**Experiment No.: 1**

**Aim**

Odd or even

**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"?>

<TableLayout 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:background="@drawable/imgnew2"

tools:context=".MainActivity">

<TableRow

android:layout\_height="wrap\_content"

android:layout\_width="wrap\_content">

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="@string/nameone"

/>

<EditText

android:id="@+id/ed1"

android:layout\_width="200px"

android:layout\_height="wrap\_content"

android:inputType="text"

/>

</TableRow>

<TableRow

android:layout\_width="match\_parent"

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

<Button

android:id="@+id/bt1"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="find"

/>

</TableRow>

<TableRow

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content">

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="match\_parent"

android:text="@string/nametwo" />

<TextView

android:id="@+id/tx1"

android:layout\_height="wrap\_content"

android:layout\_width="wrap\_content"

android:inputType="text"/>

</TableRow>

</TableLayout>

**Strings.xml**

<resources>

<string name="app\_name">OddOrEven</string>

<string name="nameone">Enter the number here :</string>

<string name="nametwo">The result is :</string>

</resources>

**MainActivity.java**

package com.example.oddoreven;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import android.widget.TextView;

public class MainActivity extends AppCompatActivity {

Button B1;

EditText ET1;

TextView TXT1;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

ET1=findViewById(R.id.ed1);

TXT1=findViewById(R.id.tx1);

B1=findViewById(R.id.bt1);

B1.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

String N1=ET1.getText().toString();

Integer NEWN1=Integer.parseInt(N1);

if(NEWN1 % 2 ==0)

{

TXT1.setText(String.valueOf(NEWN1)+" is an even number");

}

else {

TXT1.setText(String.valueOf(NEWN1)+" is an odd number");

}

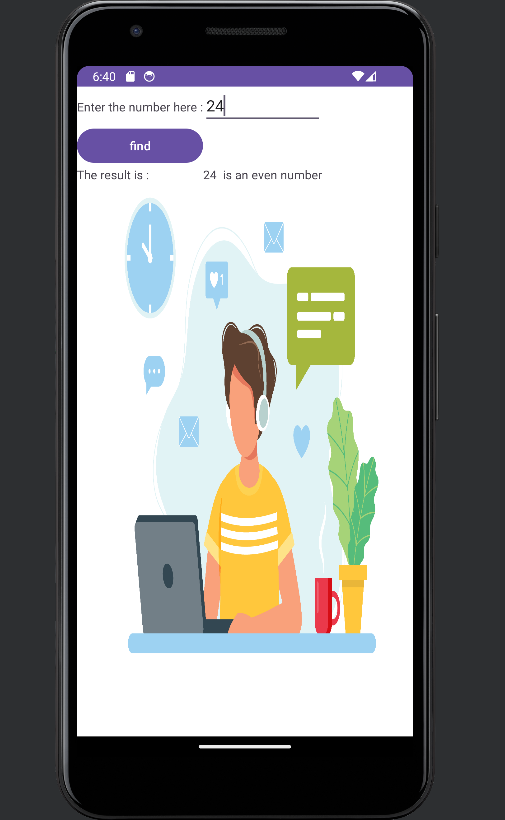
}

});

}

}

**Output Screenshot**



**Result**

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

**Experiment No.: 2**

**Aim**

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"?>

<TableLayout 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:background="@drawable/imgnew2"

tools:context=".MainActivity">

<TableRow

android:layout\_height="wrap\_content"

android:layout\_width="wrap\_content">

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="@string/nameone"

/>

<EditText

android:id="@+id/ed1"

android:layout\_width="200px"

android:layout\_height="wrap\_content"

android:inputType="text"

/>

</TableRow>

<TableRow

android:layout\_height="wrap\_content"

android:layout\_width="wrap\_content">

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="@string/nametwo"

/>

<EditText

android:id="@+id/ed2"

android:layout\_width="200px"

android:layout\_height="wrap\_content"

android:inputType="text"

/>

</TableRow>

<TableRow

android:layout\_width="match\_parent"

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

<Button

android:id="@+id/bt1"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="add"

/>

<Button

android:id="@+id/bt2"

android:layout\_width="200dp"

android:layout\_height="wrap\_content"

android:text="subtract"

/>

</TableRow>

<TableRow

android:layout\_width="match\_parent"

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

<Button

android:id="@+id/bt3"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="multiply"

/>

<Button

android:id="@+id/bt4"

android:layout\_width="200dp"

android:layout\_height="wrap\_content"

android:text="divide"

/>

</TableRow>

<TableRow

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content">

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="match\_parent"

android:text="@string/namethree" />

<TextView

android:id="@+id/tx1"

android:layout\_height="wrap\_content"

android:layout\_width="wrap\_content"

android:inputType="text"/>

</TableRow>

</TableLayout>

**Strings.xml**

<resources>

<string name="app\_name">Calculator</string>

<string name="nameone">Enter the first number here :</string>

<string name="nametwo">Enter the second number here :</string>

<string name="namethree">The result is :</string>

</resources>

**MainActivity.java**

package com.example.calculator;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import android.widget.TextView;

public class MainActivity extends AppCompatActivity {

Button B1,B2,B3,B4;

EditText E1,E2;

TextView TX1;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

E1 = findViewById(R.id.ed1);

E2 = findViewById(R.id.ed2);

B1 = findViewById(R.id.bt1);

B2 = findViewById(R.id.bt2);

B3 = findViewById(R.id.bt3);

B4 = findViewById(R.id.bt4);

TX1= findViewById(R.id.tx1);

B1.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

calculate("+");

}

});

B2.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

calculate("-");

}

});

B3.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

calculate("\*");

}

});

B4.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

calculate("/");

}

});

}

private void calculate(String operator) {

double num1 = Double.parseDouble(E1.getText().toString());

double num2 = Double.parseDouble(E2.getText().toString());

double result = 0;

switch (operator) {

case "+":

result = num1 + num2;

break;

case "-":

result = num1 - num2;

break;

case "\*":

result = num1 \* num2;

break;

case "/":

if (num2 != 0) {

result = num1 / num2;

} else {

TX1.setText("DIVISION BY ZERO IS NOT ALLOWED");

return;

}

break;

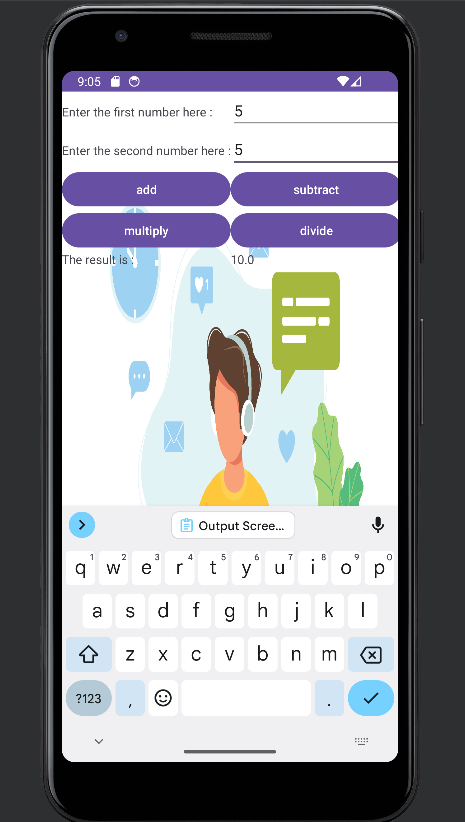
}

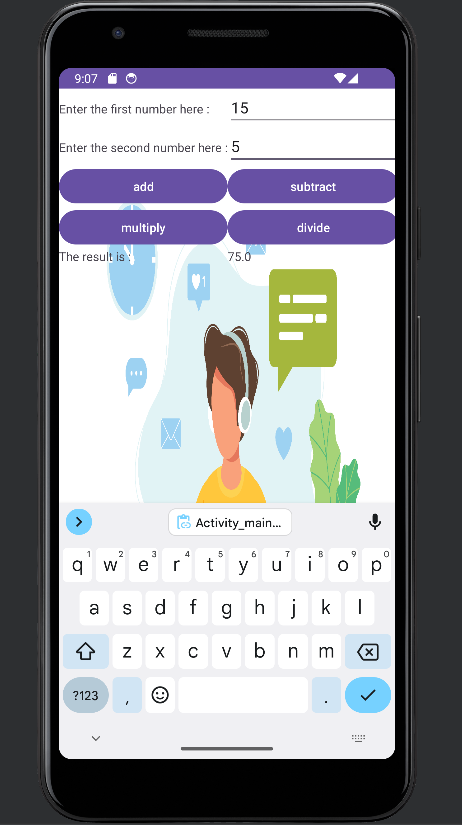
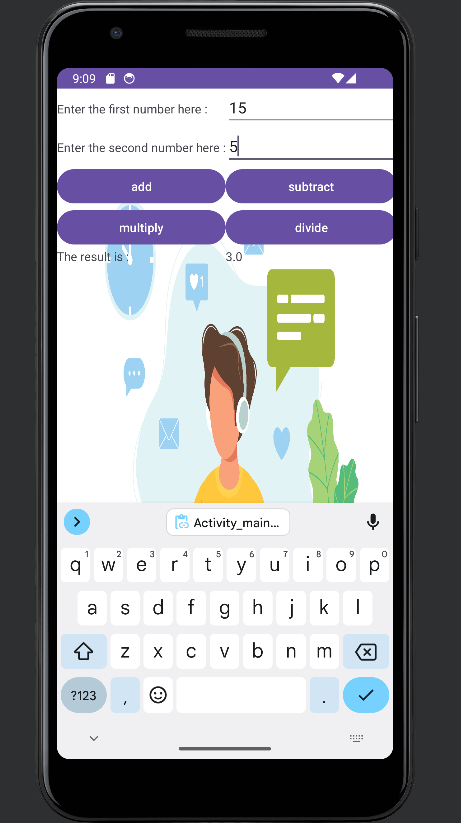
TX1.setText(String.valueOf(result));

}

}

**Output Screenshot**

**Result**

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

**Experiment No.: 3**

**Aim**

Login

**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"?>

<TableLayout 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:background="@drawable/img"

tools:context=".MainActivity">

<TableRow

android:layout\_height="wrap\_content"

android:layout\_width="wrap\_content"

android:background="@color/white">

<TextView

android:background="@color/white"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:textAlignment="center"

android:text="LOGIN"

/>

</TableRow>

<TableRow

android:layout\_height="wrap\_content"

android:layout\_width="wrap\_content">

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="@string/nameone"

/>

<EditText

android:id="@+id/ed1"

android:layout\_width="200px"

android:layout\_height="wrap\_content"

android:inputType="text"

/>

</TableRow>

<TableRow

android:layout\_height="wrap\_content"

android:layout\_width="wrap\_content">

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="@string/nametwo"

/>

<EditText

android:id="@+id/ed2"

android:layout\_width="200px"

android:layout\_height="wrap\_content"

android:password="true"

/>

</TableRow>

<TableRow

android:layout\_width="match\_parent"

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

<Button

android:id="@+id/bt1"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="login"

/>

</TableRow>

<TableRow

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content">

<TextView

android:id="@+id/tx1"

android:layout\_height="wrap\_content"

android:layout\_width="wrap\_content"

android:inputType="text"/>

</TableRow>

</TableLayout>

**Strings.xml**

<resources>

<string name="app\_name">OddOrEven</string>

<string name="nameone">Enter your username :</string>

<string name="nametwo">Enter the password :</string>

</resources>

**MainActivity.java**

package com.example.login;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import android.widget.TextView;

public class MainActivity extends AppCompatActivity {

Button B1;

EditText E1,E2;

TextView T1;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

E1=findViewById(R.id.ed1);

E2=findViewById(R.id.ed2);

T1=findViewById(R.id.tx1);

B1=findViewById(R.id.bt1);

B1.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

String username=E1.getText().toString();

String password=E2.getText().toString();

if (username.equals("sahid") && password.equals("root") ){

T1.setText("Login Successful");

} else {

T1.setText("Login failed");

}

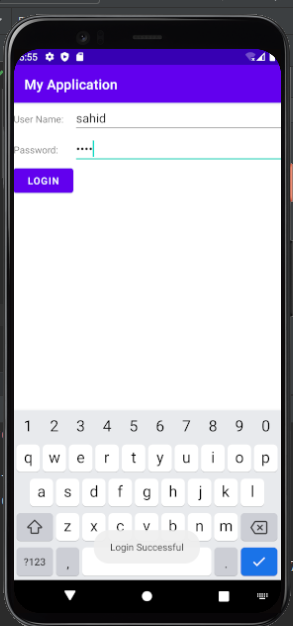
}

});

}

}

**Output Screenshot**



**Result**

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

**Experiment No.: 5**

**Aim**

**Menu Options**

**CO1**

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

**Procedure**

**ANDROID Menu Options**

**MainActivity.xmal**

package com.example.menucreation;

import androidx.annotation.NonNull;

import androidx.appcompat.app.AppCompatActivity;

import androidx.appcompat.view.menu.MenuBuilder;

import android.annotation.SuppressLint;

import android.os.Bundle;

import android.view.Menu;

import android.view.MenuInflater;

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);

}

@SuppressLint("RestrictedApi")

@Override

public boolean onCreateOptionsMenu(Menu menu) {

MenuInflater inflater = getMenuInflater();

inflater.inflate(R.menu.menus, menu);

if(menu instanceof MenuBuilder) {

MenuBuilder m = (MenuBuilder) menu;

m.setOptionalIconsVisible(true);

}

return super.onCreateOptionsMenu(menu);

}

@Override

public boolean onOptionsItemSelected(@NonNull MenuItem item) {

Toast.makeText(this, "You select this item", Toast.LENGTH\_SHORT).show();

switch (item.getItemId()) {

case R.id.search\_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.upload\_item:

return true;

default:

return super.onOptionsItemSelected(item);

}

}

}

**Menus.xml**

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

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

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

android:title="Search"

android:icon="@drawable/ic\_baseline\_search\_24" />

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

android:icon="@drawable/ic\_baseline\_cloud\_upload\_24"

android:title="Upload"

/>

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

android:icon="@drawable/ic\_baseline\_print\_24"

android:title="Print"

/>

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

android:icon="@drawable/ic\_baseline\_share\_24"

android:title="Share"

/>

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

android:icon="@drawable/ic\_baseline\_content\_copy\_24"

android:title="Copy"

/>

</menu>

MainActivity.java

