



Department of Computer Science and Engineering

National Institute of Technology Nagaland

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2019105194

ASSIGNMENT NO - 1

Aim : write a simple android program to create a form for new student enrolled in your institute , which must include some basic information of the student like – Student ID , student name , sex, email , dob etc.

➤ Description:

I have to create an android application for registration of the student which consist of some of the field like name , sex, student reg_no, email etc:

- Create a new project.
- Name them as registration form.
- It will generate activity_main.xml and mainactivity.java file.
- Create another activity to show the result.

➤ Expected input:

My expected input is the student detail.

➤ Expected output:

My expected output is the page showing the registration has been completed .

➤ Discussion:

In this program I have to create the form which will take the user input and show that the user has been successfully registered in other page.

➤ Error checking :

I have done the error checking there is no any error the program is running well and fine.

➤ Assumption taken:

There is no any assumption.

➤ Scope for improvement:

Its user interface should be improved and database should be connected to store the data.

➤ Additional feature :

It will display all the data in proper format.

Activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
        xmlns:app="http://schemas.android.com/apk/res-auto"
        xmlns:tools="http://schemas.android.com/tools"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:layout_margin="10dp"
        android:background="#D6D5CC"
        android:textAlignment="center"
        tools:context=".MainActivity">

    <EditText
        android:id="@+id/name"
        android:layout_width="370dp"
        android:layout_height="wrap_content"
        android:ems="10"
        android:hint="Enter your name"
        android:inputType="textPersonName"
        android:textAlignment="center"
        android:textColor="@color/design_default_color_error"
        android:textColorHint="#2196F3"
        android:textSize="20sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.5"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.142" />

    <EditText
        android:id="@+id/editTextTextPostalAddress"
        android:layout_width="370dp"
        android:layout_height="50dp"
        android:ems="10"
        android:hint="Enter your Address"
        android:inputType="textPostalAddress"
        android:textAlignment="center"
        android:textColorHint="#2196F3"
        android:textSize="20sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.5"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.232" />

    <TextView
        android:id="@+id/textView"
        android:layout_width="383dp"
        android:layout_height="52dp"
        android:text="REGISTRATION FORM"
        android:textAlignment="center"
        android:textSize="34sp"
```

```
        android:textStyle="bold"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.413"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.044" />

    <EditText
        android:id="@+id/reg"
        android:layout_width="370dp"
        android:layout_height="47dp"
        android:ems="10"
        android:hint="Enter your registration no"
        android:inputType="number"
        android:textAlignment="center"
        android:textColorHint="#2196F3"
        android:textSize="20sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.5"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.336" />

    <EditText
        android:id="@+id/editTextTextEmailAddress"
        android:layout_width="370dp"
        android:layout_height="61dp"
        android:ems="10"
        android:hint="Enter your email address"
        android:inputType="textEmailAddress"
        android:textAlignment="center"
        android:textColorHint="#2196F3"
        android:textSize="20sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.589"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.432" />

    <RadioGroup
        android:id="@+id/radioGroup"
        android:layout_width="384dp"
        android:layout_height="56dp"
        android:orientation="horizontal"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.5"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.59">

        <RadioButton
            android:id="@+id radioButton1"
            android:layout_width="127dp"
            android:layout_height="56dp"
            android:layout_marginLeft="35dp"
            android:text="female"
            android:textColor="@color/teal_200"
```

```
        android:textSize="20sp" />

    <RadioButton
        android:id="@+id/radioButton"
        android:layout_width="127dp"
        android:layout_height="56dp"
        android:text="male"
        android:textColor="#4CAF50"
        android:textSize="20sp" />

</RadioGroup>

<TextView
    android:id="@+id/textView2"
    android:layout_width="223dp"
    android:layout_height="29dp"
    android:text="Gender"
    android:textAlignment="center"
    android:textSize="20sp"
    android:textStyle="bold"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.502"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.518" />

<Button
    android:id="@+id	btn"
    android:layout_width="196dp"
    android:layout_height="69dp"
    android:background="#CDDC39"
    android:text="SUBMIT"
    android:textAlignment="center"
    app:iconTint="#CDDC39"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.989" />

<TextView
    android:id="@+id/textView3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Date of birth"
    android:textAlignment="center"
    android:textSize="20sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.673" />

<EditText
    android:id="@+id/dd"
    android:layout_width="120dp"
    android:layout_height="50dp"
    android:ems="10"
    android:hint="DD"
```

```

        android:inputType="number"
        android:textAlignment="center"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.011"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.752" />

    <EditText
        android:id="@+id/mm"
        android:layout_width="120dp"
        android:layout_height="50dp"
        android:ems="10"
        android:hint="MM"
        android:inputType="number"
        android:textAlignment="center"
        android:textSize="20sp"
        app:layout_constraintBottom_toBottomOf="@+id/btn"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.761" />

    <EditText
        android:id="@+id/yy"
        android:layout_width="120dp"
        android:layout_height="50dp"
        android:ems="10"
        android:hint="YYYY"
        android:inputType="number"
        android:textAlignment="center"
        android:textSize="20sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.977"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.752" />

</androidx.constraintlayout.widget.ConstraintLayout>

```

Activity_main2.xml

```

<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity2">

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

```

```
        android:textSize="34sp"
        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.kt

```
package com.example.labfirstproject

import android.content.Intent
import androidx.appcompat.app.AppCompatActivity
import android.os.Bundle
import android.view.View
import android.widget.Button
import android.widget.EditText
import android.widget.Toast

class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)

        val name = findViewById<EditText>(R.id.name)
        val reg = findViewById<EditText>(R.id.reg)
        val dd = findViewById<EditText>(R.id.dd)
        val mm = findViewById<EditText>(R.id.mm)
        val yy = findViewById<EditText>(R.id.yy)
        val submit = findViewById<Button>(R.id.btn)

        submit.setOnClickListener {
            var enteredName = name.text.toString()
            var enteredreg = reg.text.toString()
            var dd1 = dd.text.toString()
            var mm1 = mm.text.toString()
            var yy1 = yy.text.toString()
            if (enteredName=="")
            {
                //greetingTextView.text = ""
                Toast.makeText(
                    this@MainActivity,
                    "please enter your name",
                    Toast.LENGTH_SHORT
                ).show()
            }
            else if ((enteredreg=="") || (enteredreg.length < 10))
            {
                //greetingTextView.text = ""
                Toast.makeText(
                    this@MainActivity,
                    "please enter your registration no of 10 character",
                    Toast.LENGTH_SHORT
                ).show()
            }
            else if (dd1 =="" || dd1.toInt()>31 || dd1.toInt()<1)
            {
                Toast.makeText(
                    this@MainActivity,
                    "please enter the proper date between 1 and 31",
                    Toast.LENGTH_SHORT
                ).show()
            }
        }
    }
}
```

```
        Toast.LENGTH_SHORT
    ).show()
}
else if (mm1 =="" || mm1.toInt()>12 || mm1.toInt()<1)
{
    Toast.makeText(
        this@MainActivity,
        "please enter the proper month between 1 and 12",
        Toast.LENGTH_SHORT
    ).show()
}
else if (yy1 =="" || yy1.toInt()>2007 || yy1.toInt()<1995)
{
    Toast.makeText(
        this@MainActivity,
        "please enter the proper year less than 2007",
        Toast.LENGTH_SHORT
    ).show()
}
else
{
    val intent = Intent(this,MainActivity2::class.java)
    intent.putExtra("USER",enteredName)
    startActivity(intent)
}
}
```

MainActivity2.kt

```
package com.example.labfirstproject

import androidx.appcompat.app.AppCompatActivity
import android.os.Bundle
import android.widget.TextView

class MainActivity2 : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main2)

        val username = intent.getStringExtra("USER")
        val textview = findViewById<TextView>(R.id.output)
        val message = "Welcome ,$username, registration completed"
        textview.text = message
    }
}
```

Output

The image displays two side-by-side screenshots of a mobile application interface, likely from an Android device, showing a registration form. Both screenshots have a dark header bar at the top with the text "labfirstproject". The main content area has a light gray background.

Left Screenshot (Empty Form):

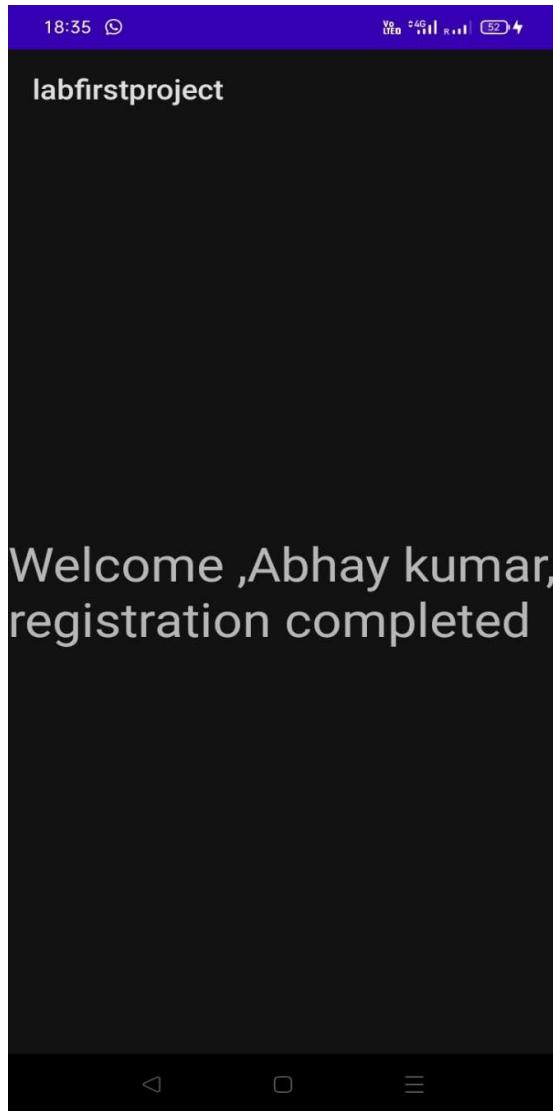
- Text Input:** Placeholder text "Enter your name".
- Text Input:** Placeholder text "Enter your Address".
- Text Input:** Placeholder text "Enter your registration no".
- Text Input:** Placeholder text "Enter your email address".
- Gender Selection:** Text "Gender" followed by two radio buttons: one labeled "female" and one labeled "male".
- Date Selection:** Text "Date of birth" followed by three input fields: DD (empty), MM (empty), and YYYY (empty).
- Submit Button:** A large purple button labeled "SUBMIT".

Right Screenshot (Filled Form):

- Text Input:** Text "Abhay kumar".
- Text Input:** Text "dimapur".
- Text Input:** Text "2019105194".
- Text Input:** Text "abhay@gmail.com".
- Gender Selection:** Text "Gender" followed by two radio buttons: one labeled "female" and one labeled "male" (which is selected).
- Date Selection:** Text "Date of birth" followed by three input fields: DD (02), MM (05), and YYYY (2000).
- Submit Button:** A large purple button labeled "SUBMIT".

Registration form

Detail inserted



Registration completed

ASSIGNMENT NO - 2

Aim : To write an android program to mimic the function of a calculator which must include some basic arithmetic operation like addition, subtraction, multiplication and division.

➤ **Description:**

I have to create an android application which will take the input from the user and give the result by performing the assigned operation like addition, subtraction, multiplication, division the steps are as follows :

- Create a new project.
- Name them as calculator.
- It will generate activity_main.xml and mainactivity.java file.
- Assigned all the functionality of the calculator like no, operation and many more.
- Perform the operation as required.

➤ **Expected input:**

My expected input the integer value.

➤ **Expected output:**

My expected output will be the result which will came after performing the operation .

➤ **Discussion:**

In this program I have to create the calculator with having the basic functionality like addition , subtraction, multiplication, division and no as well, when a user gives some input to the calculator it will perform the given task and display the result.

➤ **Error checking :**

I have done the error checking there is no any error the program is running well and fine.

➤ **Assumption taken:**

There is no any assumption.

➤ **Scope for improvement:**

Its user interface should be improved and database should be connected to store the data.

➤ Additional feature :

It will display all the data in proper format.

Activity_main.xml

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

    <Button
        android:id="@+id/btnr"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="refresh"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.368"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.874" />

    <Button
        android:id="@+id/btne"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="="
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.832"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.737" />

    <Button
        android:id="@+id/btnd"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="/"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.444"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.737" />
```

```
<Button
    android:id="@+id/btnm"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="*"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.05"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.737" />

<Button
    android:id="@+id/btns"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="_"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.832"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.631" />

<Button
    android:id="@+id/btnp"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="+"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.403"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.631" />

<Button
    android:id="@+id(btn4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="4"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.049"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.409" />

<Button
    android:id="@+id/btn1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="1"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.049"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.313" />
```

```
<Button
    android:id="@+id	btn0"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="0"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.044"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.631" />

<Button
    android:id="@+id	btn9"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="9"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.817"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.527" />

<Button
    android:id="@+id	btn8"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="8"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.416"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.527" />

<Button
    android:id="@+id	btn7"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="7"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.05"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.527" />

<Button
    android:id="@+id	btn6"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="6"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.817"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.409" />

<Button
```

```

        android:id="@+id	btn3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="3"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.817"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.313" />

    <Button
        android:id="@+id	btn2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="2"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.416"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.313" />

    <Button
        android:id="@+id	btn5"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="5"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.416"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.409" />

    <TextView
        android:id="@+id	textView2"
        android:layout_width="333dp"
        android:layout_height="58dp"
        android:textSize="34sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.453"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.103" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

Mainactivity.kt

```

package com.example.calculator

import androidx.appcompat.app.AppCompatActivity
import android.os.Bundle
import android.widget.Button

```

```
import android.widget.EditText
import android.widget.TextView

class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)

        var value = findViewById<TextView>(R.id.textView2)
        var btn1 = findViewById<Button>(R.id.btn1)
        var btn2 = findViewById<Button>(R.id.btn2)
        var btn3 = findViewById<Button>(R.id.btn3)
        var btn4 = findViewById<Button>(R.id.btn4)
        var btn5 = findViewById<Button>(R.id.btn5)
        var btn6 = findViewById<Button>(R.id.btn6)
        var btn7 = findViewById<Button>(R.id.btn7)
        var btn8 = findViewById<Button>(R.id.btn8)
        var btn9 = findViewById<Button>(R.id.btn9)
        var btn0 = findViewById<Button>(R.id.btn0)

        var btnp = findViewById<Button>(R.id.btnp)
        var btsns = findViewById<Button>(R.id.btsns)
        var btmn = findViewById<Button>(R.id.btmn)
        var btnd = findViewById<Button>(R.id.btnd)
        var btne = findViewById<Button>(R.id.btne)
        var btnr = findViewById<Button>(R.id.bntr)

        var initial_value = ""
        var mo = ""

        btn1.setOnClickListener {
            var valu = value.text.toString()
            value.text = valu+"1"
        }

        btn2.setOnClickListener {
            var valu = value.text.toString()
            value.text = valu+"2"
        }

        btn3.setOnClickListener {
            var valu = value.text.toString()
            value.text = valu+"3"
        }

        btn4.setOnClickListener {
            var valu = value.text.toString()
            value.text = valu+"4"
        }

        btn5.setOnClickListener {
            var valu = value.text.toString()
            value.text = valu+"5"
        }

        btn6.setOnClickListener {
            var valu = value.text.toString()
            value.text = valu+"6"
        }

        btn7.setOnClickListener {
```

```

        var valu = value.text.toString()
        value.text = valu+"7"
    }

btn8.setOnClickListener {
    var valu = value.text.toString()
    value.text = valu+"8"
}

btn9.setOnClickListener {
    var valu = value.text.toString()
    value.text = valu+"9"
}

btn0.setOnClickListener {
    var valu = value.text.toString()
    value.text = valu+"0"
}

btnc.setOnClickListener {
    var valu = value.text.toString()
    initial_value = valu
    mo = "+"
    value.text = ""
}

btnd.setOnClickListener {
    var valu = value.text.toString()
    initial_value = valu
    mo = "-"
    value.text = ""
}

btncm.setOnClickListener {
    var valu = value.text.toString()
    initial_value = valu
    mo = "*"
    value.text = ""
}

btndd.setOnClickListener {
    var valu = value.text.toString()
    initial_value = valu
    mo = "/"
    value.text = ""
}

btne.setOnClickListener {
    var valu = value.text.toString()
    if (mo == "+") {
        var fin = initial_value.toInt() + valu.toInt()
        value.text = "$fin"
    }
    else if (mo == "-") {
        var fin = initial_value.toInt() - valu.toInt()
        value.text = "$fin"
    }
    else if (mo == "*")
    {
        var fin = initial_value.toInt() * valu.toInt()
        value.text = "$fin"
    }
}

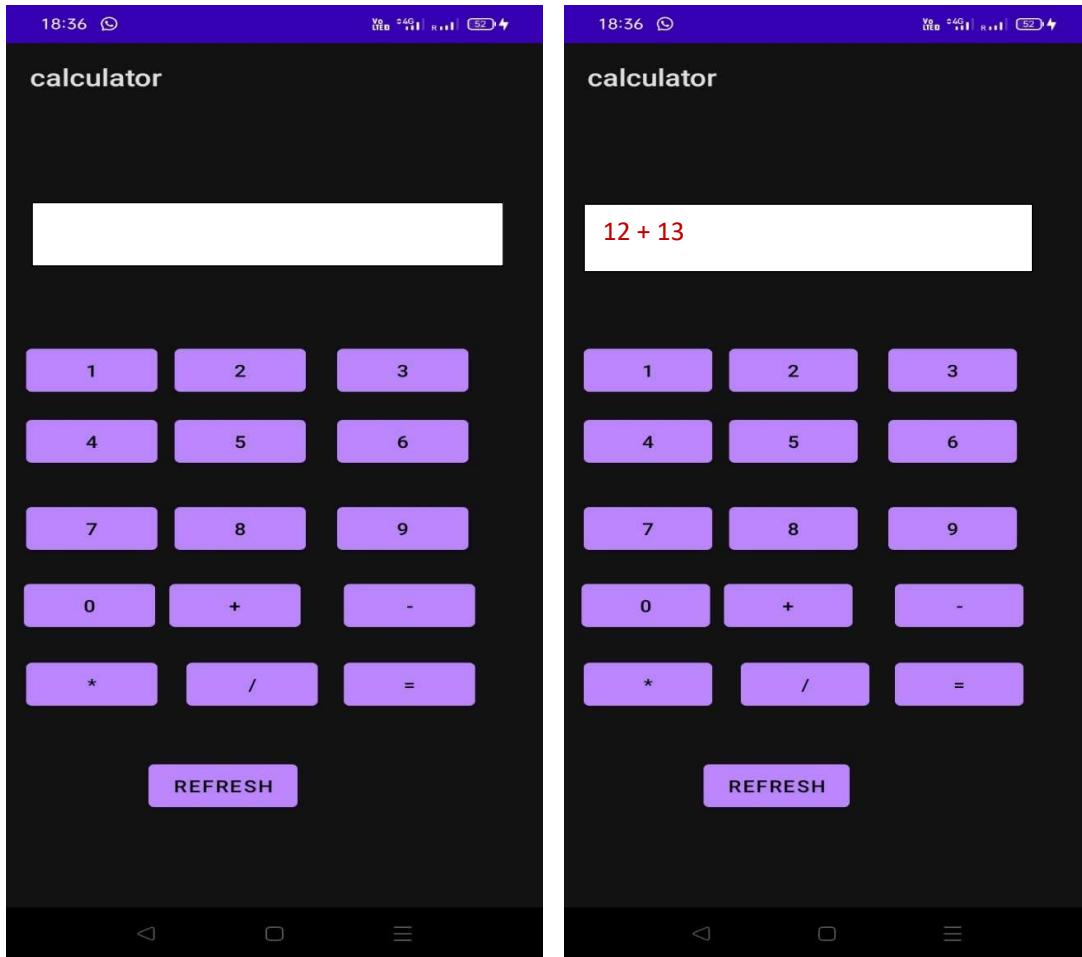
```

```
        value.text = "$fin"
    }
    else if (mo == "/")
    {
        var fin = initial_value.toInt()/valu.toInt()
        value.text = "$fin"
    }
}

btnr.setOnClickListener {
    initial_value = ""
    mo = ""
    value.text = ""
}

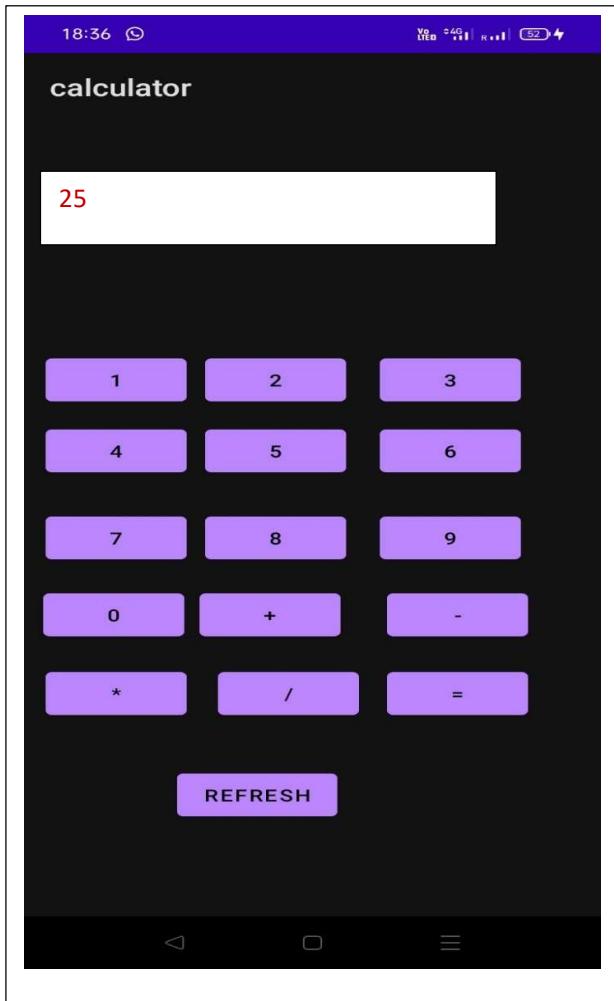
}
```

Output



Calculator

Giving input



Output

ASSIGNMENT NO - 3

Aim :_To write an android program to take in the input from the user (name , address , age , registration no) and submit to display the detail in the other screen.

➤ Description:

I have to create an android application which will take the input from the user in a user form which consist of name , address , registration no etc . on pressing the submit button a new page will be displayed which will show the result which I have submitted :

- Create a new project.
- Name them as user input form.
- It will generate activity_main.xml and mainactivity.java file.
- Create another activity file which will display the output on clicking the submit button.

➤ Expected input:

My expected input is name, reg_no , address , email_id.

➤ Expected output:

My expected output will be a new page displaying all the entered value .

➤ Discussion:

In this program I have to create the form which consist of some input field like name, registration no, address and email id . The user will fill up all these data and then on clicking the submit button we will get a new page which will display all the data which I have submitted in the first page.

➤ Error checking :

I have done the error checking there is no any error the program is running well and fine.

➤ Assumption taken:

There is no any assumption.

➤ **Scope for improvement:**

Its user interface should be improved and database should be connected to store the data.

➤ **Additional feature :**

It will display all the data in proper format.

Activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
        xmlns:app="http://schemas.android.com/apk/res-auto"
        xmlns:tools="http://schemas.android.com/tools"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:layout_margin="10dp"
        android:background="#D6D5CC"
        android:textAlignment="center"
        tools:context=".MainActivity">

    <EditText
        android:id="@+id/name"
        android:layout_width="370dp"
        android:layout_height="wrap_content"
        android:ems="10"
        android:hint="Enter your name"
        android:inputType="textPersonName"
        android:textAlignment="center"
        android:textColor="@color/design_default_color_error"
        android:textColorHint="#2196F3"
        android:textSize="20sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.5"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.142" />

    <EditText
        android:id="@+id/addr"
        android:layout_width="370dp"
        android:layout_height="50dp"
        android:ems="10"
        android:hint="Enter your Address"
        android:inputType="textPostalAddress"
```

```
        android:textAlignment="center"
        android:textColorHint="#2196F3"
        android:textSize="20sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.5"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.232" />

    <TextView
        android:id="@+id/textView"
        android:layout_width="383dp"
        android:layout_height="52dp"
        android:text="REGISTRATION FORM"
        android:textAlignment="center"
        android:textSize="34sp"
        android:textStyle="bold"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.413"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.044" />

    <EditText
        android:id="@+id/reg"
        android:layout_width="370dp"
        android:layout_height="47dp"
        android:ems="10"
        android:hint="Enter your registration no"
        android:inputType="number"
        android:textAlignment="center"
        android:textColorHint="#2196F3"
        android:textSize="20sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.5"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.336" />

    <EditText
        android:id="@+id/email"
        android:layout_width="370dp"
        android:layout_height="61dp"
        android:ems="10"
        android:hint="Enter your email address"
        android:inputType="textEmailAddress"
        android:textAlignment="center"
        android:textColorHint="#2196F3"
```

```

        android:textSize="20sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.589"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.432" />

    <Button
        android:id="@+id	btn"
        android:layout_width="196dp"
        android:layout_height="69dp"
        android:background="#CDDC39"
        android:text="SUBMIT"
        android:textAlignment="center"
        app:iconTint="#CDDC39"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.5"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.989" />

</androidx.constraintlayout.widget.ConstraintLayout>

```

Activity_main2.xml

```

<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:layout_margin="10dp"
    android:background="#D6D5CC"
    android:backgroundTint="#CDDC39"
    android:textAlignment="center"
    tools:context=".MainActivity">

    <EditText
        android:id="@+id/name"
        android:layout_width="370dp"
        android:layout_height="70dp"
        android:ems="10"

```

```
    android:inputType="textPersonName"
    android:textAlignment="center"
    android:textColor="@color/design_default_color_error"
    android:textColorHint="#2196F3"
    android:textSize="20sp"
    app:layout_constraintBottom_toTopOf="@+id/addr"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/textView"
    app:layout_constraintVertical_bias="0.142" />

<EditText
    android:id="@+id/addr"
    android:layout_width="376dp"
    android:layout_height="70dp"
    android:ems="10"
    android:inputType="textPostalAddress"
    android:textAlignment="center"
    android:textColorHint="#2196F3"
    android:textSize="20sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.323" />

<TextView
    android:id="@+id/textView"
    android:layout_width="383dp"
    android:layout_height="52dp"
    android:text="REGISTRATION COMPLETED"
    android:textAlignment="center"
    android:textSize="24sp"
    android:textStyle="bold"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.413"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.044" />

<EditText
    android:id="@+id/reg"
    android:layout_width="370dp"
    android:layout_height="70dp"
    android:ems="10"
    android:inputType="number"
    android:textAlignment="center"
    android:textColorHint="#2196F3"
    android:textSize="20sp"
```

```

        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.549" />

<EditText
    android:id="@+id/email"
    android:layout_width="370dp"
    android:layout_height="70dp"
    android:ems="10"
    android:inputType="textEmailAddress"
    android:textAlignment="center"
    android:textColorHint="#2196F3"
    android:textSize="16sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.727"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.739" />

</androidx.constraintlayout.widget.ConstraintLayout>

```

MainActivity.kt

```

package com.example.labproject3

import android.content.Intent
import android.os.Bundle
import android.widget.Button
import android.widget.EditText
import android.widget.Toast
import androidx.appcompat.app.AppCompatActivity

class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)

        val name = findViewById<EditText>(R.id.name)
        val reg = findViewById<EditText>(R.id.reg)
        val addr = findViewById<EditText>(R.id.addr)
        val submit = findViewById<Button>(R.id.btn)
    }
}

```

```

    val email = findViewById<EditText>(R.id.email)

    submit.setOnClickListener {
        var enteredName = name.text.toString()
        var enteredreg = reg.text.toString()
        var email1 = email.text.toString()
        var addr = addr.text.toString()
        if (enteredName=="")
        {
            //greetingTextView.text = ""
            Toast.makeText(
                this@MainActivity,
                "please enter your name",
                Toast.LENGTH_SHORT
            ).show()
        }
        else if ((enteredreg=="") || (enteredreg.length <
10))
        {
            //greetingTextView.text = ""
            Toast.makeText(
                this@MainActivity,
                "please enter your registration no of 10
character",
                Toast.LENGTH_SHORT
            ).show()
        }
        else
        {
            val intent = Intent(this,
MainActivity2::class.java)
            val extras = Bundle()
            extras.putString("USERNAME", "$enteredName")
            extras.putString("REG_NO", "$enteredreg")
            extras.putString("EMAIL", "$email1")
            extras.putString("ADDR", "$addr")
            intent.putExtras(extras)
            startActivity(intent)
        }
    }
}

```

MainActivity2.kt

```
package com.example.labproject3

import android.os.Bundle
import android.widget.TextView
import androidx.appcompat.app.AppCompatActivity

class MainActivity2 : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main2)

        val extras = intent.extras
        val username = extras!!.getString("USERNAME")
        val regno = extras!!.getString("REG_NO")
        val email = extras!!.getString("EMAIL")
        val addr = extras!!.getString("ADDR")

        val name = findViewById<TextView>(R.id.name)
        val address = findViewById<TextView>(R.id.addr)
        val emai = findViewById<TextView>(R.id.email)
        val reg = findViewById<TextView>(R.id.reg)

        name.text = "NAME : $username"
        address.text = "ADDRESS : $addr"
        emai.text = "EMAIL : $email"
        reg.text = "REGNO : $regno"

    }
}
```

Output

The image displays two side-by-side screenshots of a mobile application interface, labeled "Before input" and "After input".

Before input (Left Screenshot):

- Time: 18:37
- Network: 4G
- Battery: 52%

App Title: labproject3

Form Title: REGISTRARION FORM

Fields:

- Enter your name
- Enter your Address
- Enter your regiistration no
- Enter your email address

Buttons:

- SUBMIT

After input (Right Screenshot):

- Time: 18:38
- Network: 4G
- Battery: 52%

App Title: labproject3

Form Title: REGISTRARION FORM

Fields:

- Abhay kumar
- Dimapur
- 2019105194
- abhay@gmail.com

Buttons:

- SUBMIT

Before input

After input



After submitting

ASSIGNMENT NO - 4

Aim : To write an android program for a functioning Alarm clock with on/off toggle option .

➤ **Description:**

I have to create an android application which can setup and discard the alarm using alarmclock:

- Create a new project.
- Name them as alarmclock.
- It will generate activity_main.xml and mainactivity.java file.

➤ **Expected input:**

My expected input is the time at which we have to set the alarm the clock.

➤ **Expected output:**

My expected output is the alarm clock which will set the alarm according to our requirement and give notification at the allotted time .

➤ **Discussion:**

In this program I will create an application which consist of the user interface where a user can choose the time and set the alarm.

➤ **Error checking :**

I have done the error checking there is no any error the program is running well and fine.

➤ **Assumption taken:**

There should be the system compatible with alarm clock.

➤ **Scope for improvement:**

Its user interface should be improved and some more function can be added.

➤ **Additional feature :**

It will notify the user at a particular time.

Activity_main.xml

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

    <!--Added Time picker just to pick the alarm time-->
    <!--gravity is aligned to center-->
    <TimePicker
        android:id="@+id/timePicker"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center" />

    <!--Added Toggle Button to set the alarm on or off-->
    <!--ByDefault toggleButton is set to false-->
    <ToggleButton
        android:id="@+id/toggleButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:layout_margin="20dp"
        android:checked="false"
        android:onClick="OnToggleClicked" />

    <!--"OnToggleClicked" method will be implemented in MainActivity.java --
    ->

</LinearLayout>
```

MainActivity.java

```
package com.example.cloc;

import android.app.AlarmManager;
import android.app.PendingIntent;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.TimePicker;
import android.widget.Toast;
import android.widget.ToggleButton;

import androidx.appcompat.app.AppCompatActivity;

import java.util.Calendar;

public class MainActivity extends AppCompatActivity {
    TimePicker alarmTimePicker;
```

```

PendingIntent pendingIntent;
AlarmManager alarmManager;

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

    alarmTimePicker = (TimePicker) findViewById(R.id.timePicker);
    alarmManager = (AlarmManager) getSystemService(ALARM_SERVICE);

}

// OnToggleClicked() method is implemented the time functionality
public void OnToggleClicked(View view) {
    long time;
    if (((ToggleButton) view).isChecked()) {
        Toast.makeText(MainActivity.this, "ALARM ON",
Toast.LENGTH_SHORT).show();
        Calendar calendar = Calendar.getInstance();

        // calendar is called to get current time in hour and minute
        calendar.set(Calendar.HOUR_OF_DAY,
alarmTimePicker.getCurrentHour());
        calendar.set(Calendar.MINUTE,
alarmTimePicker.getCurrentMinute());

        // using intent i have class AlarmReceiver class which inherits
        // BroadcastReceiver
        Intent intent = new Intent(this, alarmReceiver.class);

        // we call broadcast using pendingIntent
        pendingIntent = PendingIntent.getBroadcast(this, 0, intent, 0);

        time = (calendar.getTimeInMillis() -
(calendar.getTimeInMillis() % 60000));
        if (System.currentTimeMillis() > time) {
            // setting time as AM and PM
            if (calendar.AM_PM == 0)
                time = time + (1000 * 60 * 60 * 12);
            else
                time = time + (1000 * 60 * 60 * 24);
        }
        // Alarm rings continuously until toggle button is turned off
        alarmManager.setRepeating(AlarmManager.RTC_WAKEUP, time, 10000,
pendingIntent);
        // alarmManager.set(AlarmManager.RTC_WAKEUP,
System.currentTimeMillis() + (time * 1000), pendingIntent);
    } else {
        alarmManager.cancel(pendingIntent);
        Toast.makeText(MainActivity.this, "ALARM OFF",
Toast.LENGTH_SHORT).show();
    }
}
}

```

AlarmReceiver.java

```
package com.example.cloc;

import android.content.BroadcastReceiver;
import android.content.Context;
import android.content.Intent;
import android.media.Ringtone;
import android.media.RingtoneManager;
import android.net.Uri;
import android.os.Build;
import android.os.Vibrator;
import android.widget.Toast;

import androidx.annotation.RequiresApi;

public class alarmReceiver extends BroadcastReceiver {

    @RequiresApi(api = Build.VERSION_CODES.Q)
    @Override
    public void onReceive(Context context, Intent intent) {

        Vibrator vibrator = (Vibrator)
context.getSystemService(context.VIBRATOR_SERVICE);
        vibrator.vibrate(4000);

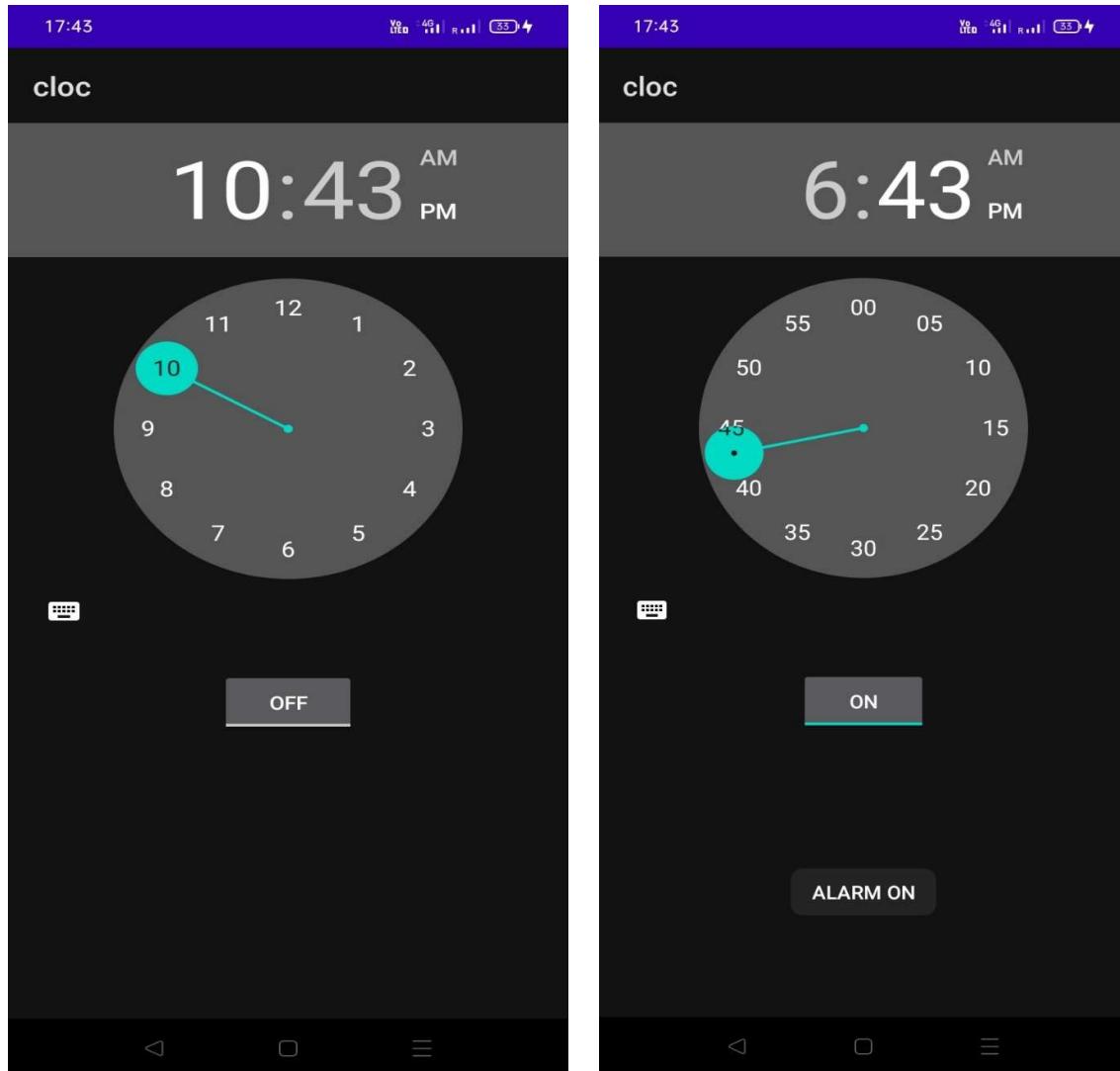
        Toast.makeText(context, "Alarm! Wake up! Wake up!",
Toast.LENGTH_LONG).show();
        Uri alarmUri =
RingtoneManager.getDefaultUri(RingtoneManager.TYPE_ALARM);
        if (alarmUri == null) {
            alarmUri =
RingtoneManager.getDefaultUri(RingtoneManager.TYPE_NOTIFICATION);
        }

        // setting default ringtone
        Ringtone ringtone = RingtoneManager.getRingtone(context, alarmUri);

        // play ringtone
        ringtone.play();

    }
}
```

Output



Alarm clock

Alarm on

ASSIGNMENT NO - 5

Aim : write a simple android program for a functioning stopwatch and display running time (button as Start , Reset and Stop).

➤ **Description:**

I have to create an android application which will show the stopwatch which consist of timer in the form of second , minute and hour with some basic functionality like start , reset, stop . the steps are as follows:

- Create a new project
- Name them as stopwatch app
- It will generate activity_main.xml and mainactivity.java file.
- Then initialise three button as start, stop , reset.

➤ **Expected input:**

My expected input is clicking the start, stop, reset button.

➤ **Expected output:**

My expected output will be the stopwatch which will show the time elapsed from the start time as well as show the other functionality.

➤ **Discussion:**

In this program I have created three button which is start , reset , pause. Whose functionality is decided based on the defined function like when I press the start button it will start the stopwatch , like show when I will press the reset button it will reset the timer to zero value and then again start the stopwatch from the zero value, stop button stop the stopwatch at the time when it has been pressed.

➤ **Error checking :**

I have done the error checking there is no any error the program is running well and fine.

➤ **Assumption taken:**

There must be system clock installed in the system.

➤ **Scope for improvement:**

Its user interface as well as option should be improved.

➤ **Additional feature :**

It will show the real stopwatch with some functionality like start stop as well as reset .

Activity_main.xml

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

    <Chronometer
        android:id="@+id/chronometer"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textSize="30sp"/>

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Start"
        android:onClick="startChronometer"/>

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Pause"
        android:onClick="pauseChronometer"/>

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Reset"
        android:onClick="resetChronometer"/>
</LinearLayout>
```

Mainactivity.java

```
package com.example.lab_report_no_5;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.os.SystemClock;
import android.view.View;
import android.widget.Chronometer;

public class MainActivity extends AppCompatActivity {

    private Chronometer chronometer;
    private long pauseOffset;
    private boolean running;

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

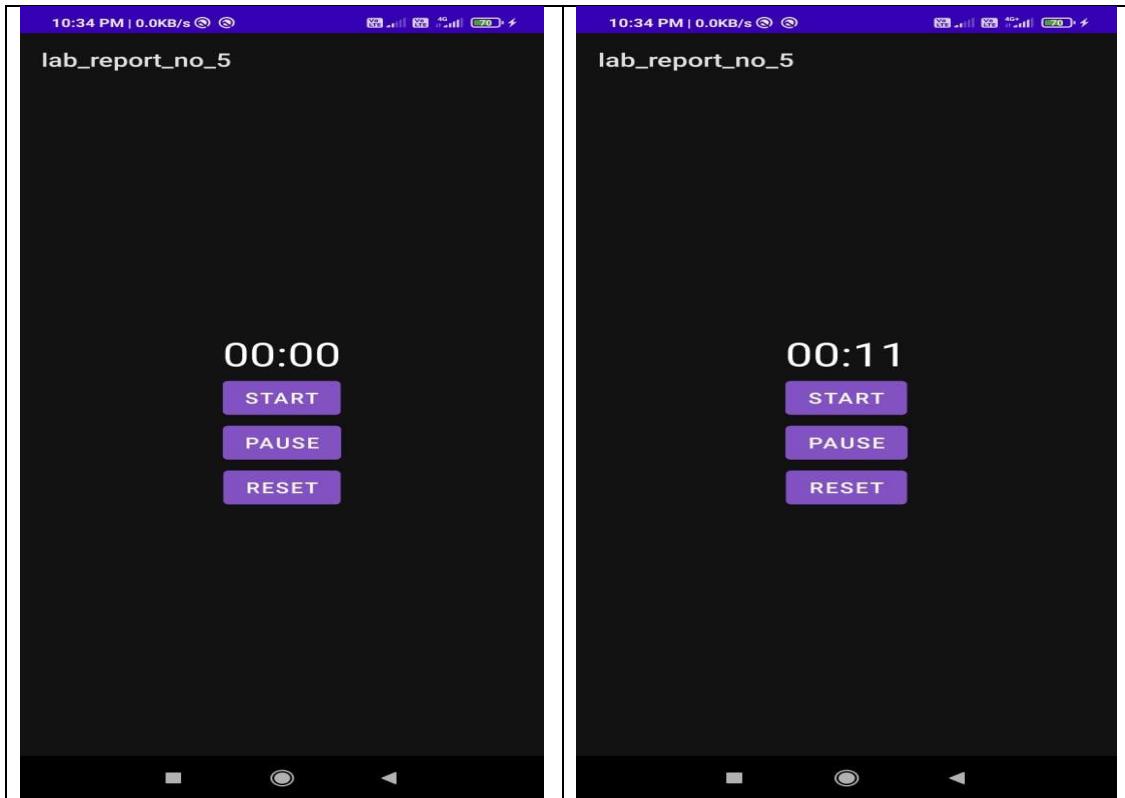
        chronometer = findViewById(R.id.chronometer);
    }

    public void startChronometer(View v) {
        //first check if the chronometer is running or not
        if(!running){
            chronometer.setBase(SystemClock.elapsedRealtime()
- pauseOffset);
            chronometer.start();
            running = true;
        }
    }

    public void pauseChronometer(View v) {
        if(running){
            chronometer.stop();
            pauseOffset = SystemClock.elapsedRealtime() -
chronometer.getBase();
            running = false;
        }
    }

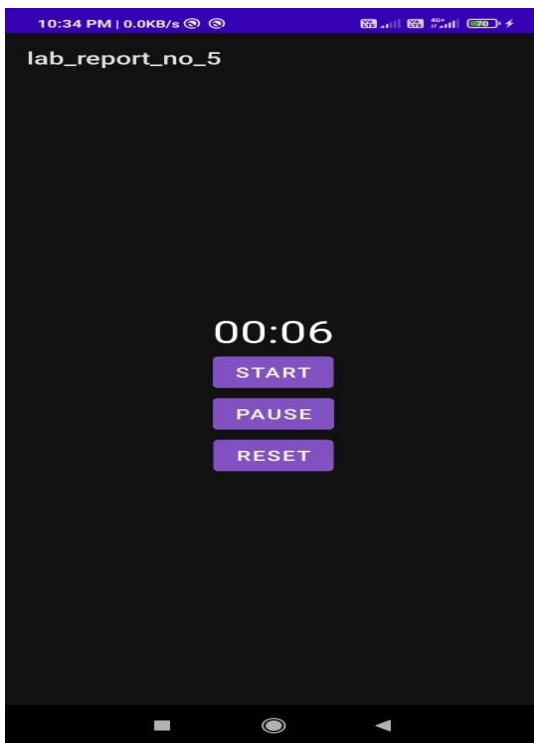
    public void resetChronometer(View v) {
        chronometer.setBase(SystemClock.elapsedRealtime());
        pauseOffset = 0;
    }
}
```

Output



Before start

After start



On clicking pause

ASSIGNMENT NO - 6

Aim : write a simple android program for a simple image viewer.

➤ **Description:**

I have to create an android application which will show the image present in the gallery so I will do the following steps:

- Create a new project
- Name them as simple image viewer app
- It will generate activity_main.xml and mainactivity.java file
- Then I will make two tools as image viewer and button to select the image.

➤ **Expected input:**

My expected input is the image gallery from which I will select the image.

➤ **Expected output:**

My expected output will be the image in the form of rectangular box in the image viewing app.

➤ **Discussion:**

In this program I have initialise the image view tools as well as the button . on clicking the button it will show all the image present in the gallery and then I will select the image which I have to show through my gallery and this will show the image in the assigned image viewer app. If we want to see other image then we will again click the button and select the different image from the gallery.

➤ **Error checking :**

I have done the error checking there is no any error the program is running well and fine.

➤ **Assumption taken:**

There must be some image in the gallery to show.

➤ **Scope for improvement:**

Its user interface as well as option should be improve.

➤ Additional feature :

Photo can be zoomed in as well as zoomed out etc.

Activity_main.xml

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

    <ImageView
        android:id="@+id/imageView"
        android:layout_width="366dp"
        android:layout_height="284dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.355"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.062" />

    <Button
        android:id="@+id/button"
        android:layout_width="141dp"
        android:layout_height="87dp"
        android:text="SELECT"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.498"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.579" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

Mainactivity.java

```
package com.example.lab_report_6;

import androidx.annotation.Nullable;
import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.provider.MediaStore;
import android.view.View;
import android.widget.Button;
import android.widget.ImageView;

public class MainActivity extends AppCompatActivity {

    private final int GALLERY_REQ_CODE = 1000;
    ImageView imgGallery;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        imgGallery = findViewById(R.id.imageView);
        Button btnGallery = findViewById((R.id.button));

        btnGallery.setOnClickListener(new
View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Intent iGallery = new
Intent(Intent.ACTION_PICK);

                iGallery.setData(MediaStore.Images.Media.EXTERNAL_CONTENT_URI);
            }
        });
    }

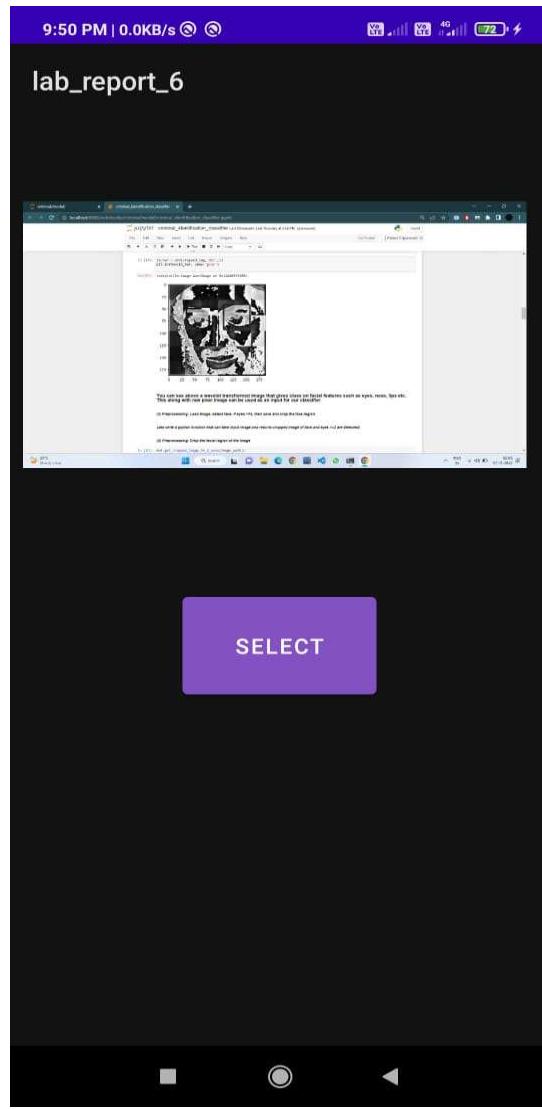
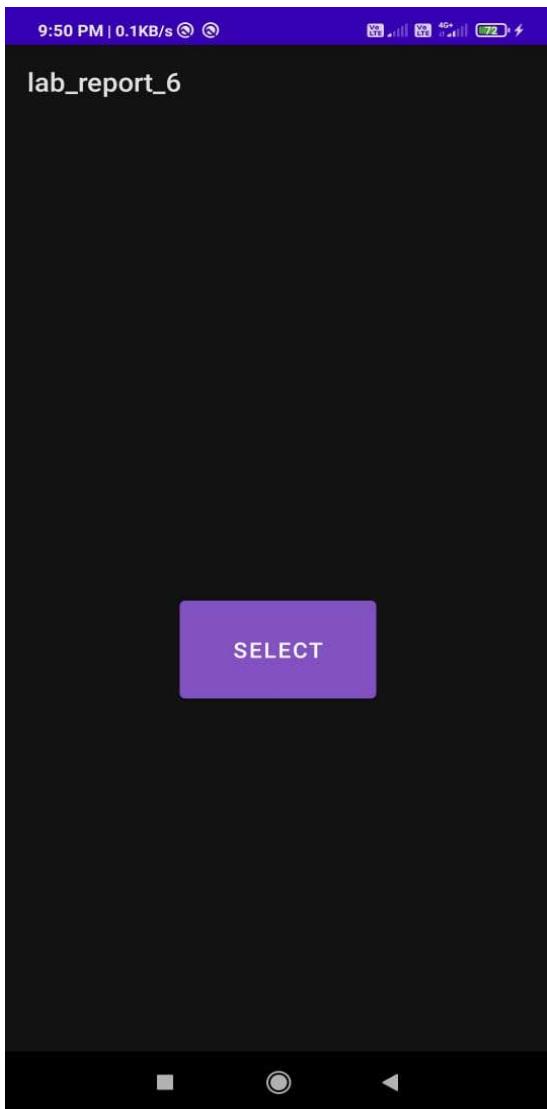
    @Override
    protected void onActivityResult(int requestCode, int
resultCode, @Nullable Intent data) {
        super.onActivityResult(requestCode, resultCode, data);

        if(resultCode == RESULT_OK) {
            if(requestCode==GALLERY_REQ_CODE) {
                //for gallery

                imgGallery.setImageURI(data.getData());
            }
        }
    }
}
```

```
        }  
    }  
}  
}
```

Output



Before opening gallery

After selecting the image

ASSIGNMENT NO - 7

Aim : write a simple android program to create a contact app with basic functionality like saving the contact.

➤ **Description:**

I have to create an android application adding a new contact in to the contact list.

- Create a new project.
- Name them as registration form.
- It will generate activity_main.xml and mainactivity.java file.
- It will save the contact in the contact list.

➤ **Expected input:**

My expected input is mobile no and name.

➤ **Expected output:**

My expected output is showing the name in alphabetical order .

➤ **Discussion:**

In this program I have to create the form which will take the mobile no and name and save it to the contact list according to the alphabetical order.

➤ **Error checking :**

I have done the error checking there is no any error the program is running well and fine.

➤ **Assumption taken:**

There should be the read and write permission.

➤ **Scope for improvement:**

Its user interface should be improved and database should be connected to store the data.

➤ **Additional feature :**

It will display all the data in proper format, here alphabetically.

Activity_main.xml

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

    <EditText
        android:id="@+id/editTextTextPersonName"
        android:layout_width="287dp"
        android:layout_height="85dp"
        android:ems="10"
        android:hint="Name . . ."
        android:inputType="textPersonName"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.54"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.086" />

    <EditText
        android:id="@+id/editTextNumber"
        android:layout_width="282dp"
        android:layout_height="91dp"
        android:layout_marginTop="53dp"
        android:ems="10"
        android:hint="Number . . ."
        android:inputType="number"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.519"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/editTextTextPersonName"
        app:layout_constraintVertical_bias="0.116" />

    <Button
        android:id="@+id/button"
        android:layout_width="158dp"
        android:layout_height="54dp"
        android:layout_marginTop="96dp"
        android:onClick="buttonAddContact"
        android:text="Add Contact"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.498"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/editTextNumber"
        app:layout_constraintVertical_bias="0.149" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

Mainactivity.java

```
package com.example.project_7;

import androidx.appcompat.app.AppCompatActivity;
import androidx.core.app.ActivityCompat;

import android.Manifest;
import android.app.Activity;
import android.content.ContentProviderOperation;
import android.content.OperationApplicationException;
import android.content.pm.PackageManager;
import android.os.Bundle;
import android.os.RemoteException;
import android.provider.ContactsContract;
import android.view.View;
import android.widget.EditText;

import java.util.ArrayList;

public class MainActivity extends AppCompatActivity {

    private EditText editTextName, editTextNumber;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        //THESE LINE OF CODE WILL GIVE THE PERMISSION TO WRITE INTO THE CONTACT
        ActivityCompat.requestPermissions(this,
                new String[]{Manifest.permission.WRITE_CONTACTS},
                PackageManager.PERMISSION_GRANTED);

        editTextName = findViewById(R.id.editTextTextPersonName);
        editTextNumber = findViewById(R.id.editTextNumber);
    }

    public void buttonAddContact(View view) {
        ArrayList<ContentProviderOperation> contentProviderOperations
                = new ArrayList<ContentProviderOperation>();

        contentProviderOperations.add(ContentProviderOperation.newInsert(
                ContactsContract.RawContacts.CONTENT_URI)
                .withValue(ContactsContract.RawContacts.ACCOUNT_TYPE, null)
                .withValue(ContactsContract.RawContacts.ACCOUNT_NAME, null)
                .build());

        // Adding Name
        contentProviderOperations.add(ContentProviderOperation
                .newInsert(ContactsContract.Data.CONTENT_URI)
                .withValueBackReference(ContactsContract.Data.RAW_CONTACT_ID, 0)
                .withValue(ContactsContract.Data.MIMETYPE,
                        ContactsContract.CommonDataKinds.StructuredName.CONTENT_ITEM_TYPE)
                .withValue(ContactsContract.CommonDataKinds.StructuredName.DISPLAY_NAME,
                        
```

```
    editTextName.getText().toString())
.build());

// Adding Number
contentProviderOperations.add(ContentProviderOperation
    .newInsert(ContactsContract.Data.CONTENT_URI)

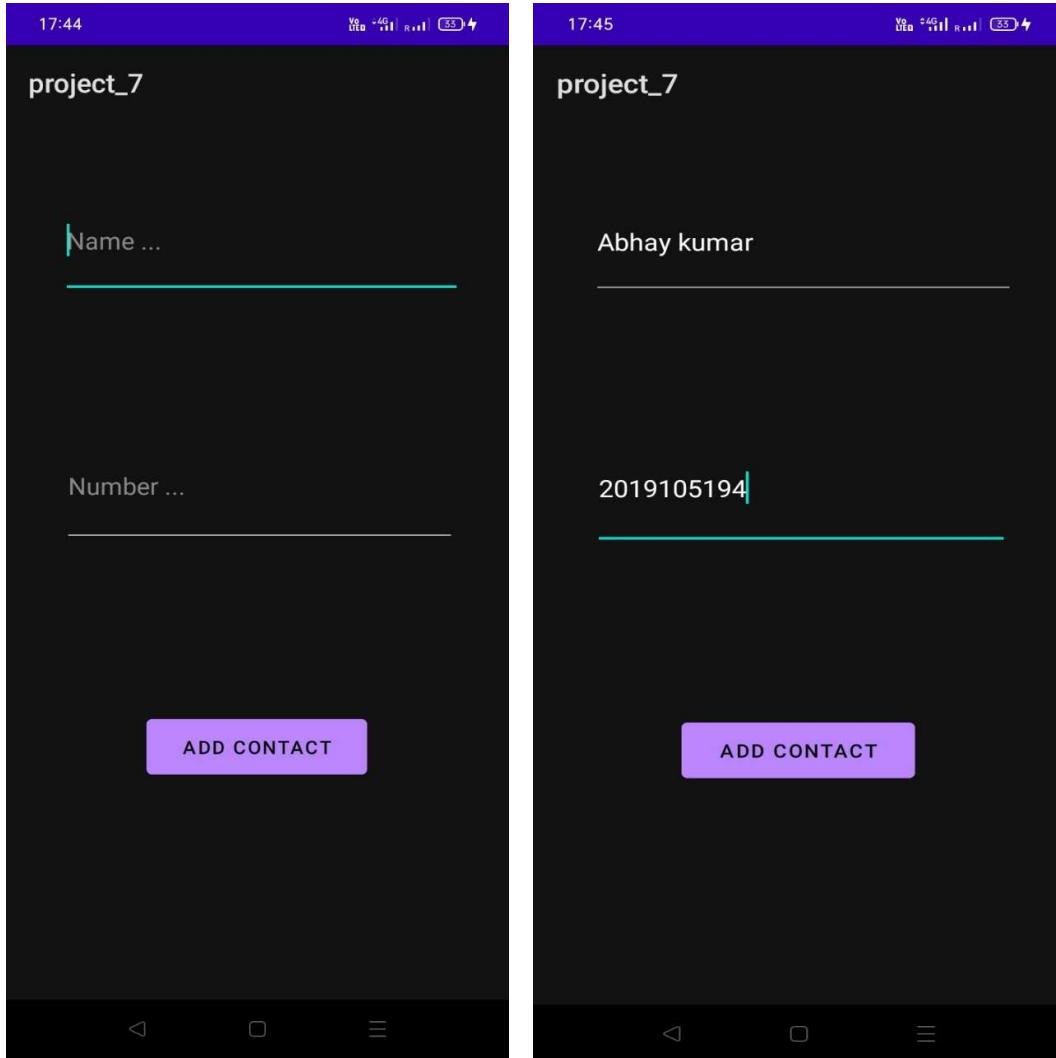
    .WithValueBackReference(ContactsContract.Data.RAW_CONTACT_ID, 0)
        .WithValue(ContactsContract.Data.MIMETYPE,

ContactsContract.CommonDataKinds.Phone.CONTENT_ITEM_TYPE)
        .WithValue(ContactsContract.CommonDataKinds.Phone.NUMBER,
            editTextNumber.getText().toString())
        .WithValue(ContactsContract.CommonDataKinds.Phone.TYPE,
            ContactsContract.CommonDataKinds.Phone.TYPE_MOBILE)
    .build());

try {
    getContentResolver().applyBatch(ContactsContract.AUTHORITY,
contentProviderOperations);
} catch (OperationApplicationException e) {
    e.printStackTrace();
} catch (RemoteException e) {
    e.printStackTrace();
}

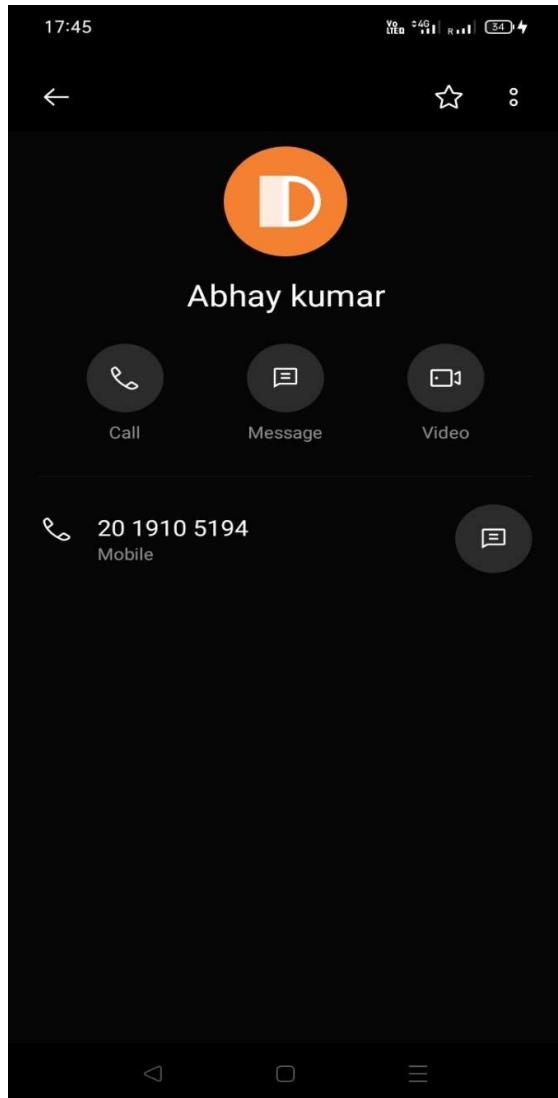
}
}
```

Output



Contact form

Input data



Saved contact

THANK YOU