apps using basic building blocks, UI components and application structure using Emulator | 60 |
| CO2 | Write simple programs and develop small applications using the concepts of UI design, layouts and preferences | 60 |
| CO3 | Develop applications with multiple activities using intents, array adapter, exceptions and options menu. | 60 |
| CO4 | Implement activities with dialogs, spinner, fragments and navigation drawer by applying themes | 60 |
| CO5 | Develop mobile applications using SQLite. | 60 |

**COURSE END SURVEY**

|  |  |  |
| --- | --- | --- |
| **CO** | **Survey Question** | **Answer Format** |
| CO1 | To what extent you are able to design and develop UI usingEmulator | Excellent/Very Good/Good Satisfactory/Needs improvement |
| CO2 | To what extent you understood concepts of layouts | Excellent/Very Good/Good Satisfactory/Needs improvement |
| CO3 | To what extent you understood intents, exceptions and menus | Excellent/Very Good/Good Satisfactory/Needs improvement |
| CO4 | To what extent you are able to implement activities applyingthemes | Excellent/Very Good/Good Satisfactory/Needs improvement |
| CO5 | To what extent you understood to create applications with SQLite | Excellent/Very Good/Good Satisfactory/Needs improvement |

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|  |  |  |  |  |
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# Experiment No.: 1 Aim

Design a Login Form with username and password using Linear Layout and toast valid credentials

# CO1

Design and develop user interfaces for mobile apps using basic building blocks, UI components and application structure using Emulator

# Procedure

**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"

   android:paddingHorizontal="30dp"

   tools:context=".MainActivity">

   <EditText

       android:id="@+id/email"

       android:layout\_width="match\_parent"

       android:layout\_height="wrap\_content"

       android:inputType="textEmailAddress"

       android:hint="email"

   <EditText

       android:id="@+id/password"

       android:layout\_width="match\_parent"

  android:layout\_height="wrap\_content"

       android:layout\_marginTop="10dp"

       android:inputType="textPassword"

       android:hint="password"

/>

   <Button

       android:id="@+id/loginbutton"

       android:layout\_width="match\_parent"

       android:layout\_height="wrap\_content"

       android:layout\_marginTop="20dp"

       android:text="login" />

</LinearLayout>

**MAINACTIVITY**

package com.example.registrationvalidation;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.view.View;

import android.widget.AdapterView;

import android.widget.Button;

import android.widget.EditText;

import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

   EditText email,password;

   Button login;

  protected void onCreate(Bundle savedInstanceState) {

       super.onCreate(savedInstanceState);

       setContentView(R.layout.*activity\_main*);

       email= findViewById(R.id.*email*);

       password= findViewById(R.id.*password*);

       login= findViewById(R.id.*loginbutton*);

login.setOnClickListener(new View.OnClickListener() {

   @Override

   public void onClick(View v) {

       String e=email.getText().toString();

       String p=password.getText().toString();

       String ereg = "[a-zA-Z0-9.\_-]+@[a-z]+\\\\.+[a-z]+";

       String passcheck="^(?=.\*[0-9])(?=.\*[a-z])(?=.\*[A-Z])(?=.\*[@#$%^&+=])(?=\\\\S+$).{4,}$";

       if (e==null)

       {

           email.setError("please enter a email");

           email.requestFocus();

       }

       else if(!e.matches(ereg)){

           email.setError("please enter a valid email");

           email.requestFocus();

       }

       else if(p==null)

       {

           password.setError("please enter a email");

           password.requestFocus();

       }

       else if(!p.matches(passcheck))

       {

           password.setError("please enter a valid email")

}

       else {

           Toast.*makeText*(getApplicationContext(), "Wecome to our website", Toast.*LENGTH\_SHORT*).show();

       }

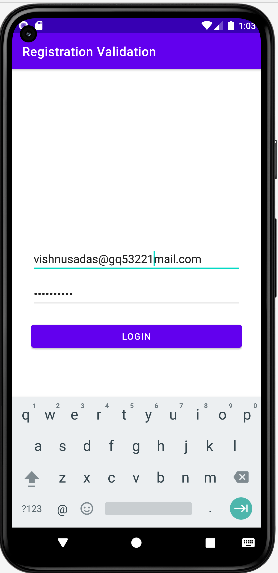
   }

});

   }

}

**Output Screenshot**



# Result

The program was executed and the result was successfully obtained. Thus CO1 was obtained.

# Experiment No.: 2 Aim

Write a program that demonstrates Activity Lifecycle.

# CO1

Design and develop user interfaces for mobile apps using basic building blocks, UI components and application structure using Emulator

# Procedure

## Activity\_main.xml

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

<LinearLayout xmlns:android=["http://schemas.android.com/](http://schemas.android.com/apk/res/android)a[pk/res/android"](http://schemas.android.com/apk/res/android) xmlns:app=["http://sc](http://schemas.android.com/apk/res-auto)h[emas.android.com/apk/res-auto"](http://schemas.android.com/apk/res-auto) xmlns:t[ools="ht](http://schemas.android.com/tools)tp:/[/sc](http://schemas.android.com/tools)he[mas.android.com/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="wrap\_content" android:layout\_height="wrap\_content" android:text="Activity Life cycle!" android:textColor="#910000" android:textSize="40dp" app:layout\_constraintBottom\_toBottomOf="parent" app:layout\_constraintEnd\_toEndOf="parent" app:layout\_constraintStart\_toStartOf="parent" app:layout\_constraintTop\_toTopOf="parent" />

</LinearLayout>

MainActivity.java

public class MainActivity extends AppCompatActivity {

@Override

protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity\_main); Log.d("act\_LC","OnCreate Invoke");

}

@Override

protected void onStart(){ super.onStart(); Log.d("act\_LC","onStart");

}

@Override

protected void onResume(){ super.onResume(); Log.d("act\_LC","onResume");

}

@Override

protected void onPause(){ super.onPause(); Log.d("act\_LC","onPause");

}

@Override

protected void onStop(){ super.onStop(); Log.d("act\_LC","onStop");

}

@Override

protected void onRestart(){ super.onRestart(); Log.d("act\_LC","onRestart");

}

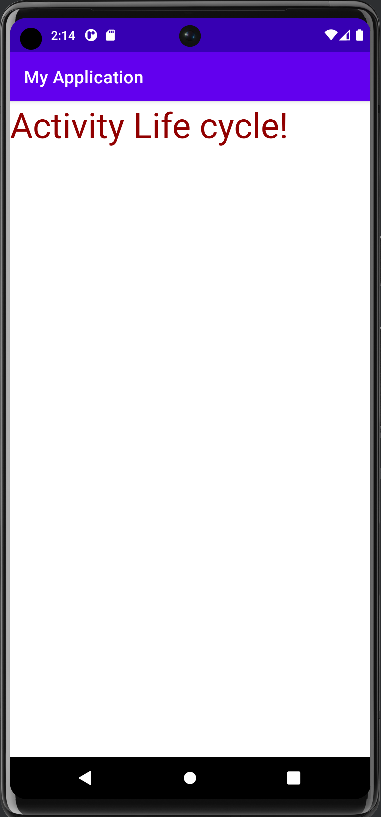
@Override

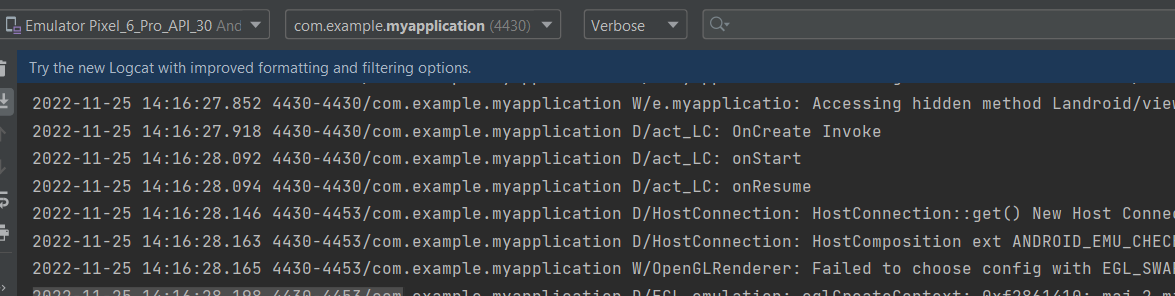
protected void onDestroy(){ super.onDestroy(); Log.d("act\_LC","onDestroy");

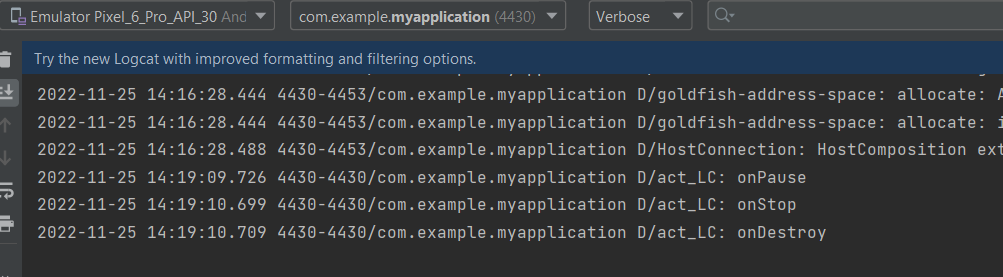
}

}

# Output Screenshot

****





**Result**

The program was executed and the result was successfully obtained. Thus CO1 was obtained.

# Experiment No.: 3 Aim

Implementing basic arithmetic operations of a simple calculator

# CO1

Design and develop user interfaces for mobile apps using basic building blocks, UI components and application structure using Emulator

# Procedure

## activity\_main.xml

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

<RelativeLayout xmlns:andr[oid="htt](http://schemas.android.com/apk/res/android)p://[schemas.android.com/apk/res/android"](http://schemas.android.com/apk/res/android) xmlns:app=["http://sc](http://schemas.android.com/apk/res-auto)h[emas.android.com/apk/res-auto"](http://schemas.android.com/apk/res-auto) xmlns:t[ools="ht](http://schemas.android.com/tools)tp:/[/sc](http://schemas.android.com/tools)he[mas.android.com/tools"](http://schemas.android.com/tools) android:layout\_width="match\_parent" android:layout\_height="match\_parent" android:background="#D8D8D8" tools:context=".MainActivity">

<TextView android:layout\_width="match\_parent" android:layout\_height="wrap\_content" android:id="@+id/text" android:text="Arithmetic\_Sol" android:gravity="center"/>

<EditText android:id="@+id/firstval"

android:layout\_width="match\_parent" android:layout\_height="wrap\_content" android:layout\_below="@id/text"

android:layout\_marginStart="2dp" android:layout\_marginTop="1dp" android:layout\_marginEnd="2dp" android:layout\_marginBottom="2dp" android:background="#C9FFFFFF” android:hint="Enter first value"/>

<EditText android:id="@+id/secondval"

android:layout\_width="match\_parent" android:layout\_height="wrap\_content" android:layout\_below="@id/firstval” android:hint="Enter second value" android:padding="10dp" android:textColor="@color/black" android:textColorHint="@color/black" />

<Button

android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:id="@+id/add" android:layout\_below="@+id/secondval" android:text="ADD" android:layout\_centerHorizontal="true" />

<Button

android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:id="@+id/sub" android:layout\_below="@+id/add" android:text="SUB" android:backgroundTint="@color/white"

android:layout\_centerHorizontal="true" />

<Button

android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:id="@+id/mult" android:layout\_below="@+id/sub" android:text="MULT" android:backgroundTint="@color/white" android:layout\_centerHorizontal="true" />

<Button

android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:id="@+id/div" android:layout\_below="@+id/mult" android:text="DIV" android:backgroundTint="@color/white" android:layout\_centerHorizontal="true" />

<TextView android:layout\_width="match\_parent" android:layout\_height="wrap\_content" android:id="@+id/viewcntnt" android:hint="result shows here" android:layout\_below="@id/div” android:gravity="center"/>

</RelativeLayout>

## MainActivity.java

package com.example.basic\_arithmetic\_solution; import android.support.v7.app.AppCompatActivity; import android.os.Bundle;

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

public class MainActivity extends AppCompatActivity { @Override

protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity\_main);

EditText first =(EditText) findViewById(R.id.firstval); EditText second = (EditText) findViewById(R.id.secondval); Button add = (Button) findViewById(R.id.add);

Button sub = (Button) findViewById(R.id.sub); Button mult = (Button) findViewById(R.id.mult); Button div = (Button) findViewById(R.id.div);

TextView ans = (TextView) findViewById(R.id.viewcntnt); add.setOnClickListener(view -> {

int x = Integer.parseInt(first.getText().toString()); int y = Integer.parseInt(second.getText().toString()); int z = x + y;

TextView tv\_data = (TextView) findViewById(R.id.viewcntnt); tv\_data.setText("Result : " + z);

});

sub.setOnClickListener(view -> {

int x = Integer.parseInt(first.getText().toString()); int y = Integer.parseInt(second.getText().toString()); int z = x - y;

TextView tv\_data = (TextView) findViewById(R.id.viewcntnt); tv\_data.setText("Result : " + z);

});

mult.setOnClickListener(view -> {

int x = Integer.parseInt(first.getText().toString()); int y = Integer.parseInt(second.getText().toString()); int z = x \* y;

TextView tv\_data = (TextView) findViewById(R.id.viewcntnt); tv\_data.setText("Result : " + z);

});

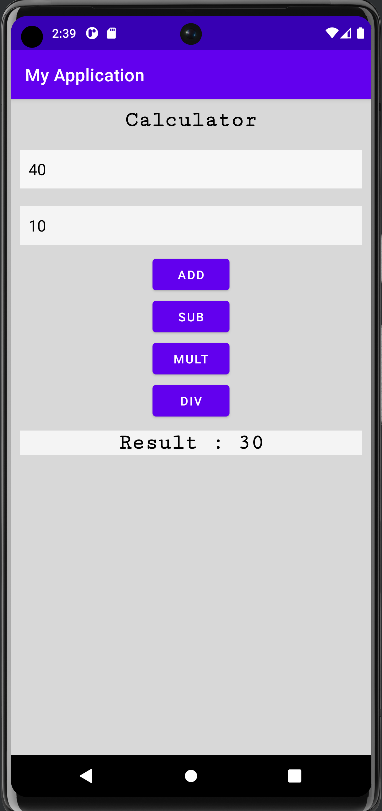
div.setOnClickListener(view -> {

int x = Integer.parseInt(first.getText().toString()); int y = Integer.parseInt(second.getText().toString()); int z = x / y;

TextView tv\_data = (TextView) findViewById(R.id.viewcntnt); tv\_data.setText("Result : " + z);

});}}

# Output Screenshot

****

**Result**

The program was executed and the result was successfully obtained. Thus CO1 was obtained.

# Experiment No.: 4 Aim

Implement validations on various UI controls

# CO1

Design and develop user interfaces for mobile apps using basic building blocks, UI components and application structure using Emulator

# Procedure

## activity\_main.xml

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

<LinearLayout xmlns:android=["http://schemas.android.com/](http://schemas.android.com/apk/res/android)a[pk/res/android"](http://schemas.android.com/apk/res/android) xmlns:app=["http://sc](http://schemas.android.com/apk/res-auto)h[emas.android.com/apk/res-auto"](http://schemas.android.com/apk/res-auto) xmlns:t[ools="ht](http://schemas.android.com/tools)tp:/[/sc](http://schemas.android.com/tools)he[mas.android.com/tools"](http://schemas.android.com/tools) android:layout\_width="match\_parent" android:layout\_height="match\_parent"

android:padding="50sp" android:background="#B287AFCA" android:orientation="vertical" android:gravity="top|center" tools:context=".MainActivity">

<TextView android:layout\_width="match\_parent" android:layout\_height="wrap\_content" android:text="LOGIN" android:textAlignment="center" android:textSize="25sp" android:textStyle="bold" android:layout\_marginTop="150dp"/>

<EditText

android:id="@+id/et\_username" android:layout\_marginLeft="15dp" android:layout\_marginTop="25dp" android:layout\_marginBottom="20dp" android:layout\_marginRight="15dp" android:hint="Email" android:inputType="text" android:angle="270"/>

<EditText android:id="@+id/et\_password" android:layout\_marginLeft="15dp" android:layout\_marginTop="15dp" android:layout\_marginBottodp" android:layout\_marginRight="15dp”/>

<Button

android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:id="@+id/btn\_login" android:text="Sign in" android:textSize="15sp" android:textAlignment="center"/>

</LinearLayout>

## MainActivity.java

package com.example.validation;

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

import android.util.Log; import android.widget.Button;

import android.widget.EditText;

import android.widget.Toast;

public class MainActivity extends AppCompatActivity { @Override

protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity\_main);

EditText un = (EditText) findViewById(R.id.et\_username); EditText ps = (EditText) findViewById(R.id.et\_password); Button btn = (Button) findViewById(R.id.btn\_login); btn.setOnClickListener(view -> {

String uname = un.getText().toString(); String pswd = ps.getText().toString();

String specialCharRegex= ".\*[@#!$%^&+=].\*"; String UpperCaseRegex= ".\*[A-Z].\*";

String NumberRegex= ".\*[0-9].\*";

String emailPattern = "[a-zA-Z0-9.\_-]+@[a-z]+\\.+[a-z]+"; if (uname.length()==0)

{

un.setError("user name not to be null");

}

else if(!uname.matches(emailPattern)){ un.setError(" provided email is invalid");

}

else if(pswd.length() == 0) { ps.setError("password not to be null");

}

else if((!pswd.matches(specialCharRegex)) && (!pswd.matches(UpperCaseRegex))&& (!pswd.matches(NumberRegex))){

ps.setError("include Special character and uppercase");

}

else

{ if (uname.equa[ls("ajc](mailto:ajcemca@gmail.com)emca[@gmail.com"](mailto:ajcemca@gmail.com)) && pswd.equals("Ajcemca@2022")) { Toast.makeText(this, "Login Success", Toast.LENGTH\_SHORT).show();

} else if (uname != ("[ajcemca@gmail.com"](mailto:ajcemca@gmail.com)) && pswd.equals("Ajcemca@2022")) { Toast.makeText(this, "Invalid username", Toast.LENGTH\_SHORT).show();

} else if (uname.equa[ls("aj](mailto:ajcemca@gmail.com)cemc[a@gmail.com")](mailto:ajcemca@gmail.com) && pswd != ("Ajcemca@2022")) { Toast.makeText(this, "Invalid password", Toast.LENGTH\_SHORT).show();

} else {

Toast.makeText(this, "Invalid username and password", Toast.LENGTH\_SHORT).show();

} }

});

}}

# Output Screenshot

# 

**Result**

The program was executed and the result was successfully obtained. Thus CO1 was obtained.

# Experiment No.: 5 Aim

Design a registration activity and store registration details in local memory of phone using Intents and Shared Preferences

# CO2

Write simple programs and develop small applications using the concepts of UI design, layouts and preferences

# Procedure

## activity\_main.xml

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

<LinearLayout xmlns:android=["http://schemas.android.com/](http://schemas.android.com/apk/res/android)a[pk/res/android"](http://schemas.android.com/apk/res/android) xmlns:app=["http://sc](http://schemas.android.com/apk/res-auto)h[emas.android.com/apk/res-auto"](http://schemas.android.com/apk/res-auto) xmlns:t[ools="ht](http://schemas.android.com/tools)tp:/[/sc](http://schemas.android.com/tools)he[mas.android.com/tools"](http://schemas.android.com/tools) android:layout\_width="match\_parent" android:layout\_height="match\_parent"

android:orientation="vertical" tools:context=".MainActivity">

<TextView android:id="@+id/textView" android:layout\_width="match\_parent"

android:layout\_height="wrap\_content" android:text="Registration" app:layout\_constraintTop\_toTopOf="parent" />

<EditText android:id="@+id/eD"

android:layout\_width="match\_parent" android:layout\_height="wrap\_content" android:hint="enter name"/>

android:id="@+id/eD2" android:layout\_width="match\_parent" android:layout\_height="wrap\_content" android:hint="enter email"/>

<EditText android:id="@+id/eD3"

android:layout\_width="match\_parent" android:layout\_height="wrap\_content" android:hint="enter password"/>

<EditText android:id="@+id/eD4"

android:layout\_width="match\_parent" android:layout\_height="wrap\_content" android:hint="re-enter password"/>

<LinearLayout android:layout\_width="wrap\_content" android:layout\_height="wrap\_content">

<Button

android:id="@+id/btn1" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content"

android:text="save"/>

<Button

android:id="@+id/btn2" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:text="view"/>

<Button

android:id="@+id/btn3"

android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:text="clear" />

</LinearLayout>

<TextView +android:id="@+id/textView1" android:layout\_width="match\_parent" android:layout\_height="wrap\_content"

app:layout\_constraintBottom\_toBottomOf="parent" app:layout\_constraintEnd\_toEndOf="parent" app:layout\_constraintStart\_toStartOf="parent" app:layout\_constraintTop\_toTopOf="parent" />

<TextView android:id="@+id/textView2" android:layout\_width="match\_parent" android:layout\_height="wrap\_content"

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="match\_parent" android:layout\_height="wrap\_content"

app:layout\_constraintBottom\_toBottomOf="parent" app:layout\_constraintEnd\_toEndOf="parent" app:layout\_constraintStart\_toStartOf="parent" app:layout\_constraintTop\_toTopOf="parent" />

<TextView

android:id="@+id/textView4" android:layout\_width="match\_parent" android:layout\_height="wrap\_content" app:layout\_constraintBottom\_toBottomOf="parent" app:layout\_constraintEnd\_toEndOf="parent" app:layout\_constraintStart\_toStartOf="parent" app:layout\_constraintTop\_toTopOf="parent" />

</LinearLayout>

## MainActivity.java

package com.example.sharedpreferance;

import androidx.appcompat.app.AppCompatActivity; import android.content.Context;

import android.content.SharedPreferences; 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 { @Override

protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity\_main);

Button btn = (Button) findViewById(R.id.btn1); Button btn2 = (Button) findViewById(R.id.btn2); Button btn3 = (Button) findViewById(R.id.btn3);

TextView tv = (TextView) findViewById(R.id.textView);

EditText eD = (EditText) findViewById(R.id.eD); EditText eD2 = (EditText) findViewById(R.id.eD2); EditText eD3 = (EditText) findViewById(R.id.eD3); EditText eD4 = (EditText) findViewById(R.id.eD4);

TextView tv1 = (TextView) findViewById(R.id.textView1); TextView tv2 = (TextView) findViewById(R.id.textView2); TextView tv3 = (TextView) findViewById(R.id.textView3); TextView tv4 = (TextView) findViewById(R.id.textView4);

SharedPreferences pref =getApplicationContext().getSharedPreferences("storage", Context.MODE\_PRIVATE);

btn.setOnClickListener(new View.OnClickListener() { @Override

public void onClick(View view) { SharedPreferences.Editor ed = pref.edit(); String a=eD.getText().toString();

String e=eD2.getText().toString(); String p=eD3.getText().toString(); String cp=eD4.getText().toString();

Toast.makeText(MainActivity.this, "Data inserted Successfully", Toast.LENGTH\_SHORT).show();

ed.putString("NameKey",a); ed.putString("email", e); ed.putString("password", p); ed.putString("cpswd", cp); ed.commit();

}

});

btn2.setOnClickListener(new View.OnClickListener() { @Override

public void onClick(View view) {

tv1.setText(pref.getString("NameKey",null)); eD.setText(pref.getString("NameKey",null)); tv2.setText(pref.getString("email",null)); eD2.setText(pref.getString("email",null)); tv3.setText(pref.getString("password",null)); eD3.setText(pref.getString("password",null)); tv4.setText(pref.getString("cpswd",null)); eD4.setText(pref.getString("cpswd",null));

Toast.makeText(MainActivity.this, "DAta inserted Successfully", Toast.LENGTH\_SHORT).show();

}

});

btn3.setOnClickListener(new View.OnClickListener() { @Override

public void onClick(View view) { tv1.setText("");

tv2.setText("");

tv3.setText("");

tv4.setText("");

eD.setText("");

eD2.setText("");

eD3.setText("");

eD4.setText("");

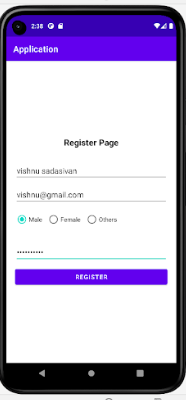
}

});

}

}

# Output Screenshot



**Result**

The program was executed and the result was successfully obtained. Thus CO2 was obtained.

# Experiment No.: 6 Aim

Design a simple Calculator using GridLayout and Cascaded LinearLayout

# CO2

Write simple programs and develop small applications using the concepts of UI design, layouts and preferences

# Procedure

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

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

   android:orientation="vertical"

   android:layout\_width="fill\_parent"

   android:layout\_height="fill\_parent">

   <LinearLayout

       android:layout\_width="fill\_parent"

       android:layout\_height="99dp"

       android:orientation="vertical" android:layout\_weight="0.67">

       <TextView

           android:id="@+id/txtSolution"

           android:layout\_width="fill\_parent"

           android:layout\_height="272dp"

           android:layout\_weight="0.50"

           android:gravity="right"

           android:paddingTop="5sp"

           android:paddingRight="10sp"

           android:textSize="15pt"

           android:textStyle="bold" />

       <TextView

           android:id="@+id/txtInput"

           android:layout\_width="match\_parent"

           android:layout\_height="wrap\_content"

           android:layout\_weight="0.50"

           android:gravity="right"

           android:paddingRight="10sp"

           android:paddingTop="5sp"

           android:textSize="15pt"

   <LinearLayout

       android:layout\_width="fill\_parent"

       android:layout\_height="75dp"

       android:orientation="horizontal" >

       <Button

           android:id="@+id/btnClear"

           android:layout\_width="wrap\_content"

           android:layout\_height="75dp"

           android:layout\_weight="5"

           android:textStyle="bold"

           android:textSize="40sp"

           android:text="Clear" />

       <Button

           android:id="@+id/btnBack"

           android:layout\_width="wrap\_content"

           android:layout\_height="75dp"

           android:layout\_weight=".51"

           android:textStyle="bold"

           android:textSize="40sp"

           android:text="BS" />

   </LinearLayout>

   <LinearLayout

       android:layout\_width="fill\_parent"

       android:layout\_height="75dp"

       android:orientation="horizontal" >

       <Button

           android:id="@+id/btnSeven"

           android:layout\_width="wrap\_content"

           android:layout\_height="75dp"

           android:layout\_weight="1"

           android:textStyle="bold"

           android:textSize="40sp"

           android:text="7" />

       <Button

           android:id="@+id/btnEight"

           android:layout\_width="wrap\_content"

           android:layout\_height="75dp"

           android:layout\_weight="1"

           android:textStyle="bold"

           android:textSize="40sp"

           android:text="8" />

       <Button

           android:id="@+id/btnNine"

           android:layout\_width="wrap\_content"

           android:layout\_height="75dp"

           android:layout\_weight="1"

           android:textStyle="bold"

           android:textSize="40sp"

           android:text="9" />

       <Button

           android:id="@+id/btnDivide"

           android:layout\_width="wrap\_content"

           android:layout\_height="75dp"

           android:layout\_weight="1.15"

           android:textStyle="bold"

           android:textSize="40sp"

           android:text="/" />

   </LinearLayout>

   <LinearLayout

       android:layout\_width="fill\_parent"

       android:layout\_height="75dp"

       android:orientation="horizontal" >

       <Button

           android:id="@+id/btnFour"

           android:layout\_width="wrap\_content"

           android:layout\_height="75dp"

           android:layout\_weight="1"

           android:textSize="40sp"

           android:textStyle="bold"

           android:text="4" />

       <Button

           android:id="@+id/btnFive"

           android:layout\_width="wrap\_content"

           android:layout\_height="75dp"

           android:layout\_weight="1"

           android:textStyle="bold"

           android:textSize="40sp"

           android:text="5" />

       <Button

           android:id="@+id/btnSix"

           android:layout\_width="wrap\_content"

           android:layout\_height="75dp"

           android:layout\_weight="1"

           android:textStyle="bold"

           android:textSize="40sp"

           android:text="6" />

       <Button

           android:id="@+id/btnMultiply"

           android:layout\_width="wrap\_content"

           android:layout\_height="75dp"

           android:layout\_weight=".98"

           android:textStyle="bold"

           android:textSize="40sp"

           android:text="x" />

   </LinearLayout>

   <LinearLayout

       android:layout\_width="fill\_parent"

       android:layout\_height="75dp"

       android:orientation="horizontal" >

       <Button

           android:id="@+id/btnOne"

           android:layout\_width="wrap\_content"

           android:layout\_height="75dp"

           android:layout\_weight="1"

           android:textStyle="bold"

           android:textSize="40sp"

           android:text="1" />

       <Button

           android:id="@+id/btnTwo"

           android:layout\_width="wrap\_content"

           android:layout\_height="75dp"

           android:layout\_weight="1"

           android:textStyle="bold"

           android:textSize="40sp"

           android:text="2" />

       <Button

           android:id="@+id/btnThree"

           android:layout\_width="wrap\_content"

           android:layout\_height="75dp"

           android:layout\_weight="1"

           android:textStyle="bold"

           android:textSize="40sp"

           android:text="3" />

       <Button

           android:id="@+id/btnSubtract"

           android:layout\_width="wrap\_content"

           android:layout\_height="75dp"

           android:layout\_weight="1.27"

           android:textStyle="bold"

           android:textSize="40sp"

           android:text="-" />

   </LinearLayout>

   <LinearLayout

       android:layout\_width="fill\_parent"

       android:layout\_height="75dp"

       android:orientation="horizontal" >

       <Button

           android:id="@+id/btnDecimal"

           android:layout\_width="wrap\_content"

           android:layout\_height="75dp"

           android:layout\_weight="1.22"

           android:textStyle="bold"

           android:textSize="40sp"

           android:text="." />

       <Button

           android:id="@+id/btnZero"

           android:layout\_width="wrap\_content"

           android:layout\_height="75dp"

           android:layout\_weight=".98"

           android:textStyle="bold"

           android:textSize="40sp"

           android:text="0" />

       <Button

           android:id="@+id/btnEquals"

           android:layout\_width="wrap\_content"

           android:layout\_height="75dp"

           android:layout\_weight=".95"

           android:textStyle="bold"

           android:textSize="40sp"

           android:text="=" />

       <Button

           android:id="@+id/btnAdd"

           android:layout\_width="wrap\_content"

           android:layout\_height="75dp"

           android:layout\_weight=".93"

           android:textStyle="bold"

           android:textSize="40sp"

           android:text="+" />

   </LinearLayout>

</LinearLayout>

# Output Screenshot

# 

**Result**

The program was executed and the result was successfully obtained. Thus CO2 was obtained.

# Experiment No.: 7 Aim

Create a Facebook page using Relative Layout; set properties using .xml file

# CO2

Write simple programs and develop small applications using the concepts of UI design, layouts and preferences

# Procedure

## activity\_main.xml

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

<RelativeLayout xmlns:android=["http://schemas.android.com/](http://schemas.android.com/apk/res/android)a[pk/res/android"](http://schemas.android.com/apk/res/android) xmlns:app=["http://sc](http://schemas.android.com/apk/res-auto)h[emas.android.com/apk/res-auto"](http://schemas.android.com/apk/res-auto) xmlns:t[ools="ht](http://schemas.android.com/tools)tp:/[/sc](http://schemas.android.com/tools)he[mas.android.com/tools"](http://schemas.android.com/tools) android:layout\_width="match\_parent" android:layout\_height="match\_parent"

android:background="#1E62DA" tools:context=".MainActivity">

<TextView

android:id="@+id/fb" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:layout\_marginLeft="130dp" android:layout\_marginTop="200dp" android:text="Facebook”/>

<EditText android:id="@+id/uname"

android:layout\_width="match\_parent" android:layout\_height="40dp" android:layout\_below="@id/fb"

android:text="Email or Phone" android:padding="10dp"/>

<EditText android:id="@+id/pswd"

android:layout\_width="match\_parent" android:layout\_height="40dp" android:layout\_below="@id/uname" android:text="Password" android:padding="10dp"/>

<TextView android:id="@+id/signin"

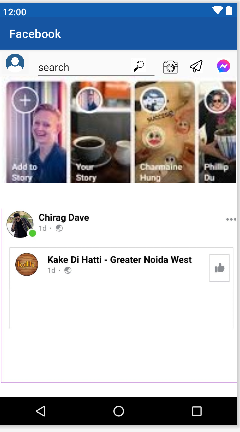
android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:layout\_below="@+id/pswd" android:text="sign in"/>

<TextView android:id="@+id/frgt"

android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:layout\_below="@+id/signin" android:layout\_marginLeft="160dp" android:text="Forgot password"/>

<ImageView android:id="@+id/imageView" android:layout\_width="97dp" android:layout\_height="97dp" android:layout\_marginTop="90dp" android:layout\_marginLeft="140dp" app:srcCompat="@drawable/fb" />

# Output Screenshot

****

**Result**

The program was executed and the result was successfully obtained. Thus CO2 was obtained.

# Experiment No.: 8 Aim

Develop an application that toggles image using Frame Layout

# CO2

Write simple programs and develop small applications using the concepts of UI design, layouts and preferences

# Procedure

## Activity\_main.xml

<FrameLayout xmlns:android=["http://schemas.android.com/](http://schemas.android.com/apk/res/android)a[pk/res/android"](http://schemas.android.com/apk/res/android) android:orientation="vertical"

android:layout\_width="match\_parent" android:layout\_height="match\_parent">

<ImageView android:id="@+id/first\_image" android:src = "@drawable/a" android:layout\_width="match\_parent" android:layout\_height="match\_parent" android:scaleType="fitXY" />

<ImageView android:id="@+id/second\_image" android:src = "@drawable/b" android:layout\_width="match\_parent" android:layout\_height="match\_parent" android:scaleType="fitXY" />

<TextView android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:text="Click the image to switch"

android:layout\_gravity="center\_horizontal|bottom" android:padding="5dip" android:textColor="#ffffff" android:textStyle="bold" android:background="#333333" android:layout\_marginBottom="10dip" />

</FrameLayout>

**MainActivity.java** package com.example.a8prgm; import android.app.Activity; import android.os.Bundle;

import android.widget.ImageView;

import android.view.View.OnClickListener; import android.view.View;

import androidx.appcompat.app.AppCompatActivity; public class MainActivity extends AppCompatActivity {

@Override

public void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity\_main);

final ImageView first\_image = (ImageView)this.findViewById(R.id.first\_image);

final ImageView second\_image = (ImageView)this.findViewById(R.id.second\_image); first\_image.setOnClickListener(new OnClickListener(){

public void onClick(View view) { second\_image.setVisibility(View.VISIBLE); view.setVisibility(View.GONE);

}

});

second\_image.setOnClickListener(new OnClickListener(){ public void onClick(View view) {

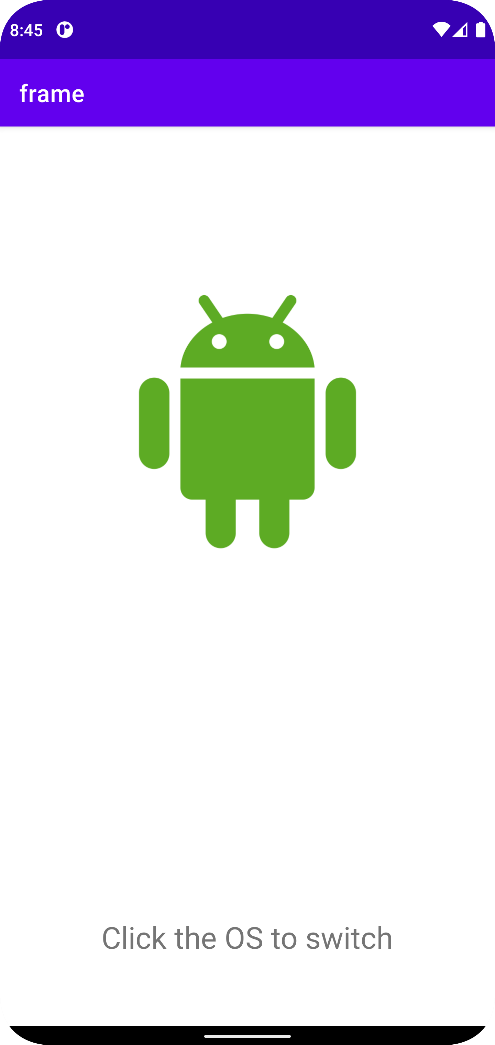
first\_image.setVisibility(View.VISIBLE); view.setVisibility(View.GONE);

}

});

}

}

**Output Screenshot**

**Result**

The program was executed and the result was successfully obtained. Thus CO2 was obtained.

# Experiment No.: 9 Aim

Implement Adapters and perform exception handling

# CO3

Develop applications with multiple activities using intents, array adapter, exceptions and options menu.

# Procedure

**Activitymain 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:layout\_width="match\_parent"

       android:layout\_height="match\_parent"

       android:id="@+id/list"

/>

</androidx.constraintlayout.widget.ConstraintLayout>

**Main Activity**

package com.example.adapter;

import androidx.appcompat.app.AppCompatActivity;

import androidx.recyclerview.widget.RecyclerView;

import android.os.Bundle;

import android.view.View;

import android.widget.Adapter;

import android.widget.AdapterView;

import android.widget.ArrayAdapter;

import android.widget.ListView;

import android.widget.Toast

public class MainActivity extends AppCompatActivity {

   ListView list;

  @Override

   protected void onCreate(Bundle savedInstanceState) {

       super.onCreate(savedInstanceState);

       setContentView(R.layout.*activity\_main*);

       list =findViewById(R.id.*list*);

       String Countries[]= new String[] {"Thailand","America","india"};

       ArrayAdapter<String> myAdapter =new ArrayAdapter<String>(MainActivity.this,

               android.R.layout.*simple\_expandable\_list\_item\_1*,Countries);

       list.setAdapter(myAdapter);

       list.setOnItemClickListener(new AdapterView.OnItemClickListener() {

           @Override

           public void onItemClick(AdapterView<?> parent, View view, int position, long id) {

               Toast.*makeText*(getApplicationContext(),"You clicked"+Countries[position],Toast.*LENGTH\_SHORT*).show();

           }

       });}}

# Output Screenshot



**Result**

The program was executed and the result was successfully obtained. Thus CO3 was obtained.

# Experiment No.: 10 Aim

Implement Intent to navigate between multiple activities

# CO3

Develop applications with multiple activities using intents, array adapter, exceptions and options menu.

# Procedure

**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:id="@+id/linearLayout"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".MainActivity">

<Button

android:id="@+id/go"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_marginTop="272dp"

android:text="Next"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintHorizontal\_bias="0.498"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toTopOf="parent" />

<TextView

android:id="@+id/text1"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_marginTop="48dp"

android:text="First page"

android:textSize="34sp"

app:layout\_constraintEnd\_toEndOf="@+id/go"

app:layout\_constraintStart\_toStartOf="@+id/go"

app:layout\_constraintTop\_toBottomOf="@+id/go" />

</androidx.constraintlayout.widget.ConstraintLayout>

**activity\_2.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:id="@+id/linearLayout2"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".MainActivity2">

<Button

android:id="@+id/back"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_marginTop="256dp"

android:text="Back"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintHorizontal\_bias="0.498"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toTopOf="parent" />

<TextView

android:id="@+id/text2"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_marginTop="36dp"

android:text="Second page"

android:textSize="34sp"

app:layout\_constraintEnd\_toEndOf="@+id/back"

app:layout\_constraintStart\_toStartOf="@+id/back"

app:layout\_constraintTop\_toBottomOf="@+id/back" />

</androidx.constraintlayout.widget.ConstraintLayout>

**MainActivity.java**

package com.example.explicit;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;

import android.os.Bundle;

import android.widget.Button;

import android.widget.TextView;

public class MainActivity extends AppCompatActivity {

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

Button btn = findViewById(R.id.go);

btn.setOnClickListener(view1 ->{

Intent newIntent = new Intent(getApplicationContext(),MainActivity2.class);

startActivity(newIntent);

});

}

}

**MainActivity2.java**

package com.example.explicit;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;

import android.os.Bundle;

import android.widget.Button;

public class MainActivity2 extends AppCompatActivity {

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_2);

Button btn = findViewById(R.id.back);

btn.setOnClickListener(view1 ->{

Intent newIntent = new Intent(getApplicationContext(),MainActivity.class);

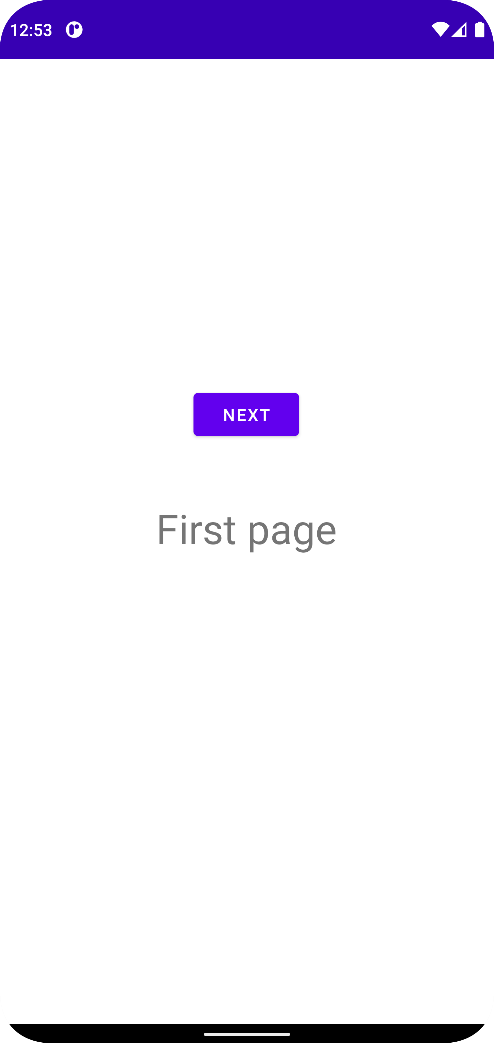
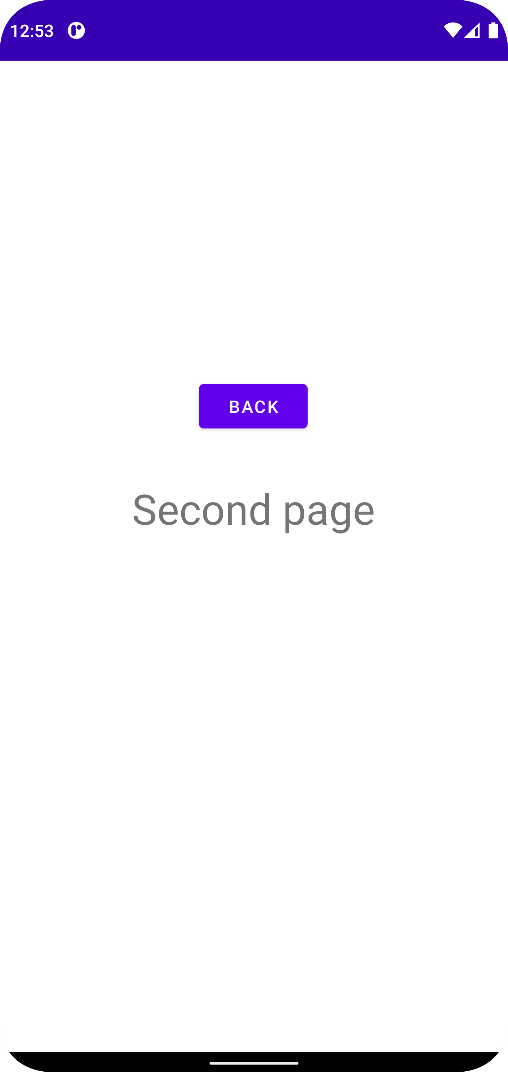
startActivity(newIntent);

});

}

}

**Output Screenshot**



**Result**

The program was executed and the result was successfully obtained. Thus CO3 was obtained.

# Experiment No.: 11 Aim

Develop application that works with explicit intents

# CO3

Develop applications with multiple activities using intents, array adapter, exceptions and options menu.

# Procedure

## activity\_main.xml

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

<LinearLayout xmlns:android=["http://schemas.android.com/](http://schemas.android.com/apk/res/android)a[pk/res/android"](http://schemas.android.com/apk/res/android) xmlns:app=["http://sc](http://schemas.android.com/apk/res-auto)h[emas.android.com/apk/res-auto"](http://schemas.android.com/apk/res-auto) xmlns:tools=["http://schemas.android.com/tool](http://schemas.android.com/tools)s" android:layout\_width="match\_parent" android:layout\_height="match\_parent"

android:padding="50sp" android:background="#B2C6CBCF" android:orientation="vertical" android:gravity="top|center" tools:context=".MainActivity">

<EditText android:id="@+id/et\_text"

android:layout\_marginLeft="15dp" android:layout\_marginTop="15dp" android:layout\_marginBottom="20dp" android:layout\_marginRight="15dp" android:layout\_centerVertical="true" android:layout\_width="match\_parent" android:layout\_height="wrap\_content"

android:ellipsize="start" android:gravity="center" android:hint="url here" android:inputType="text" android:thickness="0dp" android:shape="rectangle" android:width="3dp" android:color="#4799E8" android:startColor="#C8C8C8" android:endColor="#FFFFFF" android:type="linear" android:angle="270"/>

<Button

android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:id="@+id/btn\_click" android:text="Click" android:textSize="15sp" android:textAlignment="center"/>

</LinearLayout>

## MainActivity.java

package com.example.implicit\_intent;

import androidx.appcompat.app.AppCompatActivity; import android.content.Intent;

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

import android.widget.EditText;

public class MainActivity extends AppCompatActivity { @Override

protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity\_main);

EditText et = (EditText) findViewById(R.id.et\_text); Button btn = (Button) findViewById(R.id.btn\_click); btn.setOnClickListener(new View.OnClickListener() {

@Override

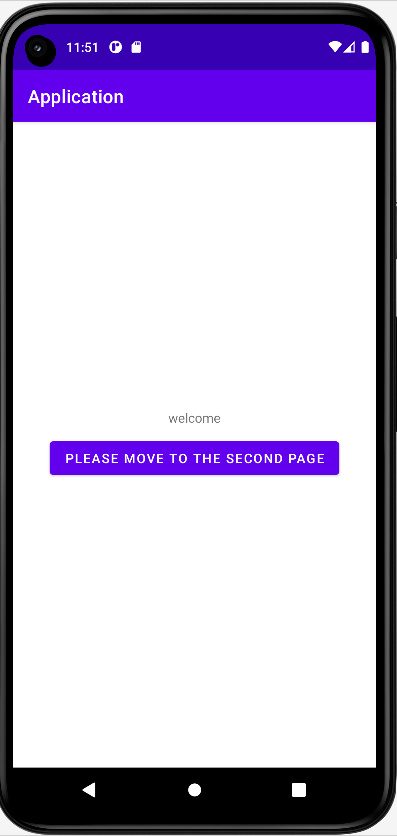
public void onClick(View view) { String url = et.getText().toString();

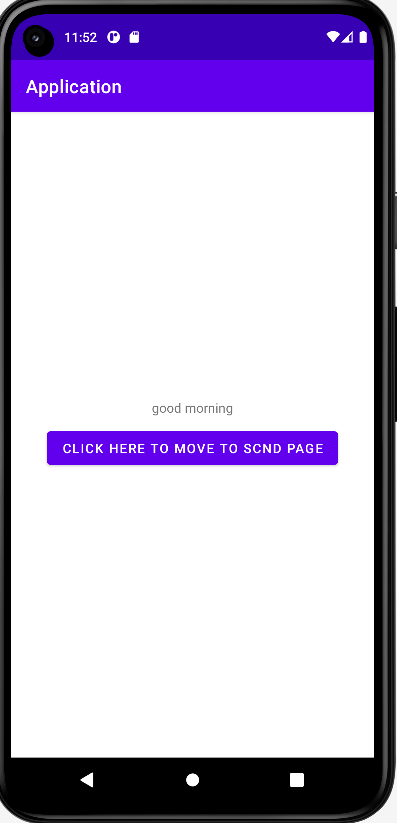
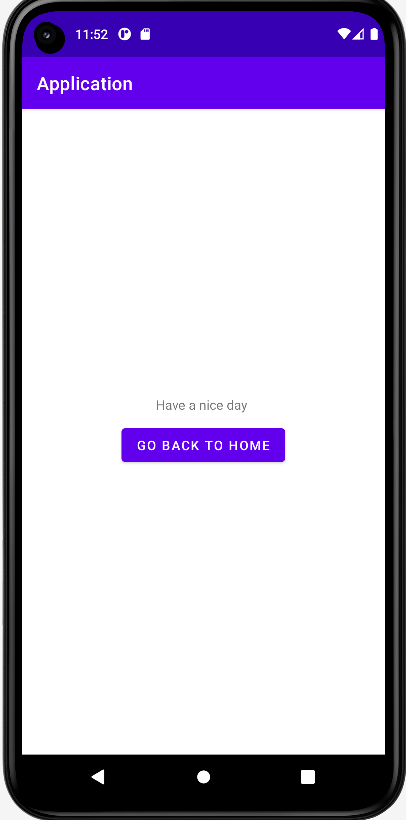
Intent intent = new Intent(Intent.ACTION\_VIEW, Uri.parse(url)); startActivity(intent);

} });

}}

# Output Screenshot



**Result**

The program was executed and the result was successfully obtained. Thus CO3 was obtained.

# Experiment No.: 12 Aim

Implement Options Menu to navigate to activities

# CO3

Develop applications with multiple activities using intents, array adapter, exceptions and options menu.

# Procedure

## Activity\_main.xml

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

<androidx.constraintlayout.widget.ConstraintLayout xmlns:andr[oid="htt](http://schemas.android.com/apk/res/android)p://[schemas.android.com/apk/res/android"](http://schemas.android.com/apk/res/android) xmlns:app=["http://sc](http://schemas.android.com/apk/res-auto)h[emas.android.com/apk/res-auto"](http://schemas.android.com/apk/res-auto) xmlns:t[ools="ht](http://schemas.android.com/tools)tp:/[/sc](http://schemas.android.com/tools)he[mas.android.com/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="ajce"

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.optionmenu;

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.mainmenu, menu); return true;

}

@Override

public boolean onOptionsItemSelected(MenuItem item) {

Toast.makeText(this, "Selected Item: " +item.getTitle(), Toast.LENGTH\_SHORT).show(); switch (item.getItemId()) {

case R.id.search\_item: return true;

case R.id.upload\_item: return true;

case R.id.copy\_item: return true;

case R.id.print\_item: return true;

case R.id.share\_item: return true;

case R.id.bookmark\_item: return true;

default:

return super.onOptionsItemSelected(item);

}

}

}

## Mainmenu.xml

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

<menu xmlns:android="[http://schemas.android.com/apk/res/android"](http://schemas.android.com/apk/res/android)>

<item android:id="@+id/search\_item" android:title="Search" />

<item android:id="@+id/upload\_item" android:title="Upload" />

<item android:id="@+id/copy\_item" android:title="Copy" />

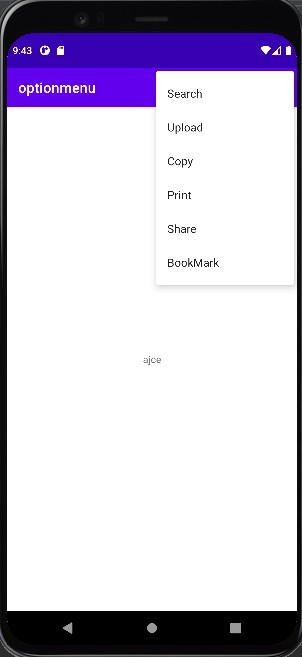
<item android:id="@+id/print\_item" android:title="Print" />

<item android:id="@+id/share\_item" android:title="Share" />

<item android:id="@+id/bookmark\_item" android:title="BookMark" /> app:showAsAction="withText"/>

</menu>

# Output Screenshot



**Result**

The program was executed and the result was successfully obtained. Thus CO3 was obtained.

# Experiment No.: 13 Aim

Develop an application that uses Array Adapter with List View.

# CO3

Develop applications with multiple activities using intents, array adapter, exceptions and options menu.

# Procedure

## Activity\_main.xml

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

<LinearLayout xmlns:android=["http://schemas.android.com/](http://schemas.android.com/apk/res/android)a[pk/res/android"](http://schemas.android.com/apk/res/android) xmlns:app=["http://sc](http://schemas.android.com/apk/res-auto)h[emas.android.com/apk/res-auto"](http://schemas.android.com/apk/res-auto) xmlns:t[ools="ht](http://schemas.android.com/tools)tp:/[/sc](http://schemas.android.com/tools)he[mas.android.com/tools"](http://schemas.android.com/tools) android:layout\_width="match\_parent" android:layout\_height="match\_parent"

android:orientation="vertical" tools:context=".MainActivity">

<ListView android:id="@+id/listview"

android:layout\_width="match\_parent" android:layout\_height="match\_parent">

</ListView>

</LinearLayout>

## listfile.xml

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

<LinearLayout xmlns:andr[oid="htt](http://schemas.android.com/apk/res/android)p:/[/schemas.android.com/](http://schemas.android.com/apk/res/android)a[pk/res/androi](http://schemas.android.com/apk/res/android)d" android:layout\_width="match\_parent"

android:orientation="vertical"

android:layout\_height="match\_parent">

<LinearLayout android:layout\_width="wrap\_content" android:layout\_height="wrap\_content">

<ImageView android:id="@+id/img" android:layout\_width="80dp" android:layout\_height="80dp" android:layout\_margin="5dp"/>

<TextView android:id="@+id/tv1"

android:layout\_width="match\_parent" android:layout\_height="wrap\_content" android:layout\_margin="5dp" android:textColor="#01B0C1"/>

</LinearLayout>

<TextView android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:id="@+id/phn" android:layout\_margin="5dp" android:textColor="#01B0C1"/>

</LinearLayout>

## MainActivity.java

package com.example.listview;

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

import android.widget.ListView;

import android.widget.SimpleAdapter; import java.util.ArrayList;

import java.util.HashMap;

public class MainActivity extends AppCompatActivity { String[] person\_qualify = {"vishnu ", "manu", "don", "don", "dhanya", "john", "raghav", "tom"};

@Override

protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity\_main);

ListView lv = (ListView) findViewById(R.id.listview); ArrayList<HashMap<String,Object>>arrayList = new ArrayList<>(); for(int i = 0; i<StudName.length;i++){

HashMap<String,Object> map = new HashMap<>(); map.put("contactName",StudName[i]); map.put("profile",studicon[i]); map.put("contactno",phnno[i]); arrayList.add((map));

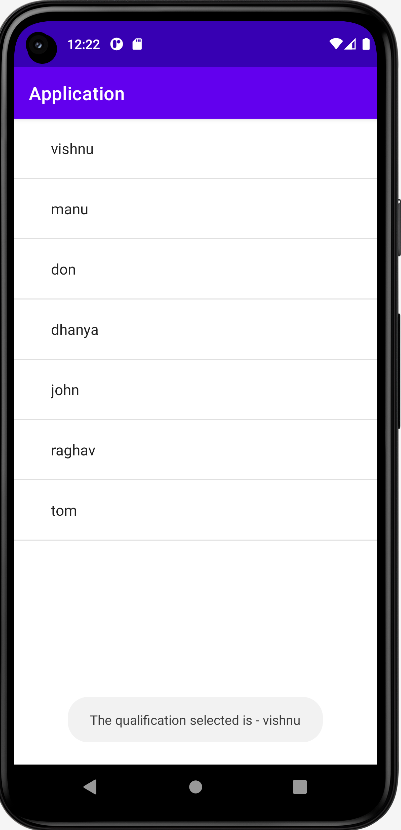
}

String[] from = {"profile","contactName","contactno"}; int[] to = {R.id.img,R.id.tv1,R.id.phn};

SimpleAdapter adaptor= new SimpleAdapter(this,arrayList,R.layout.listfile,from,to); lv.setAdapter(adaptor);

}}

# Output Screenshot



**Result**

The program was executed and the result was successfully obtained. Thus CO3 was obtained.

# Experiment No.: 14 Aim

Develop an application that use Grid View with images and display Alert box on selection

# CO4

Implement activities with dialogs, spinner, fragments and navigation drawer by applying themes

# Procedure

*<?*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"  
 android:orientation="vertical"  
 tools:context=".Ques14Activity">  
  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Mobile Quick-Access Options"  
 android:layout\_marginTop="30dp"  
 android:textColor="@color/black"  
 android:textSize="20sp"  
 android:textStyle="bold"/>  
  
 <GridLayout  
 android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"  
 android:layout\_marginTop="30dp"  
 android:columnCount="3"  
 android:orientation="horizontal"  
 android:rowCount="3">  
  
 <ImageButton  
 android:id="@+id/wifi\_btn"

android:layout\_width="80dp"  
 android:layout\_height="80dp"  
 android:padding="13dp"  
 android:src="@drawable/ic\_wifi"  
 android:textColor="@color/white" />

<ImageButton

android:id="@+id/blutooth\_btn"

android:layout\_width="80dp"

android:layout\_height="80dp"

android:layout\_marginStart="10dp"

android:padding="13dp"

android:src="@drawable/ic\_bluetooth"

android:textColor="@color/white" />

<ImageButton

android:id="@+id/volume\_btn"

android:layout\_width="80dp"

android:layout\_height="80dp"

android:layout\_marginStart="10dp"

android:padding="13dp"

android:src="@drawable/ic\_bluetooth"

android:textColor="@color/white" />

<ImageButton

android:id="@+id/volume\_btn"

android:layout\_width="80dp"

android:layout\_height="80dp"

android:layout\_marginStart="10dp"

android:padding="13dp"

android:src="@drawable/ic\_volume"

android:textColor="@color/white" />

</GridLayout>

</LinearLayout>

**Mainactivity**

package com.example.application;  
  
import androidx.appcompat.app.AlertDialog;  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.content.DialogInterface;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.ImageButton;  
import android.widget.Toast;  
  
public class Ques14Activity extends AppCompatActivity {

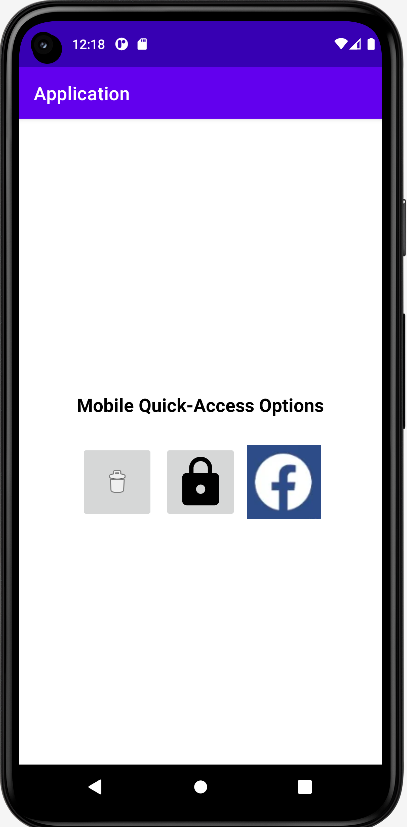
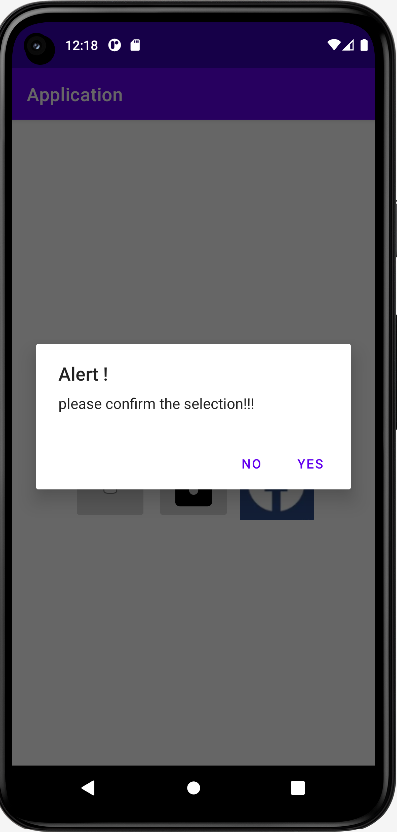
ImageButton wifi\_btn, blutooth\_btn, volume\_btn;  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);

setContentView(R.layout.*activity\_ques14*);  
  
 wifi\_btn= findViewById(R.id.*wifi\_btn*);  
 blutooth\_btn= findViewById(R.id.*blutooth\_btn*);  
 volume\_btn= findViewById(R.id.*volume\_btn*);  
  
 wifi\_btn.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 myAlertBox("Wifi Button");  
 }  
 });  
  
 blutooth\_btn.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 myAlertBox("Bluetooth Button");  
 }  
 });  
  
 volume\_btn.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 myAlertBox("Volume Button");  
 }  
 });  
 }  
 public void myAlertBox(String buttonname){  
 AlertDialog.Builder builder = new AlertDialog.Builder(Ques14Activity.this);  
 builder.setMessage("Are you sure about the selection ?");  
 builder.setTitle("Alert !");  
 builder.setCancelable(false);  
 builder.setPositiveButton("Yes", new DialogInterface.OnClickListener() {  
 @Override  
 public void onClick(DialogInterface dialogInterface, int i) {  
 Toast.*makeText*(getApplicationContext(), buttonname+" is successfully selected.", Toast.*LENGTH\_SHORT*).show();  
 }  
 });  
 builder.setNegativeButton("No", (DialogInterface.OnClickListener) (dialog, which) -> {  
 dialog.cancel();  
 });  
 AlertDialog alertDialog = builder.create();  
 alertDialog.show();

}

}

# Output Screenshot

**Result**

The program was executed and the result was successfully obtained. Thus CO4 was obtained.

# Experiment No.: 15 Aim

Develop an application that implements Spinner component and perform event handling

# CO4

**Procedure**

## Activity\_main.xml

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

<androidx.constraintlayout.widget.ConstraintLayout xmlns:andr[oid="htt](http://schemas.android.com/apk/res/android)p:/[/sc](http://schemas.android.com/apk/res/android)he[mas.android.com/apk/res/android"](http://schemas.android.com/apk/res/android)

xmlns:app=["http://sc](http://schemas.android.com/apk/res-auto)h[emas.android.com/apk/res-auto"](http://schemas.android.com/apk/res-auto) xmlns:tools=["http://schemas.android.com/tool](http://schemas.android.com/tools)s" android:layout\_width="match\_parent" android:layout\_height="match\_parent" tools:context=".MainActivity">

<Spinner android:id="@+id/spinner" android:layout\_width="360dp" android:layout\_height="36dp"

android:layout\_marginStart="4dp" android:layout\_marginTop="20dp" app:layout\_constraintStart\_toStartOf="parent" app:layout\_constraintTop\_toBottomOf="@+id/textView2" />

<TextView android:id="@+id/textView2" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:layout\_marginStart="160dp" android:layout\_marginTop="100dp"

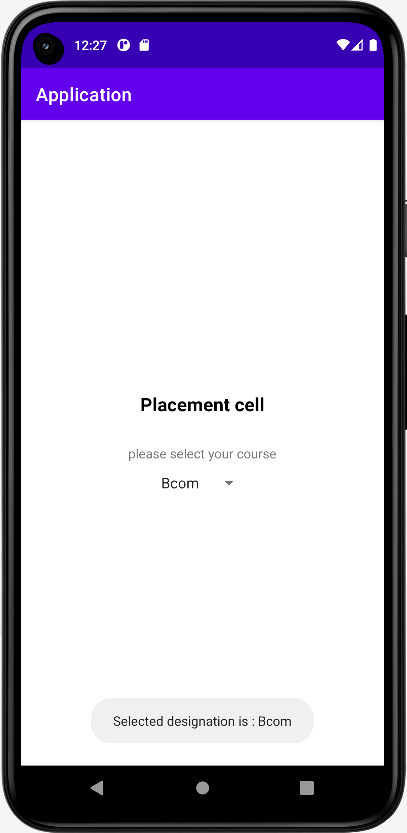
android:text="TextView" app:layout\_constraintStart\_toStartOf="parent" app:layout\_constraintTop\_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>

## MainActivity.java

package com.example.application;  
  
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 Ques15Activity extends AppCompatActivity {  
  
 Spinner spinner;  
 String[] designations = {"quatar", "india", "korea", "france", "spain", "portugal", "argentina"};  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_ques15*);  
  
 spinner= findViewById(R.id.*spinner*);  
 ArrayAdapter adapter = new ArrayAdapter(this, android.R.layout.*simple\_spinner\_item*, designations);  
 adapter.setDropDownViewResource(android.R.layout.*simple\_spinner\_dropdown\_item*);  
 spinner.setAdapter(adapter);  
  
 spinner.setOnItemSelectedListener(new AdapterView.OnItemSelectedListener() {  
 @Override  
 public void onItemSelected(AdapterView<?> adapterView, View view, int i, long l) {  
 Toast.*makeText*(getApplicationContext(), "Selected designation is : "+designations[i], Toast.*LENGTH\_LONG*).show();  
 }  
  
 @Override  
 public void onNothingSelected(AdapterView<?> adapterView) { }  
 });  
  
 }  
}

# Output Screenshot



**Result**

The program was executed and the result was successfully obtained. Thus CO4 was obtained.

# Experiment No.:16 Aim

Create database using SQLite and perform INSERT and SELECT

# CO5

Develop mobile applications using SQLite.

# Procedure

## Activity\_main.xml

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

<androidx.constraintlayout.widget.ConstraintLayout xmlns:andr[oid="htt](http://schemas.android.com/apk/res/android)p:/[/sc](http://schemas.android.com/apk/res/android)he[mas.android.com/apk/res/android"](http://schemas.android.com/apk/res/android)

xmlns:app=["http://sc](http://schemas.android.com/apk/res-auto)h[emas.android.com/apk/res-auto"](http://schemas.android.com/apk/res-auto) xmlns:t[ools="ht](http://schemas.android.com/tools)tp:/[/sc](http://schemas.android.com/tools)he[mas.android.com/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="Enter the Details Below!" app:layout\_constraintBottom\_toBottomOf="parent" app:layout\_constraintEnd\_toEndOf="parent" app:layout\_constraintStart\_toStartOf="parent" app:layout\_constraintTop\_toTopOf="parent" app:layout\_constraintVertical\_bias="0.108" />

<EditText android:id="@+id/editTextTextPersonName" android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content" android:layout\_marginStart="116dp" android:layout\_marginTop="24dp" android:ems="10" android:inputType="textPersonName" android:hint="Enter Name Here" app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toBottomOf="@+id/textView" />

<EditText android:id="@+id/editTextTextPersonName4" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:layout\_marginStart="116dp" android:layout\_marginTop="36dp" android:ems="10" android:inputType="textPersonName" android:hint="Enter contact Here" app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toBottomOf="@+id/editTextTextPersonName" />

<EditText android:id="@+id/editTextTextPersonName5" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:layout\_marginStart="116dp" android:layout\_marginTop="40dp" android:ems="10" android:inputType="textPersonName" android:hint="Enter DOB" app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toBottomOf="@+id/editTextTextPersonName4" />

<Button

android:id="@+id/button5" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:layout\_marginStart="76dp" android:layout\_marginTop="64dp" android:hint="Insert data" app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toBottomOf="@+id/editTextTextPersonName5" />

<Button

android:id="@+id/button7" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:layout\_marginStart="8dp" android:layout\_marginTop="64dp" android:text="View Details" app:layout\_constraintStart\_toEndOf="@+id/button5"

app:layout\_constraintTop\_toBottomOf="@+id/editTextTextPersonName5" />

</androidx.constraintlayout.widget.ConstraintLayout>

## MainActivity.java

package com.fb.insertview;

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,age,contact;

Button create1; DBHelper DB; @Override

protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity\_main);

name = (EditText) findViewById(R.id.editTextTextPersonName); age =(EditText) findViewById(R.id.editTextTextPersonName4); contact = (EditText) findViewById(R.id.editTextTextPersonName5); create1 = (Button) findViewById(R.id.button5);

Button read = (Button)findViewById(R.id.button7); DB=new DBHelper(this);

create1.setOnClickListener(new View.OnClickListener() { @Override

public void onClick(View v) {

String nameTXT=name.getText().toString(); String ageTXT=age.getText().toString();

String contactTXT=contact.getText().toString();

Boolean checkinsertdata = DB.insertuserdatas(nameTXT,ageTXT,contactTXT); if(checkinsertdata == true)

{

Toast.makeText(MainActivity.this, "data inserted", Toast.LENGTH\_SHORT).show();

}

else

{

Toast.makeText(MainActivity.this, "failed to insert", Toast.LENGTH\_SHORT).show();

}

}

});

read.setOnClickListener(new View.OnClickListener() { @Override

public void onClick(View v) { Cursor res = DB.getdata(); if(res.getCount()==0)

{

Toast.makeText(MainActivity.this, "no datas found", Toast.LENGTH\_SHORT).show(); return;

}

StringBuffer buffer = new StringBuffer(); while(res.moveToNext())

{

buffer.append("name:"+res.getString(0)+"\n"); buffer.append("age:"+res.getString(1)+"\n"); buffer.append("contact:"+res.getString(2)+"\n\n\n");

}

}

});

}

}

AlertDialog.Builder builder = new AlertDialog.Builder(MainActivity.this); builder.setCancelable(true);

builder.setTitle("user DEtails"); builder.setMessage(buffer.toString()); builder.show();

## DBHelper.java

package com.fb.insertview;

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, "user1.db",null, 1);

}

@Override

public void onCreate(SQLiteDatabase db) {

db.execSQL("create table studdetails (name TEXT primary key, age TEXT, contact TEXT)");

}

@Override

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

}

public Boolean insertuserdatas (String name, String age,String contact) { SQLiteDatabase DB = this.getWritableDatabase();

ContentValues contentvalues = new ContentValues(); contentvalues.put("name", name); contentvalues.put("age", age); contentvalues.put("contact", contact);

long result = DB.insert("studdetails", null, contentvalues); if (result==-1) {

return false;

} else {

return true;

}

}

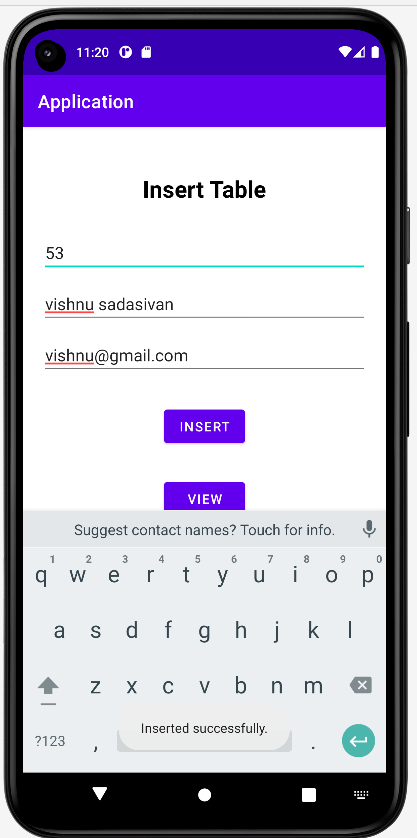
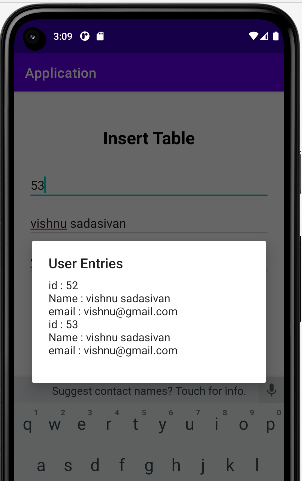
public Cursor getdata()

{

SQLiteDatabase DB = this.getWritableDatabase();

Cursor cursor = DB.rawQuery("select \* from studdetails",null); return cursor;}}

# Output Screenshot

**** 

**Result**

The program was executed and the result was successfully obtained. Thus CO5 was obtained.

# Experiment No.:17

# Aim

Perform UPDATE and DELETE on SQLite database

# CO5

Develop mobile applications using SQLite.

# Procedure

## Main\_activity.xml

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

<androidx.constraintlayout.widget.ConstraintLayout xmlns:andr[oid="htt](http://schemas.android.com/apk/res/android)p:/[/sc](http://schemas.android.com/apk/res/android)he[mas.android.com/apk/res/android"](http://schemas.android.com/apk/res/android)

xmlns:app=["http://sc](http://schemas.android.com/apk/res-auto)h[emas.android.com/apk/res-auto"](http://schemas.android.com/apk/res-auto) xmlns:t[ools="ht](http://schemas.android.com/tools)tp:/[/sc](http://schemas.android.com/tools)he[mas.android.com/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="Enter the Details Below!" app:layout\_constraintBottom\_toBottomOf="parent" app:layout\_constraintEnd\_toEndOf="parent" app:layout\_constraintStart\_toStartOf="parent" app:layout\_constraintTop\_toTopOf="parent" app:layout\_constraintVertical\_bias="0.108" />

<EditText android:id="@+id/editTextTextPersonName"

android:layout\_height="wrap\_content" android:layout\_marginStart="116dp" android:layout\_marginTop="24dp" android:ems="10" android:inputType="textPersonName" android:hint="Enter Name Here" app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toBottomOf="@+id/textView" />

<EditText android:id="@+id/editTextTextPersonName4" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:layout\_marginStart="116dp" android:layout\_marginTop="36dp" android:ems="10" android:inputType="textPersonName" android:hint="Enter contact Here" app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toBottomOf="@+id/editTextTextPersonName" />

<EditText android:id="@+id/editTextTextPersonName5" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:layout\_marginStart="116dp" android:layout\_marginTop="40dp" android:ems="10" android:inputType="textPersonName" android:hint="Enter DOB" app:layout\_

app:layout\_constraintTop\_toBottomOf="@+id/editTextTextPersonName4" />

<Button

android:id="@+id/button5" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:layout\_marginStart="4dp" android:layout\_marginTop="48dp" android:hint="Create" app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toBottomOf="@+id/editTextTextPersonName5" />

<Button

android:id="@+id/button6" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:layout\_marginStart="8dp" android:layout\_marginTop="48dp" android:text="Update"

app:layout\_constraintStart\_toEndOf="@+id/button5" app:layout\_constraintTop\_toBottomOf="@+id/editTextTextPersonName5" />

<Button

android:id="@+id/button7" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:layout\_marginStart="8dp" android:layout\_marginTop="48dp" android:text="Read" app:layout\_constraintStart\_toEndOf="@+id/button6"

app:layout\_constraintTop\_toBottomOf="@+id/editTextTextPersonName5" />

<Button

android:id="@+id/button8" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:layout\_marginStart="4dp" android:layout\_marginTop="48dp" android:text="Delete" app:layout\_constraintStart\_toEndOf="@+id/button7"

app:layout\_constraintTop\_toBottomOf="@+id/editTextTextPersonName5" />

</androidx.constraintlayout.widget.ConstraintLayout>

## MainActivity.java

package com.example.curdoperation;

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 create1; DBHelper DB; @Override

protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity\_main);

name = (EditText) findViewById(R.id.editTextTextPersonName);

contact =(EditText) findViewById(R.id.editTextTextPersonName4); dob = (EditText) findViewById(R.id.editTextTextPersonName5); create1 = (Button) findViewById(R.id.button5);

Button update = (Button)findViewById(R.id.button6); Button delete = (Button)findViewById(R.id.button8); Button read = (Button)findViewById(R.id.button7); DB=new DBHelper(this);

create1.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.insertuserdatas(nameTXT,contactTXT,dobTXT); if(checkinsertdata == true)

{

Toast.makeText(MainActivity.this, "data inserted", Toast.LENGTH\_SHORT).show();

}

else

{

Toast.makeText(MainActivity.this, "failed to insert", 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.updateuserdatas(nameTXT,contactTXT,dobTXT); if(checkupdatedata == true)

{

Toast.makeText(MainActivity.this, "data updated", Toast.LENGTH\_SHORT).show();

}

else

{

Toast.makeText(MainActivity.this, "failed to update", Toast.LENGTH\_SHORT).show();

}}});

delete.setOnClickListener(new View.OnClickListener() { @Override

public void onClick(View v) {

String nameTXT=name.getText().toString();

Boolean checkdeletedata = DB.deleteuserdatas(nameTXT); if(checkdeletedata == true)

{

Toast.makeText(MainActivity.this, "row deleted", Toast.LENGTH\_SHORT).show();

}

else

{

Toast.makeText(MainActivity.this, "failed to delete row", Toast.LENGTH\_SHORT).show();

}}});

read.setOnClickListener(new View.OnClickListener() { @Override

public void onClick(View v) { Cursor res = DB.getdata(); if(res.getCount()==0)

{

Toast.makeText(MainActivity.this, "no datas found",

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("dob:"+res.getString(2)+"\n\n\n");

}

AlertDialog.Builder builder = new AlertDialog.Builder(MainActivity.this); builder.setCancelable(true);

builder.setTitle("user DEtails"); builder.setMessage(buffer.toString()); builder.show();

}

}); }}

## DBHelper.java

package com.example.curdoperation; 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.db", 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 insertuserdatas (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 updateuserdatas (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 deleteuserdatas (String name) { SQLiteDatabase DB = this.getWritableDatabase(); ContentValues contentvalues = new ContentValues();

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()

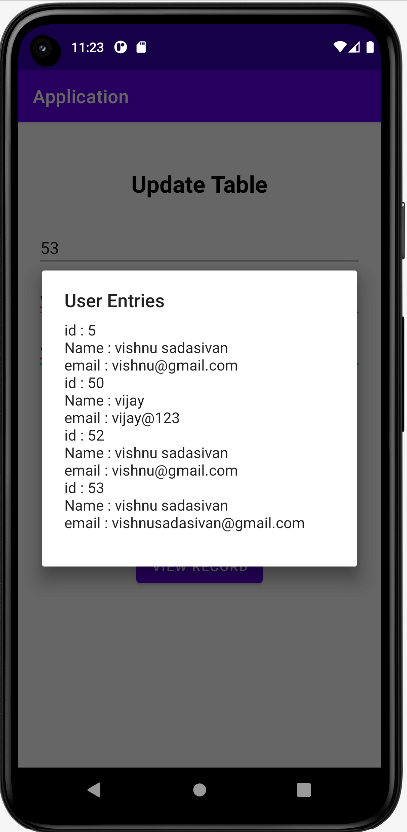
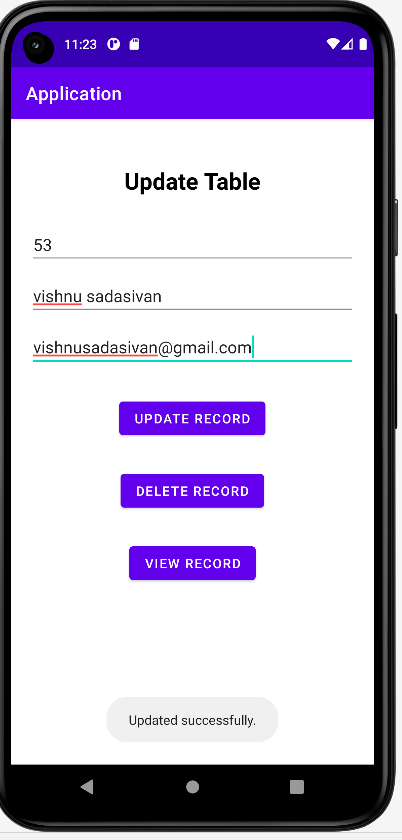
{

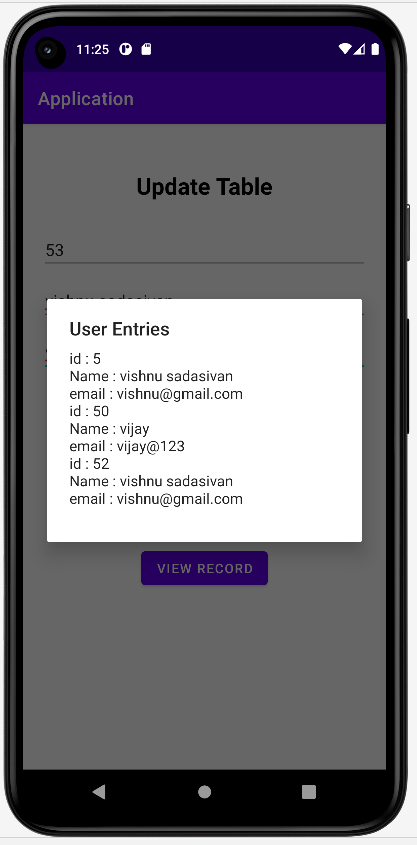
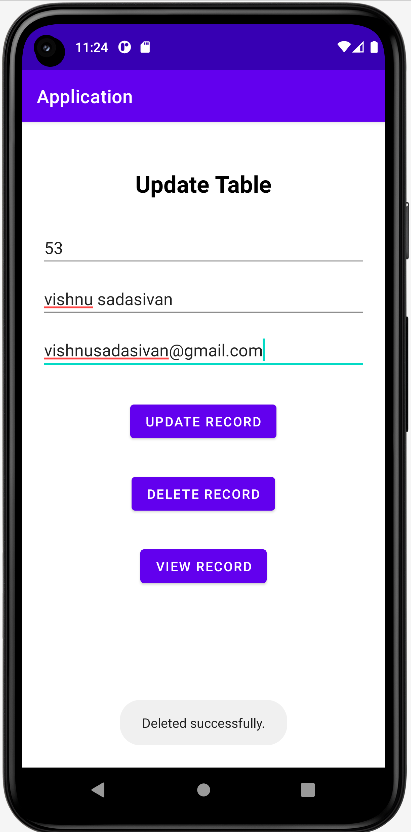
SQLiteDatabase DB = this.getWritableDatabase();

Cursor cursor = DB.rawQuery("select \* from userdetails",null); return cursor;

}}

# Output Screenshot

****

****

**Result**

The program was executed and the result was successfully obtained. Thus CO5 was obtained.