# PRACTICAL No.1

**AIM: Create an Android application to demonstrate the Android Activity Lifecycle.**
**CODE:**
**activity_main.xml:**

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

```java
package com.example.applicationpractical1;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.util.Log;
public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Log.d("lifecycle","onCreate invoked");
    }

    @Override
    protected void onStart(){
        super.onStart();
        Log.d("Lifecycle","onStart invoked"); }
```

```java
    @Override
protected void onResume(){
    super.onResume();
    Log.d("Lifecycle","onResume invoked"); }
@Override
protected void onPause(){
    super.onPause();
    Log.d("Lifecycle","onPause invoked"); }
@Override
protected void onStop(){
    super.onStop();
    Log.d("Lifecycle","onStop invoked"); }
@Override
protected void onRestart(){
    super.onRestart();
    Log.d("Lifecycle","onRestart invoked"); }
@Override
protected void onDestroy(){
    super.onDestroy();
    Log.d("Lifecycle","onDestroy invoked"); }
}
```

**OUTPUT:**

# PRACTICAL No.2

**AIM: Create Android Application to get the text from user and display it when button clicks**
**CODE:**
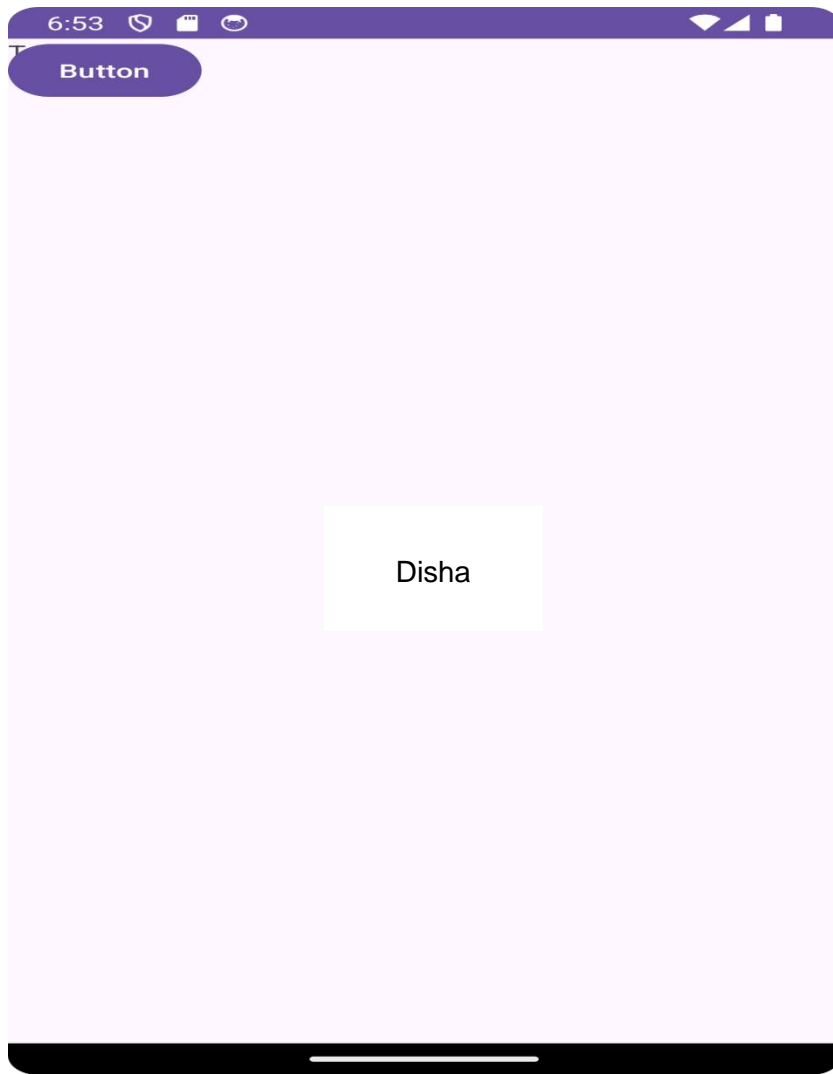**activity_main.xml**

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Disha"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="TextView"
        tools:layout_editor_absoluteX="193dp"
        tools:layout_editor_absoluteY="421dp" />
    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Button"
        tools:layout_editor_absoluteX="193dp"
        tools:layout_editor_absoluteY="481dp" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

**MainActivity.java :**

```java
package com.example.applicationpractical2;
import androidx.appcompat.app.AppCompatActivity;
import android.annotation.SuppressLint;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;
public class MainActivity extends AppCompatActivity { private
    TextView message;
    private Button button;
    @SuppressLint("MissingInflatedID")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        button = (Button) findViewById(R.id.button);
        message = (TextView) findViewById(R.id.message);
        message.setVisibility(View.INVISIBLE);
        button.setOnClickListener(new View.OnClickListener(){
            @Override
            public void onClick(View view){
                message.setVisibility(View.VISIBLE);
            }
        });
    }
}
```

**OUTPUT:**

6:53

Button

Disha

**OUTPUT:**

# Practical No.3

**AIM: Create a Simple Calculator in Android Application (+,-,*,/)**
**CODE:**
**activity_main.xml**

```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">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:gravity="center"
        android:orientation="vertical"
        tools:context=".SimpleCalculator">
        <EditText
            android:id="@+id/num1"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:ems="10"
            android:inputType="textPersonName"
            tools:hint="value 1"
            tools:layout_editor_absoluteX="159dp"
            tools:layout_editor_absoluteY="96dp"
            />
        <EditText
            android:id="@+id/num2"
            android:layout_width="202dp"
            android:layout_height="wrap_content"
            android:inputType="textPersonName"
            android:hint="Value 2"
            tools:layout_editor_absoluteX="157dp"
            tools:layout_editor_absoluteY="163dp" />
        <Button
            android:id="@+id/add"


            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="ADD"
```

```xml
                tools:layout_editor_absoluteX="54dp"
                tools:layout_editor_absoluteY="284dp"
                android:onClick="ADD"/>
        <Button
                android:id="@+id/sub"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="SUB"
                tools:layout_editor_absoluteX="203dp"
                tools:layout_editor_absoluteY="278dp"
                android:onClick="SUB"/>
        <Button
                android:id="@+id/Mul"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="MUL"
                tools:layout_editor_absoluteX="58dp"
                tools:layout_editor_absoluteY="384dp"
                android:onClick="MUL"/>
        <Button
                android:id="@+id/Div"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="Div"
                tools:layout_editor_absoluteX="209dp"
                tools:layout_editor_absoluteY="377dp"
                android:onClick="DIV"/>
        <TextView
                android:id="@+id/tv3"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="Result"
                tools:layout_editor_absoluteX="70dp"
                tools:layout_editor_absoluteY="525dp" />
        <EditText
                android:id="@+id/result"
                android:layout_width="wrap_content"


                android:layout_height="wrap_content"
                android:ems="10"
                android:inputType="textPersonName"
                tools:layout_editor_absoluteX="148dp"
                tools:layout_editor_absoluteY="501dp" />
    </LinearLayout>
```

&lt;/androidx.constraintlayout.widget.ConstraintLayout&gt;

**MainActivity.java :**

```java
package com.example.applicationpracticalcalculator; 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 {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    public void ADD(View view) {
        EditText num1, num2, result;
        float result_num;
        int x, y;
        num1 = findViewById(R.id.num1);
        num2 = findViewById(R.id.num2);
        result = findViewById(R.id.result);
        x = Integer.parseInt(num1.getText().toString()); y =
        Integer.parseInt(num2.getText().toString()); result_num =
        x + y;
        result.setText(String.valueOf(result_num)); }
    public void SUB(View view) {
        EditText num1, num2, result;
        float result_num;
        int x, y;
        num1 = findViewById(R.id.num1);
        num2 = findViewById(R.id.num2);
        result = findViewById(R.id.result);

        x = Integer.parseInt(num1.getText().toString()); y =

        Integer.parseInt(num2.getText().toString()); result_num =
        x - y;
        result.setText(String.valueOf(result_num)); }
    public void MUL(View view) {
        EditText num1, num2, result;
        float result_num;
        int x, y;
        num1 = findViewById(R.id.num1);
        num2 = findViewById(R.id.num2);
```

```
        result = findViewById(R.id.result);
        x  =  Integer.parseInt(num1.getText().toString());   y  =
        Integer.parseInt(num2.getText().toString()); result_num =
        x * y;
        result.setText(String.valueOf(result_num)); }
    public void DIV(View view) {
        EditText num1, num2, result;
        float result_num;
        int x, y;
        num1 = findViewById(R.id.num1);
        num2 = findViewById(R.id.num2);
        result = findViewById(R.id.result);
        x  =  Integer.parseInt(num1.getText().toString());   y  =
        Integer.parseInt(num2.getText().toString()); result_num =
        x / y;
        result.setText(String.valueOf(result_num)); }
}
```

## OUTPUT:
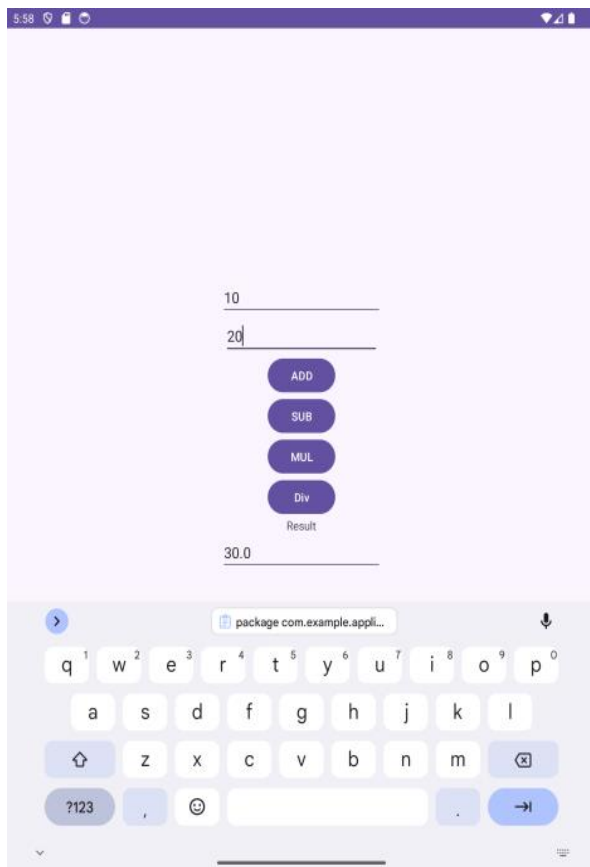
# PRACTICAL No.4

**AIM: Create an Android application to display registration form using UI components.**

**CODE:**

**activity_main.xml**

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <TextView
        android:id="@+id/tv1"
        android:layout_width="335dp"
        android:layout_height="78dp"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_alignParentEnd="true"
        android:layout_alignParentRight="true"
        android:layout_alignParentBottom="true"
        android:layout_marginLeft="61dp"
        android:layout_marginTop="29dp"
        android:layout_marginRight="49dp"
        android:layout_marginBottom="638dp"
        android:text="Registration Form"
        android:textSize="36sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintHorizontal_bias="1.0"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.0" />
    <TextView
        android:id="@+id/tv_name"
        android:layout_width="wrap_content"
        android:layout_height="57dp"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_alignParentEnd="true"
        android:layout_alignParentRight="true"
        android:layout_alignParentBottom="true"
        android:text="Enter Name : "
        android:textSize="30sp"
        app:layout_constraintBottom_toBottomOf="parent"
```

```xml
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"

        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.286" />
    <EditText
        android:id="@+id/et1"
        android:layout_width="202dp"
        android:layout_height="wrap_content"
        android:layout_below="@id/tv1"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_alignParentEnd="true"
        android:layout_alignParentRight="true"
        android:layout_alignParentBottom="true"
        android:ems="10"
        android:inputType="textPersonName"
        android:textSize="24sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.98"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.29" />
    <RelativeLayout
        android:id="@+id/radiogp1"
        android:layout_width="342dp"
        android:layout_height="86dp"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_alignParentEnd="true"
        android:layout_alignParentRight="true"
        android:layout_alignParentBottom="true"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.768"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.471">
        <RadioButton
            android:id="@+id/rb1"
            android:layout_width="149dp"
            android:layout_height="52dp"
            android:layout_alignParentStart="true"
            android:layout_alignParentTop="true"
            android:layout_alignParentEnd="true"
            android:layout_alignParentBottom="true"
            android:layout_marginStart="13dp"
            android:layout_marginLeft="38dp"
```

```xml
            android:layout_marginTop="19dp"
            android:layout_marginEnd="180dp"
            android:layout_marginRight="148dp"
            android:layout_marginBottom="15dp"
            android:text="Female"
            android:textSize="30sp" />
        <RadioButton
            android:id="@+id/rb2"
            android:layout_width="139dp"

            android:layout_height="50dp"
            android:layout_alignParentStart="true"
            android:layout_alignParentTop="true"
            android:layout_alignParentEnd="true"
            android:layout_alignParentBottom="true"
            android:layout_marginStart="188dp"
            android:layout_marginLeft="215dp"
            android:layout_marginTop="16dp"
            android:layout_marginEnd="14dp"
            android:layout_marginRight="22dp"
            android:layout_marginBottom="20dp"
            android:text="Male"
            android:textSize="30sp" />
    </RelativeLayout>
    <CheckBox
        android:id="@+id/cb1"
        android:layout_width="144dp"
        android:layout_height="wrap_content"
        android:layout_below="@id/et1"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_alignParentEnd="true"
        android:layout_alignParentRight="true"
        android:layout_alignParentBottom="true"
        android:layout_toRightOf="@id/cb2"
        android:text="php"
        android:textSize="36sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.228"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.613" />
    <CheckBox
        android:id="@+id/cb2"
        android:layout_width="134dp"
        android:layout_height="52dp"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_alignParentEnd="true"
```

```xml
        android:layout_alignParentRight="true"
        android:layout_alignParentBottom="true"
        android:text="Java"
        android:textSize="36sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.319"
        app:layout_constraintStart_toEndOf="@+id/cb1"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.617" />
    <RatingBar
        android:id="@+id/ratingbar1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"

        android:layout_alignParentEnd="true"
        android:layout_alignParentRight="true"
        android:layout_alignParentBottom="true"
        android:layout_marginBottom="52dp"
        app:layout_constraintBottom_toTopOf="@+id/b1"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.497"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="1.0" />
    <Button
        android:id="@+id/b1"
        android:layout_width="150dp"
        android:layout_height="60dp"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_alignParentEnd="true"
        android:layout_alignParentRight="true"
        android:layout_alignParentBottom="true"
        android:text="Submit"
        android:textSize="20sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.172"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.955" />
    <Button
        android:id="@+id/b2"
        android:layout_width="150dp"
        android:layout_height="60dp"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
```

```xml
        android:layout_alignParentTop="true"


        android:layout_alignParentEnd="true"
        android:layout_alignParentRight="true"
        android:layout_alignParentBottom="true"
        android:text="Google"
        android:textSize="20sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.873"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.955" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

## activity_main2.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"

    android:layout_height="match_parent"
    tools:context=".MainActivity2">
    <TextView
        android:id="@+id/tv1"
        android:layout_width="wrap_content"
        android:layout_height="96dp"
        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true"
        android:layout_alignParentEnd="true"
        android:layout_alignParentRight="true"
        android:layout_marginStart="104dp"
        android:layout_marginTop="48dp"
        android:layout_marginEnd="115dp"
        android:layout_marginRight="115dp"
        android:text="Welcome"
        android:textSize="24sp" />
    <TextView
        android:id="@+id/tv_name"
        android:layout_width="330dp"
        android:layout_height="70dp"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_marginStart="37dp"
        android:layout_marginLeft="37dp"
        android:layout_marginTop="195dp"
        android:layout_marginEnd="37dp"
        android:layout_marginRight="37dp"
```

```xml
        android:textSize="20sp" />
    <TextView
        android:id="@+id/tv_gender"
        android:layout_width="334dp"


        android:layout_height="78dp"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_marginStart="37dp"
        android:layout_marginLeft="37dp"
        android:layout_marginTop="300dp"
        android:layout_marginEnd="38dp"
        android:layout_marginRight="38dp"
        android:layout_marginBottom="470dp"
        android:textSize="20sp" />
    <TextView
        android:id="@+id/tv_Course"
        android:layout_width="330dp"
        android:layout_height="76dp"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_marginStart="38dp"
        android:layout_marginLeft="38dp"
        android:layout_marginTop="408dp"
        android:layout_marginEnd="40dp"
        android:layout_marginRight="40dp"
        android:layout_marginBottom="414dp"
        android:textSize="20sp" />

    <TextView
        android:id="@+id/tv_rating"
        android:layout_width="338dp"
        android:layout_height="75dp"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_marginStart="35dp"
        android:layout_marginLeft="35dp"
        android:layout_marginTop="508dp"
        android:layout_marginEnd="41dp"
        android:layout_marginRight="41dp"
        android:layout_marginBottom="361dp"
        android:textSize="20sp" />
</RelativeLayout>
```

## MainActivity.java :

```java
package com.example.myapplication;

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.CheckBox;



import android.widget.EditText;
import android.widget.RadioButton;
import android.widget.RatingBar;
public class MainActivity extends AppCompatActivity {
    EditText e1;
    RadioButton r1,r2;
    CheckBox c1,c2;
    Button b1, b2;
    RatingBar rb1;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        e1=(EditText)findViewById(R.id.et1);
        r1=(RadioButton)findViewById(R.id.rb1);
        r2=(RadioButton)findViewById(R.id.rb2);
        c1=(CheckBox)findViewById(R.id.cb1);
        c2=(CheckBox)findViewById(R.id.cb2);
        rb1= (RatingBar) findViewById(R.id.ratingbar1);
        b1=(Button)findViewById(R.id.b1);
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                String gender;

                String name=e1.getText( ).toString( );

                String course=" ";
                String rating=String.valueOf(rb1.getRating( ));
                if(r1.isChecked( ))

                {
                    gender = r1.getText( ).toString( );
                }
                else
                {
                    gender = r2.getText( ).toString( );
                }
                if(c1.isChecked( ))
                {
```

```java
                course = c1.getText( ).toString( );
            }
            if(c2.isChecked( ))
            {
                course = course+" , "+c2.getText( ).toString( );
            }

            Intent intent=new

                    Intent(MainActivity.this,MainActivity.class);
            intent.putExtra("NAME",name);
            intent.putExtra("GENDER",gender);
            intent.putExtra("COURSE",course);


          intent.putExtra("RATING",rating);
            startActivity(intent);
        }
    });
    b2=(Button)findViewById(R.id.b2);
    b2.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            Intent intent = new Intent(Intent.ACTION_VIEW);
            intent.setData(Uri.parse("https://www.google.com"));
            startActivity(intent);
        }
    });
   }
 }
```

## MainActivity2.java :

```java
package com.example.myapplication;

import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.widget.TextView;
public class MainActivity2 extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main2);
        TextView tv1=(TextView)findViewById(R.id.tv_name);
        TextView tv2=(TextView)findViewById(R.id.tv_gender);
        TextView tv3=(TextView)findViewById(R.id.tv_Course);
        TextView tv4=(TextView)findViewById(R.id.tv_rating);
        Intent intent=getIntent( );
        intent.getSerializableExtra("Name");
        String name = intent.getStringExtra("NAME");

        String gender = intent.getStringExtra("GENDER");
        String course = intent.getStringExtra("COURSE");
```

```
        String rating = intent.getStringExtra("RATING");
    tv1.setText("Name : "+name);
    tv2.setText("Gender : "+gender);
    tv3.setText("Course : "+course);
    tv4.setText("Rating : "+rating);
    }
}
```

## OUTPUT:

# PRACTICAL No.5

**AIM: Create an Android application to demonstrate Toast.**
 **CODE:**
**activity_main.xml**

```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">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical"
        android:gravity="center"
        tools:context=".MainActivity">
        <Button
            android:id="@+id/Div"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:onClick="Toaster"
            android:text="Toast 74"
            tools:layout_editor_absoluteX="209dp"
            tools:layout_editor_absoluteY="377dp" />
    </LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>
```

**MainActivity.java :**

```java
package com.example.applicationpracticaltoast;
 import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

    @Override
```

```java
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    public void Toaster(View view)
    {



        Toast.makeText(this, "Welcome to Application",
    Toast.LENGTH_LONG).show();
    }
}
```

**OUTPUT:**
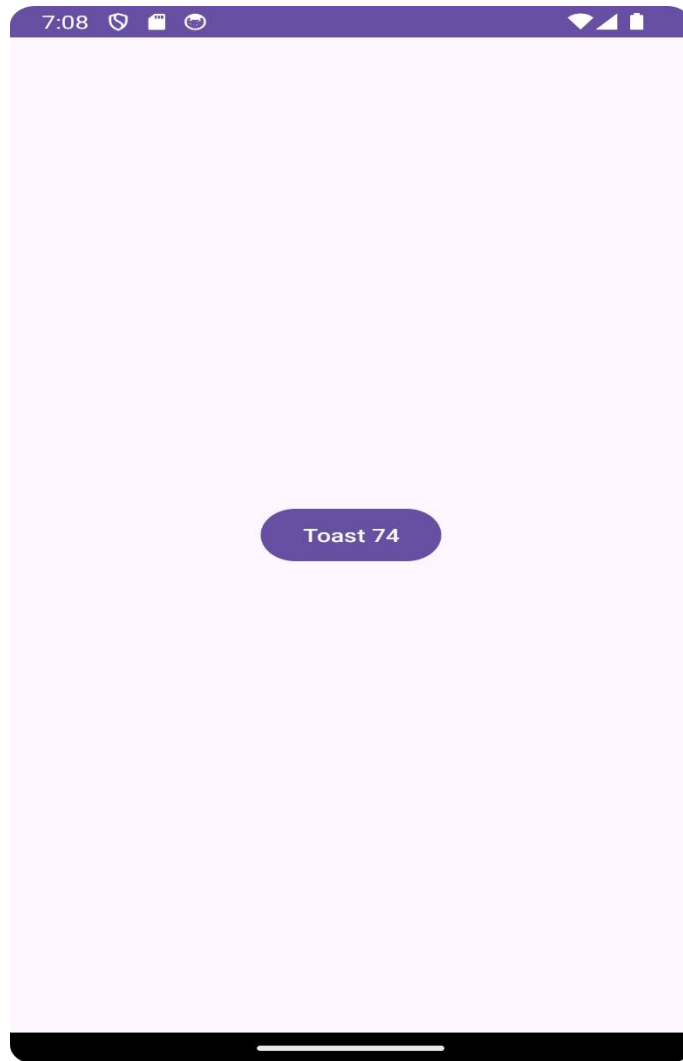
# PRACTICAL No.6

**Aim : Create an Android Application to draw a filled circle using Canvas Class**
**CODE:**

**activity_main.xml**

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

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello World!"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

**MainActivity.java :**

```java
package com.example.displaycircle;

import androidx.appcompat.app.AppCompatActivity;
import android.graphics.Canvas;
import android.graphics.Color;
import android.graphics.Paint;
import android.os.Bundle;
import android.content.Context;
import android.view.View;
public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(new Mview(this));
    }
```

```java
private class Mview extends View {
    public Mview(Context fileprogss) {
        super(fileprogss);
    }
    public void onDraw(Canvas canvas)
    {

    super.onDraw(canvas);

        int x,y;
        x= getWidth();
        y= getHeight();
        int rad=100;
        Paint p = new Paint();
        p.setStyle(Paint.Style.FILL);
        p.setColor(Color.WHITE);
        canvas.drawPaint(p);
        p.setColor(Color.parseColor("yellow"));
        canvas.drawCircle(x/2,y/2,rad,p);
        canvas.drawRect(300,250,100,100,p);
    }
  }
 }
```

**OUTPUT:**

# PRACTICAL No.7

**Aim : Create an Android application to demonstrate Alert window**

**CODE:**

**activity_main.xml**

```xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <TextView android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Disha"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
    <Button android:id="@+id/Button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="167dp"
        android:text="Button"
        tools:layout_editor_absoluteX="154dp"
        tools:layout_editor_absoluteY="170dp" />
</RelativeLayout>
```

**MainActivity.java :**

```java
package com.example.myapplication;

import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.content.DialogInterface;
import android.widget.Button;
import android.view.View;
public class MainActivity extends AppCompatActivity {
```

```java
    @Override


    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Button button_sbm;
        onButtonClickListener();



    }
    public void onButtonClickListener()
    {
                Button button_sbm = (Button) findViewById(R.id.Button);
        button_sbm.setOnClickListener (
            new View.OnClickListener()
            {
                @Override
                public void onClick(View v)
                {
AlertDialog.Builder a_builder=new AlertDialog.Builder(MainActivity.this);
            a_builder.setMessage("Do you Want to close this app")
                                .setCancelable(false)
                                .setPositiveButton("YES",new
    DialogInterface.OnClickListener()
                                {
                                    @Override
                                        public void onClick(DialogInterface
    dialog,int which)
                                    {
                                        finish();
                                    }
                                })
                                .setNegativeButton("No",new
    DialogInterface.OnClickListener()
                                {
                                        public void onClick(DialogInterface
    dialog,int which)
                                    {
                                        dialog.cancel();

                                    }
```
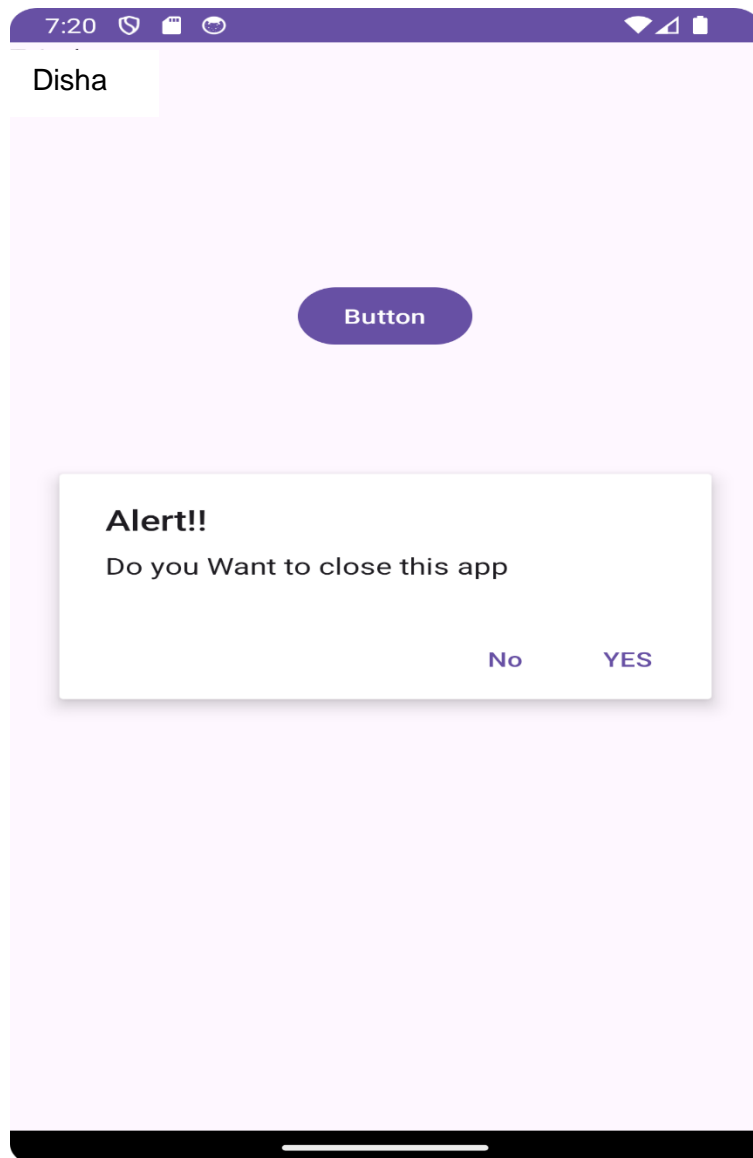
```
                    });




            AlertDialog alert=a_builder.create();
            alert.setTitle("Alert!!");
        alert.show();
    }
  }
);
}
}
```

**OUTPUT:**

# PRACTICAL No.8

**AIM: Create an Android Application to display image onclick of button**
**CODE:**
**activity_main.xml**

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

    <ImageView
        android:id="@+id/iv2"
        android:layout_width="match_parent"
        android:layout_height="667dp"
        android:layout_above="@+id/bt1"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_alignParentEnd="true"
        android:layout_marginEnd="0dp"
        android:layout_marginBottom="19dp"
        android:src="@drawable/ic_launcher_foreground" />
    <Button
        android:id="@+id/bt1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="change"
        android:layout_alignParentBottom="true"
        android:layout_marginBottom="-3dp"
        android:layout_centerHorizontal="true"/>
</RelativeLayout>
```

**MainActivity.java :**

```java
package com.example.applicationpracticalimage;

import static com.example.applicationpracticalimage.R.drawable.pic;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.ImageView;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Button btn1 =(Button) findViewById(R.id.bt1); ImageView iv
        =(ImageView) findViewById(R.id.iv2);
        btn1.setOnClickListener(new View.OnClickListener() {
        @Override
            public void onClick(View v) {
                iv.setImageResource(pic);
            }
        });
    }
}
```

**OUTPUT:**

# PRACTICAL No.9

**AIM: Create an Android application to display Menu (Option).**
**CODE:**

**activity_main.xml**

```xml
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayoutxmlns: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="com.example.ashok.optionmenu.MainActivity">

</android.support.constraint.ConstraintLayout>
```

**menu.xml**

```xml
<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android">
<item
android:id="@+id/a1"
android:title="Add"/>
<item
android:id="@+id/a2"
android:title="Edit"/>
<item
android:id="@+id/a3"
android:title="Delete"/>
<item
android:id="@+id/a4"
android:title="Save"/>
</menu>
```

**MainActivity.java**

```java
package com.example.optionmenu;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuInflater;
import android.view.MenuItem;
import android.widget.Toast;

public class MainActivityextends AppCompatActivity {

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

```java
}

@Override
public boolean onCreateOptionsMenu(Menu menu) {
MenuInflater mi=getMenuInflater();
mi.inflate(R.menu.menu,menu);
return super.onCreateOptionsMenu(menu);
 }
@Override
public boolean onOptionsItemSelected(MenuItem item) {
switch(item.getItemId())
 {
case R.id.a1:
Toast.makeText(MainActivity.this,"add is selected",Toast.LENGTH_SHORT).show();
break;
case R.id.a2:
Toast.makeText(MainActivity.this,"edit is selected",Toast.LENGTH_SHORT).show();
break;
case R.id.a3:
Toast.makeText(MainActivity.this,"delete is selected",Toast.LENGTH_SHORT).show();
break;
case R.id.a4:
Toast.makeText(MainActivity.this,"save is selected",Toast.LENGTH_SHORT).show();
break;
default:
Toast.makeText(MainActivity.this,"please select
options",Toast.LENGTH_SHORT).show();
 }
return super.onOptionsItemSelected(item);
 }
}
```
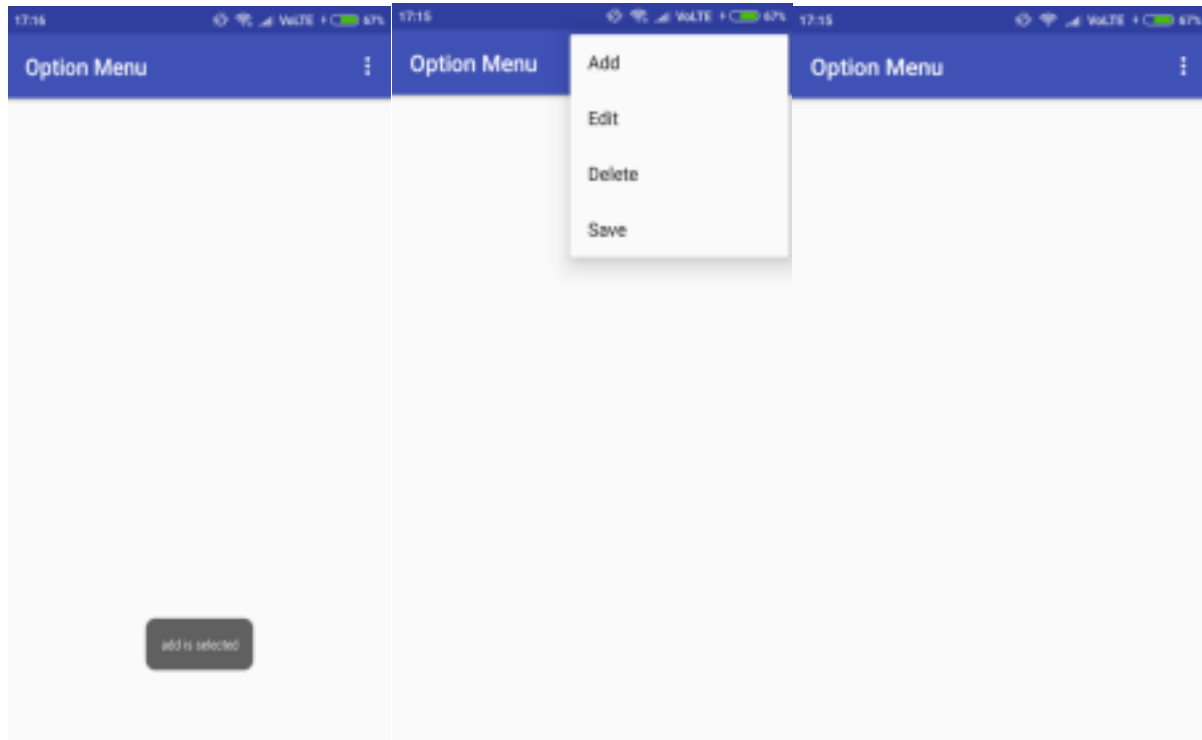
# PRACTICAL No.10

**AIM: Create an Android application to display Video with forward, backward and pause options**
**CODE:**
**activity_main.xml**

```xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <VideoView
        android:id="@+id/videoView1"
        android:layout_width="411dp"
        android:layout_height="wrap_content"
        android:layout_marginStart="8dp"
        android:layout_marginLeft="8dp"
        android:layout_marginTop="8dp"
        android:layout_marginEnd="8dp"
        android:layout_marginRight="8dp"
        android:layout_marginBottom="8dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</RelativeLayout>
```

**MainActivity.java :**

```java
package com.example.practical111;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.MediaController;
import android.widget.VideoView;
public class MainActivity extends AppCompatActivity {
    VideoView videoid;
        MediaController mediaController;
    @Override
```

```java
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);



        videoid = (VideoView) findViewById(R.id.videoView1);
        mediaController = new MediaController(this);
        videoid.setVideoPath("android.resource://" + getPackageName() + "/" +
R.raw.video1);
        mediaController.setAnchorView(videoid);
        videoid.setMediaController(mediaController);
        videoid.start();
    }
}
```

**OUTPUT:**
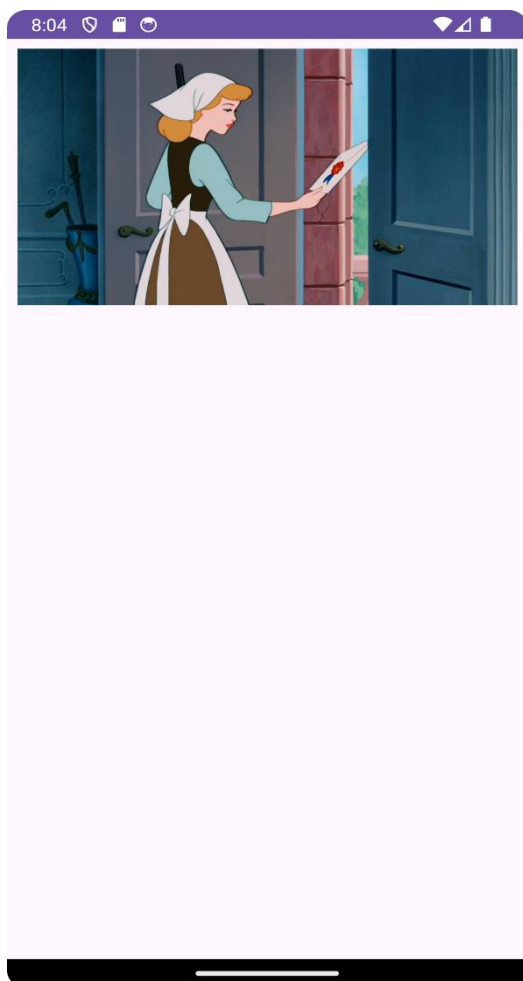
# PRACTICAL No.11

**AIM: Create an Android Application to animate (Fade, Rotate, Move & Blink) an image.**

**CODE:**

**activity_main.xml**

```xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
tools:context=".MainActivity">
<ImageView
android:id="@+id/imageView"
android:layout_width="150dp"
android:layout_height="150dp"
android:layout_marginStart="8dp"
android:layout_marginLeft="8dp"
android:layout_marginTop="48dp"
android:layout_marginEnd="8dp"
android:layout_marginRight="8dp"
android:layout_marginBottom="8dp"
app:srcCompat="@drawable/suga" />
<Button
android:id="@+id/button"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_below="@id/button3"
android:layout_marginStart="8dp"
android:layout_marginLeft="8dp"
android:layout_marginEnd="8dp"
android:layout_marginRight="8dp"
android:onClick="move"
android:text="Move" />
<Button
android:id="@+id/button2"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_below="@id/imageView"
```

```
android:layout_centerHorizontal="true"
android:layout_marginStart="8dp"
android:layout_marginLeft="8dp"
android:layout_marginTop="8dp"
android:layout_marginEnd="8dp"
android:layout_marginRight="8dp"
android:layout_marginBottom="8dp"
android:onClick="fade"
android:text="Fade" />
<Button
android:id="@+id/button3"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_below="@id/imageView"
android:layout_marginLeft="8dp"
android:layout_marginTop="8dp"
android:layout_marginRight="8dp"
android:layout_marginBottom="8dp"
android:onClick="rotate"
android:text="Rotate" />
<Button
android:id="@+id/button4"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_below="@id/button2"
android:layout_centerHorizontal="true"
android:layout_marginBottom="8dp"
android:onClick="blink"
android:text="Blink" />
</RelativeLayout>
```

**MainActivity.java :**

```java
package com.example.practical19 ;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.view.animation.Animation;
import android.view.animation.AnimationUtils;
import android.widget.ImageView;
public class MainActivity extends AppCompatActivity
{
```

```java
@Override
protected void onCreate(Bundle savedInstanceState)
{
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
}
public void move(View view) {
ImageView image = findViewById(R.id.imageView);
Animation animate1 =
AnimationUtils.loadAnimation(getApplicationContext(), R.anim.move);
image.startAnimation(animate1);
}
public void fade(View view) {


ImageView image = findViewById(R.id.imageView);
Animation animate2 =
AnimationUtils.loadAnimation(getApplicationContext(), R.anim.fade_in);
image.startAnimation(animate2);
}
public void rotate(View view) {
ImageView image = findViewById(R.id.imageView);
Animation animate3 =
AnimationUtils.loadAnimation(getApplicationContext(), R.anim.rotate);
image.startAnimation(animate3);
}
public void blink(View view) {
ImageView image = findViewById(R.id.imageView);
Animation animate4 =
AnimationUtils.loadAnimation(getApplicationContext(), R.anim.blink);
image.startAnimation(animate4);
}
}
```

**res>anim**

**blink.xml**

```xml
<?xml version="1.0" encoding="utf-8"?>
<set
xmlns:android="http://schemas.android.com/apk/res/and
roid"> <alpha android:fromAlpha="0.0"
android:toAlpha="1.0"
android:interpolator="@android:anim/accelerate_int
erpolator" android:duration="600"
android:repeatMode="reverse"
android:repeatCount="infinite"/>
</set>
```

**fade_in.xml**

```xml
<?xml version="1.0" encoding="utf-8"?>
<set
xmlns:android="http://schemas.android.com/apk/res/an
droid" android:fillAfter="true" >
<alpha
android:duration="1000"
android:fromAlpha="0.0"
android:interpolator="@android:anim/accelerate_int
erpolator" android:toAlpha="1.0" />
</set>
```
**move.xml**

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

<set
xmlns:android="http://schemas.android.com/apk/res/an
droid" android:fillAfter="true"
android:interpolator="@android:anim/linear_inte
rpolator"> <translate
android:duration="800"
android:fromXDelta="0%p"
android:toXDelta="75%p" />
</set>
```
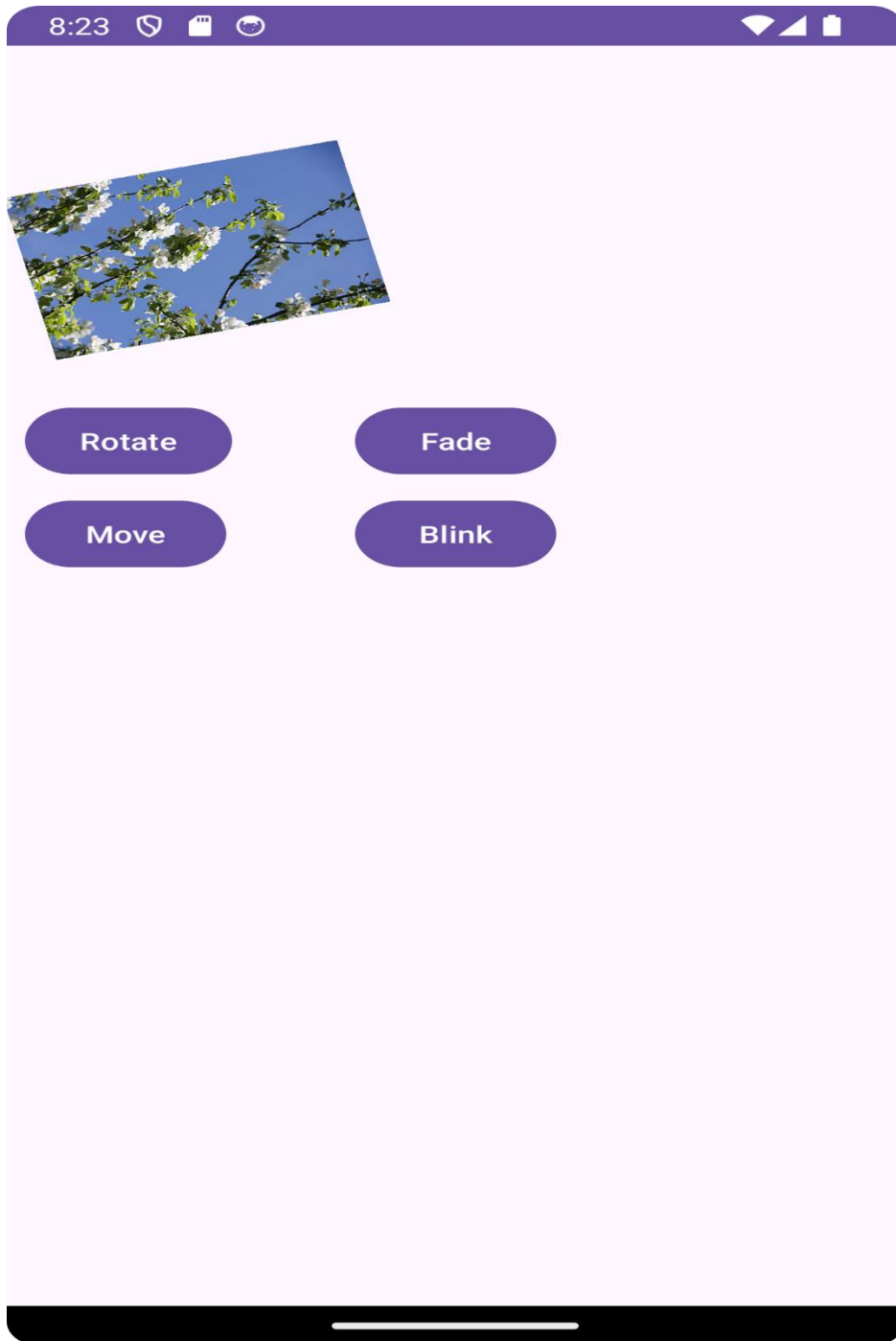**rotate.xml**
```xml
<?xml version="1.0" encoding="utf-8"?>
<set
xmlns:android="http://schemas.android.com/apk/res/and
roid"> <rotate
android:duration="600"
android:fromDegrees="0"
android:interpolator="@android:anim/cycle_inte
rpolator" android:pivotX="50%"
android:pivotY="50%"
android:repeatCount="infinite"
```

```
android:repeatMode="restart"
android:toDegrees="360" />
</set>
```

**OUTPUT:**

# PRACTICAL No.12

**AIM: Create an Android application to Insert, Delete, Update and View the SQLite Database**
**CODE:**
**activity_main.xml**

```xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <Button
        android:id="@+id/btnselect"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentBottom="true"
        android:layout_marginStart="50dp"
        android:layout_marginLeft="50dp"
        android:layout_marginBottom="201dp"
        android:text="View" />
    <Button
        android:id="@+id/btnsave"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignBottom="@+id/btnselect"
        android:layout_alignParentEnd="true"
        android:layout_alignParentRight="true"
        android:layout_marginEnd="69dp"
        android:layout_marginRight="69dp"
        android:layout_marginBottom="0dp"
        android:text="Save" />
    <Button
        android:id="@+id/btnupdate"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
```

```xml
        android:layout_alignStart="@+id/btnselect"
        android:layout_alignLeft="@id/btnselect"
        android:layout_alignParentBottom="true"
        android:layout_marginStart="-7dp"
        android:layout_marginLeft="-7dp"
        android:layout_marginBottom="72dp"
        android:text="Update" />
<Button
        android:id="@+id/btnselectparticular"
        android:layout_width="107dp"
        android:layout_height="33dp"
        android:layout_below="@+id/editTextMessage"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentEnd="true"
        android:layout_alignParentRight="true"
        android:layout_alignParentBottom="true"
        android:layout_marginStart="141dp"
        android:layout_marginLeft="141dp"
        android:layout_marginTop="330dp"
        android:layout_marginEnd="163dp"
        android:layout_marginRight="163dp"
        android:layout_marginBottom="127dp"
        android:text="Search" />
<Button
        android:id="@+id/btndel"
        android:layout_width="102dp"
        android:layout_height="wrap_content"
        android:layout_below="@+id/btnsave"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentEnd="true"
        android:layout_alignParentRight="true"
        android:layout_alignParentBottom="true"
        android:layout_marginStart="240dp"
        android:layout_marginLeft="240dp"
        android:layout_marginTop="79dp"
        android:layout_marginEnd="42dp"
        android:layout_marginRight="42dp"
        android:layout_marginBottom="74dp"
        android:text="Delete" />
```

```xml
<EditText

    android:id="@+id/editTextSearch"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentStart="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentTop="true"
    android:layout_marginStart="79dp"
    android:layout_marginLeft="42dp"
    android:layout_marginTop="54dp"
    android:ems="10"
    android:hint="Search"
    android:inputType="textPersonName"
    android:text="" />
<EditText
    android:id="@+id/editTextEmailAddress"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentStart="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentTop="true"
    android:layout_marginStart="67dp"
    android:layout_marginLeft="67dp"
    android:layout_marginTop="145dp"
    android:ems="10"
    android:hint="Enter Your EmailAddress"
    android:inputType="textPersonName"
    android:text="" />
<EditText
    android:id="@+id/editTextMessage"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentStart="true"
    android:layout_alignParentLeft="true"

    android:layout_alignParentTop="true"
    android:layout_marginStart="67dp"
    android:layout_marginLeft="67dp"
    android:layout_marginTop="196dp"
    android:ems="10"
    android:hint="Enter Your Message"
```

```xml
            android:inputType="textPersonName" android:text="" />
    <EditText


        android:id="@+id/editTextName"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_marginStart="69dp"
        android:layout_marginLeft="69dp"
        android:layout_marginTop="99dp"
        android:ems="10"
        android:hint="Enter Your Name"
        android:inputType="textPersonName"
        android:text="" />
    <TextView
        android:id="@+id/textView5"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_marginStart="122dp"
        android:layout_marginLeft="122dp"
        android:layout_marginTop="24dp"
        android:text="Contact Us"
        android:textSize="18sp"
        android:textStyle="bold"
        app:fontFamily="serif" />
</RelativeLayout>
```

**MainActivity.java :**

```java
package com.example.myapplication13;

import androidx.appcompat.app.AppCompatActivity;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.os.Bundle;
import android.view.View;
```

```java
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity implements


View.OnClickListener {
    SQLiteDatabase db;
    EditText editSearchContact, editName, editEmailAddress, editMessage; Button
    Add, Delete, Modify, View, search;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        db = openOrCreateDatabase("ContactDb", Context.MODE_PRIVATE, null);
db.execSQL("CREATE TABLE IF NOT EXISTS Contact_49(cId INTEGER PRIMARY
KEY AUTOINCREMENT, Name VARCHAR, Mail VARCHAR, CMessage VARCHAR);
"); editSearchContact = (EditText) findViewById(R.id.editTextSearch); editName =
(EditText) findViewById(R.id.editTextName);
        editEmailAddress = (EditText) findViewById(R.id.editTextEmailAddress);
        editMessage = (EditText) findViewById(R.id.editTextMessage); Add = (Button)
        findViewById(R.id.btnsave);
        Delete = (Button) findViewById(R.id.btndel);
        Modify = (Button) findViewById(R.id.btnupdate);
        View = (Button) findViewById(R.id.btnselect);
                    search = (Button) findViewById(R.id.btnselectparticular);
        Add.setOnClickListener(this);
        Delete.setOnClickListener(this);




        Modify.setOnClickListener(this);
        View.setOnClickListener(this);
        search.setOnClickListener(this);

    }
    public void msg(Context context, String str) {
            Toast.makeText(this, str, Toast.LENGTH_SHORT).show();
    }
    public void onClick(android.view.View v) {
```

```java
        if (v.getId() == R.id.btnsave) {
// code for save data
                            if (editName.getText().toString().trim().length() == 0 ||
                                editEmailAddress.getText().toString().trim().length() == 0
||
                                editMessage.getText().toString().trim().length() == 0)


            {
                    msg(this, "Please enter all values");
                return;
            }
            db.execSQL("INSERT INTO Contact_49(Name,Mail,CMessage)VALUES('"
                    + editName.getText() + "','" + editEmailAddress.getText() +
"','" +
                            editMessage.getText() + "');");
            editName.getText().clear();
            editEmailAddress.getText().clear();
            editMessage.getText().clear();
            msg(this, "Response Noted, Thanks!!");
        }
        else if (v.getId() == R.id.btnupdate)
        {
//code for update data
            if (editSearchContact.getText().toString().trim().length() == 0) { msg(this,
                "Enter Name");
                return;
            }
            Cursor c = db.rawQuery("SELECT * FROM Contact_49 WHERE
                    Name='" +
                            editSearchContact.getText() + "'", null);
            if (c.moveToFirst()) {
    db.execSQL("UPDATE Contact_49 SET Name ='" + editName.getText() + "', Mail = '" +
editEmailAddress.getText() + "', CMessage = '" + editMessage.getText() + "' WHERE Name =
                                                                            '" +
editSearchContact.getText() +
                                    "'");
                editName.getText().clear();
                editEmailAddress.getText().clear();
                editMessage.getText().clear();
                editSearchContact.getText().clear();
```

```java
                msg(this, "Record Modified");
            } else {
                msg(this, "Invalid Name");
            }
        }


        else if (v.getId() == R.id.btndel) {
//code for delete data
            if (editSearchContact.getText().toString().trim().length() == 0) { msg(this, "
                Please enter Name ");
                return;
            }
            Cursor c = db.rawQuery("SELECT * FROM Contact_49 WHERE Name ='"
                    +
                            editSearchContact.getText() + "'", null);
            if (c.moveToFirst()) {
                db.execSQL("DELETE FROM Contact_49 WHERE Name ='" +
                                editSearchContact.getText() + "'");
                editName.getText().clear();
                editEmailAddress.getText().clear();
                editMessage.getText().clear();
                msg(this, "Record Deleted");
            } else {
                msg(this, "Invalid Name ");
            }
        }
        else if (v.getId() == R.id.btnselect) {
//code for select all data
                Cursor c = db.rawQuery("SELECT * FROM Contact_49", null);
            if (c.getCount() == 0) {
                msg(this, "No records found");
                return;
            }
            StringBuffer buffer = new StringBuffer();
            while (c.moveToNext()) {
                        buffer.append("Name: " + c.getString(1) + "\n");
                        buffer.append("Mail: " + c.getString(2) + "\n\n");
                        buffer.append("Message: " + c.getString(3) + "\n\n");
```

```java
                }
            msg(this, buffer.toString());
        } else if (v.getId() == R.id.btnselectparticular) {
//code for select particular data
            if (editSearchContact.getText().toString().trim().length() == 0) { msg(this,
                "Enter Name");
                return;


            }
            Cursor c = db.rawQuery("SELECT * FROM Contact_49 WHERE
                    Name='" +
                            editSearchContact.getText() + "'", null);
            if (c.moveToFirst()) {
                editName.setText(c.getString(1));
                        editEmailAddress.setText(c.getString(2));
                editMessage.setText(c.getString(3));



            } else {
                msg(this, "Invalid Name");
            }
        }
    }
}
```

**OUTPUT:**



| 8:40 | Contact Us |
| --- | --- |

Search

Disha Mane

manedisha9@gmail.com

hello

View          Save

Search

Update          Delete

| 8:41 | Contact Us |
| --- | --- |

Search

Enter Your Name

Enter Your EmailAddress

Enter Your Message

View          Save

Search

Name: Disha
Mail:dishamane9@gmail

# PRACTICAL No.13

**AIM: Create an Android Application to show the data of one page to the other using shared preference**
**CODE:**
**activity_main.xml**

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

    <TextView
        android:id="@+id/textView_emailId"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Email Id :"
        android:textSize="24sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.105"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.068" />

    <TextView
        android:id="@+id/textView_password"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Password :"
        android:textSize="24sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.112"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
```

```xml
        app:layout_constraintVertical_bias="0.191" />

    <TextView
        android:id="@+id/textView_mobileNo"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Mobile :"
        android:textSize="24sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.19"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.33" />

    <EditText
        android:id="@+id/editText_email"
        android:layout_width="202dp"
        android:layout_height="54dp"
        android:ems="10"
        android:inputType="textPersonName"
        android:textSize="24sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.976"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.07" />

    <EditText
        android:id="@+id/editText_password"
        android:layout_width="191dp"
        android:layout_height="43dp"
        android:ems="10"
        android:inputType="textPersonName"
        android:textSize="24sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.981"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.193" />
```

```xml
<EditText
    android:id="@+id/editText_mobile"
    android:layout_width="202dp"
    android:layout_height="54dp"
    android:ems="10"
    android:inputType="phone"
    android:textSize="24sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.866"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.33" />

<CheckBox
    android:id="@+id/checkBox"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Remember Me"
    android:textSize="18sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent" /> <Button
    android:id="@+id/button_signIn"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:onClick="Save"
    android:text="Sign In"
    android:textSize="18sp"
    app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.216"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.639" /> <Button
    android:id="@+id/button_clear"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:onClick="clear"
    android:text="Clear"
```

```xml
            android:textSize="18sp"
            app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.526"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.758" /> <Button
            android:id="@+id/button_getData"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:onClick="Get"
            android:text="Get Data"
            android:textSize="18sp"

        app:layout_constraintBottom_toBottomOf="parent"
          app:layout_constraintEnd_toEndOf="parent"
         app:layout_constraintHorizontal_bias="0.848"
         app:layout_constraintStart_toStartOf="parent"
          app:layout_constraintTop_toTopOf="parent"
         app:layout_constraintVertical_bias="0.639" />
     </androidx.constraintlayout.widget.ConstraintLayout>
```

**MainActivity.java :**

```java
package com.example.practical14;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Context;
import android.content.SharedPreferences;
import android.os.Bundle;
import android.view.View;
import android.widget.CheckBox;
import android.widget.TextView;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
    SharedPreferences sharedPreferences;
    TextView password;
    TextView email;
    TextView mobile;
    CheckBox remember;
    public static final String mypreferences = "mypref";
    public static final String Email = "emailKey";
    public static final String Password = "passwordKey";
    public static final String Mobile = "mobileKey";
    @Override
```

```java
protected void onCreate(Bundle savedInstanceState) {

    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
        email = (TextView) findViewById(R.id.editText_email);
    password = (TextView) findViewById(R.id.editText_password); mobile
    = (TextView) findViewById(R.id.editText_mobile); remember =
    (CheckBox) findViewById(R.id.checkBox);
    sharedPreferences = getSharedPreferences(mypreferences,
            Context.MODE_PRIVATE);
    if (sharedPreferences.contains(Email)) {
                    email.setText(sharedPreferences.getString(Email, ""));
    }
    if (sharedPreferences.contains(Password)) {
        password.setText(sharedPreferences.getString(Password, " ")); }
    if (sharedPreferences.contains(Mobile)) {
        mobile.setText(sharedPreferences.getString(Mobile, " ")); }
}
public void Get(View view) {
        email = (TextView) findViewById(R.id.editText_email);
    password = (TextView) findViewById(R.id.editText_password); mobile
    = (TextView) findViewById(R.id.editText_mobile); sharedPreferences
    = getSharedPreferences(mypreferences, Context.MODE_PRIVATE);
    if (sharedPreferences.contains(Email)) {


        email.setText(sharedPreferences.getString(Email, " ")); }
    if (sharedPreferences.contains(Password)) {
        password.setText(sharedPreferences.getString(Password, " ")); }
    if (sharedPreferences.contains(Mobile)) {
                    mobile.setText(sharedPreferences.getString(Mobile, " "));
    }

}
public void Save(View view) {
    if (remember.isChecked()) {
        String e = email.getText().toString();
        String p = password.getText().toString();
        String m = mobile.getText().toString();
        SharedPreferences.Editor editor = sharedPreferences.edit();
        editor.putString(Email, e);
```
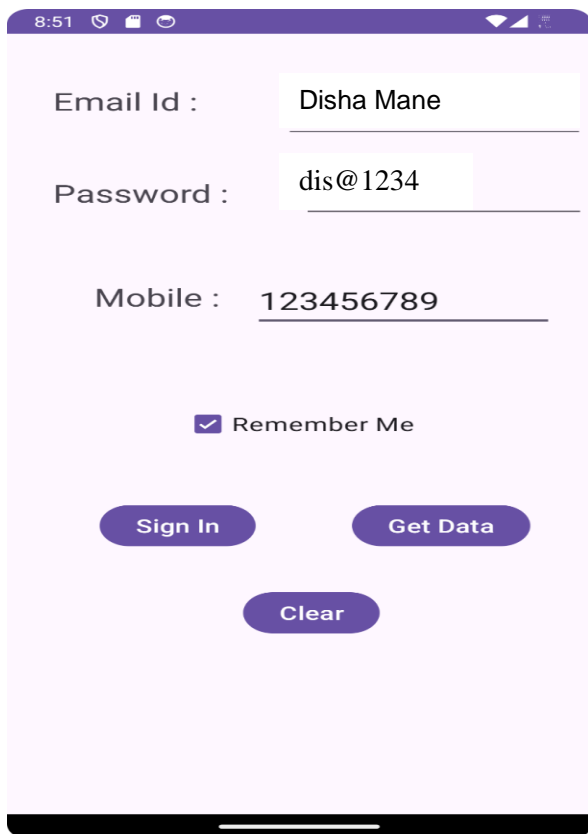
```
                editor.putString(Password, p);


                editor.putString(Mobile, m);
                editor.commit();
                Toast toast = Toast.makeText(getApplicationContext(), "Value stored in shared
preference",
                        Toast.LENGTH_SHORT);
                toast.show();
            }
        }
    public void clear(View view) {
                email = (TextView) findViewById(R.id.editText_email);
            password = (TextView) findViewById(R.id.editText_password); mobile
            = (TextView) findViewById(R.id.editText_mobile);
            email.setText(" ");
            password.setText(" ");
            mobile.setText(" ");
        }
}
```

**OUTPUT:**

# PRACTICAL No.14

**AIM: Create an Android Application to Create, Read and Delete file (Internal)**
**CODE:**
**activity_main.xml**

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

    <EditText
        android:id="@+id/txtcontent"
        android:layout_width="246dp"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_alignParentEnd="true"
        android:layout_alignParentRight="true"
        android:layout_marginTop="59dp"
        android:layout_marginEnd="162dp"
        android:layout_marginRight="162dp"
        android:ems="10"
        android:inputType="textPersonName" />

    <Button
        android:id="@+id/btnwrite"
        android:layout_width="103dp"
        android:layout_height="wrap_content"
        android:layout_alignStart="@+id/txtcontent"
        android:layout_alignLeft="@+id/txtcontent"
        android:layout_alignTop="@+id/btnread"
        android:layout_marginStart="277dp"
        android:layout_marginLeft="277dp"
        android:layout_marginTop="1dp"
        android:text="Write" />
```

```xml
<Button
    android:id="@+id/btnread"
    android:layout_width="100dp"
    android:layout_height="wrap_content"
    android:layout_alignParentTop="true"
    android:layout_marginTop="153dp"
    android:text="Read" />

<TextView
    android:id="@+id/textView"
    android:layout_width="259dp"
    android:layout_height="55dp"
    android:layout_alignParentStart="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentBottom="true"
    android:layout_marginStart="94dp"
    android:layout_marginLeft="94dp"
    android:layout_marginBottom="420dp"
    android:text="TextView" />

<Button
    android:id="@+id/btn_clear"
    android:layout_width="110dp"
    android:layout_height="34dp"
    android:layout_alignTop="@+id/btnwrite"
    android:layout_alignParentEnd="true"
    android:layout_alignParentRight="true"
    android:layout_marginStart="41dp"
    android:layout_marginLeft="41dp"
    android:layout_marginTop="1dp"
    android:layout_marginEnd="160dp"
    android:layout_marginRight="160dp"
    android:layout_toEndOf="@+id/btnread"
    android:layout_toRightOf="@+id/btnread"
    android:onClick="clearFile"
    android:text="Clear" />

<Button
    android:id="@+id/btn_delete"
    android:layout_width="126dp"
    android:layout_height="33dp"
```

```
                android:layout_alignTop="@+id/btn_clear"
                android:layout_alignParentEnd="true"
                android:layout_alignParentRight="true"
                android:layout_marginTop="44dp"
                android:layout_marginEnd="146dp"
                android:layout_marginRight="146dp"
                android:onClick="deleteFile"
                android:text="Delete" />
        </RelativeLayout>
```

**MainActivity.java :**

```java
package com.example.practical15;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.content.Context;
import android.view.View;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Button;
import android.widget.Toast;
import java.io.File;
import java.io.FileInputStream;
import java.io.FileOutputStream;
public class MainActivity extends AppCompatActivity {
    EditText et_Text;
    Button b_read, b_write, b_delete;
    TextView tv_Text;
    String file_name = "file.txt";
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        et_Text = (EditText) findViewById(R.id.txtcontent);
        b_read = (Button) findViewById(R.id.btnread);
        b_write = (Button) findViewById(R.id.btnwrite);
        tv_Text = (TextView) findViewById(R.id.textView);
        b_delete = (Button) findViewById(R.id.btn_delete);
            b_read.setOnClickListener(new View.OnClickListener() {
              @Override
              public void onClick(View view) {
                    tv_Text.setText(readFile(file_name));
              }
```

```java
        });

                b_write.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                            saveFile(file_name, et_Text.getText().toString());
Toast.makeText(MainActivity.this, "saved text", Toast.LENGTH_SHORT).show(); }
        });
    }
    public void saveFile(String file_name, String text) {
        try {
                    FileOutputStream fos = openFileOutput(file_name,
Context.MODE_PRIVATE);
            fos.write(text.getBytes());
            fos.close();
            Toast.makeText(MainActivity.this, "", Toast.LENGTH_SHORT).show(); } catch
(Exception e) {


            e.printStackTrace();
                    Toast.makeText(MainActivity.this, "Error saving
file",Toast.LENGTH_SHORT).show();
        }
    }
    public String readFile(String file_name) {
        String text = "";
        try {
                        FileInputStream fis = openFileInput(file_name); int size =
fis.available();
            byte[] buffer = new byte[size];
            fis.read(buffer);
            fis.close();
            text = new String(buffer);
        } catch (Exception e) {
            e.printStackTrace();
                Toast.makeText(MainActivity.this, "Error Read file",
                        Toast.LENGTH_SHORT).show();
        }
        return text;
    }
```
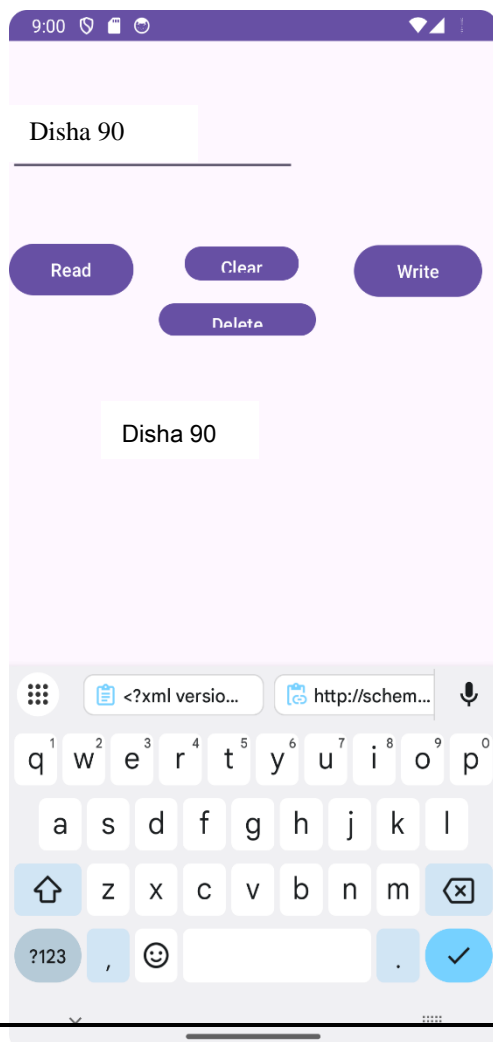
```java
    public void clearFile(View view) {
        et_Text.getText().clear();
    }


    public void deleteFile(View view) {
        File file = new File(getFilesDir(), file_name);
        if (file.exists()) {
            file.delete();
// deleteFile(filename);
            Toast.makeText(MainActivity.this, "file Deleted",
Toast.LENGTH_SHORT).show(); } else {
            Toast.makeText(MainActivity.this, "file not found",
Toast.LENGTH_SHORT).show();
        }
    }
}
```

**OUTPUT:**

# PRACTICAL No.15

**AIM: Create an Android Application to Start and Stop Alarm using Services**
**CODE:**

### activity_main.xml

```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"
    tools:context=".MainActivity">
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Start Stop"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:onClick="onClick"
        android:id="@+id/start"
        android:text="Start"/>
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:onClick="onClick"
        android:text="Stop"
        android:id="@+id/stop"/>
</LinearLayout>
```

### MainActivity.java :

```java
package com.example.myapplication2;

import androidx.appcompat.app.AppCompatActivity ;
import android.content.Intent;
import android.media.MediaPlayer;
import android.os.Bundle;
import android.provider.Settings;
import android.sax.StartElementListener;
import android.view.View;
import android.widget.Button;
public class MainActivity extends AppCompatActivity implements
```

```java
        View.OnClickListener{
        private Button b1,b2;
        @Override
        protected void onCreate(Bundle savedInstanceState) {
            super.onCreate(savedInstanceState);
            setContentView(R.layout.activity_main);
            b1=(Button)findViewById(R.id.start);
            b2=(Button)findViewById(R.id.stop);
            b1.setOnClickListener(this);
            b2.setOnClickListener(this);
        }
        public void onClick(View view) {
            if(view==b1)
            {
                startService(new Intent(this,MyService.class));
            }
            else
            {
                stopService(new Intent(this,MyService.class));
            }
        }
    }
```

## MyService.java:

```java
 package com.example.myapplication2;
import android.app.Service;
import android.content.Intent;
import android.media.MediaPlayer;
import android.os.IBinder;
import android.provider.Settings;
import androidx.annotation.Nullable;
public class MyService extends Service {
    public MyService() {
        super();
    }
    MediaPlayer m;
    @Override
    public int onStartCommand(Intent intent, int flags, int startId) {
        m=MediaPlayer.create(this, Settings.System.DEFAULT_RINGTONE_URI);
        m.setLooping(true);
        m.start();
        return START_STICKY;
    }
    @Override
    public void onDestroy() {
        super.onDestroy();
        m.stop();
    }
    @Nullable
    @Override
    public IBinder onBind(Intent intent) {
        return null;
    }
}
```
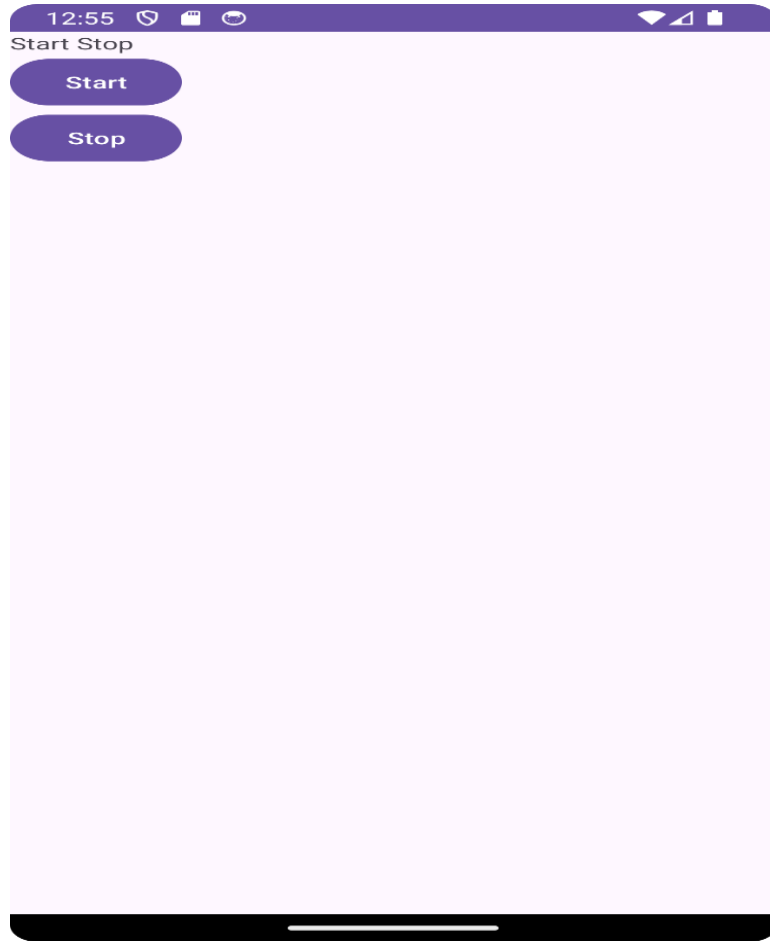
# PRACTICAL No.16

**AIM: Create an Android Application to get latitude and longitude of current location**

**CODE:**

**activity_main.xml**

```xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:gravity="center_horizontal"
        android:text="SaaP Group"
        android:textAlignment="center"
        android:textSize="30dp" />
    <TextView
        android:id="@+id/location"
        android:layout_width="338dp"
        android:layout_height="196dp"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_marginStart="22dp"
        android:layout_marginLeft="22dp"
        android:layout_marginTop="66dp"
        android:text="Text View" />
    <Button
        android:id="@+id/btn"
        android:layout_width="156dp"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentBottom="true"
        android:layout_marginStart="115dp"
        android:layout_marginLeft="115dp"
        android:layout_marginBottom="223dp"
        android:text="Location" />
</RelativeLayout>
```

**MainActivity.java :**

```java
package com.example.myapplication3;

import android.content.pm.PackageManager;
import android.location.Location;
import android.os.Build;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;
import androidx.annotation.RequiresApi;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.app.ActivityCompat;


import com.google.android.gms.location.FusedLocationProviderClient;
import com.google.android.gms.location.LocationServices;
import com.google.android.gms.tasks.OnSuccessListener;
import static android.Manifest.permission.ACCESS_FINE_LOCATION;
public class MainActivity extends AppCompatActivity {
    private FusedLocationProviderClient c1;
    @RequiresApi(api = Build.VERSION_CODES.M)
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        requestPermissions();
        c1=LocationServices.getFusedLocationProviderClient(this);
        Button btn1=(Button)findViewById(R.id.btn);
        btn1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {

if(ActivityCompat.checkSelfPermission(MainActivity.this,ACCESS_FI
NE_LOCATION)!=PackageManager.PERMISSION_GRANTED)
                {
                    return;
                }

c1.getLastLocation().addOnSuccessListener(MainActivity.this,new
                        OnSuccessListener<Location>()
                        {
                            @Override
                            public void onSuccess(Location
location){
                                if(location!=null)
                                {

                                    TextView
```
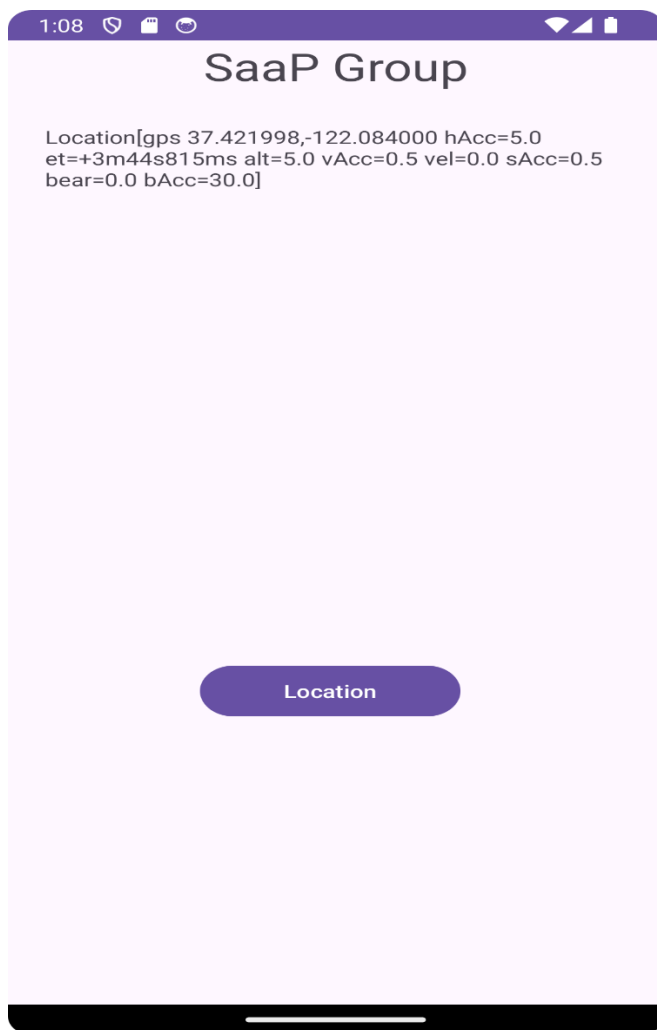
```
tv=(TextView)findViewById(R.id.location);

tv.setText(location.toString());
                                    }
                                }
                            });
                    }
                });
        }
    private void requestPermissions() {
            ActivityCompat.requestPermissions(this,new
String[]{ACCESS_FINE_LOCATION},1);
    }
}
```

**OUTPUT:**



1:08

# SaaP Group

Location[gps 37.421998,-122.084000 hAcc=5.0
et=+3m44s815ms alt=5.0 vAcc=0.5 vel=0.0 sAcc=0.5
bear=0.0 bAcc=30.0]

Location

# PRACTICAL No.17

**AIM: Create an Android application to Insert, Delete, Update and View the SQL DatabaseHelper**

**CODE:**

**activity_main.xml**

```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:background="#BAE4F6"
    android:orientation="vertical">
    <EditText
        android:id="@+id/text1"
        android:layout_width="100dp"
        android:layout_height="50dp"
        android:hint="Name"
        android:textSize="15sp" />
    <EditText
        android:id="@+id/text2"
        android:layout_width="100dp"
        android:layout_height="50dp"
        android:hint="Surname"
        android:textSize="15sp" />
    <EditText
        android:id="@+id/text3"
        android:layout_width="100dp"
        android:layout_height="50dp"
        android:hint="Marks."
        android:textSize="15sp" />
    <EditText
        android:id="@+id/text4"
        android:layout_width="100dp"
        android:layout_height="50dp"
        android:hint="Id"
        android:textSize="15sp" />
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:background="#F67979">
        <Button
            android:id="@+id/button1"

            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginLeft="10dp"
            android:layout_marginRight="5dp"
            android:text="Add" />
```

```xml
        <Button
            android:id="@+id/button2"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginRight="5dp"
            android:text="View" />
    <Button
        android:id="@+id/button3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"


        android:layout_marginRight="5dp"
        android:text="Update" />
    <Button
        android:id="@+id/button4"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginRight="5dp"
        android:text="Delete" />
    </LinearLayout>
</LinearLayout>
```

**MainActivity.java :**

```java
package com.example.myapplication4;

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 {
    DatabaseHelper myDb;
    EditText editName, editSurname, editMarks, editTextId;
    Button btnAddData;
    Button btnviewAll;
    Button btnDelete;
    Button btnviewUpdate;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        myDb = new DatabaseHelper(this);
```

```java
        editName = (EditText) findViewById(R.id.text1);

        editSurname = (EditText) findViewById(R.id.text2);
        editMarks = (EditText) findViewById(R.id.text3);
        editTextId = (EditText) findViewById(R.id.text4);
        btnAddData = (Button) findViewById(R.id.button1);
        btnviewAll = (Button) findViewById(R.id.button2);
        btnviewUpdate = (Button) findViewById(R.id.button3);
        btnDelete = (Button) findViewById(R.id.button4);
        AddData();
        viewAll();
        UpdateData();
        DeleteData();
    }
    public void DeleteData() {
        btnDelete.setOnClickListener(
                new View.OnClickListener() {
                    @Override


                    public void onClick(View v) {
                        Integer deletedRows =

myDb.deleteData(editTextId.getText().toString());
                        if (deletedRows >0)
                            Toast.makeText(MainActivity.this,
"Data Deleted",
                                    Toast.LENGTH_LONG).show();
                        else
                            Toast.makeText(MainActivity.this,
"Data not Deleted",
                                    Toast.LENGTH_LONG).show();
                    }
                }
        );
    }
    public void UpdateData() {
        btnviewUpdate.setOnClickListener(
                new View.OnClickListener() {
                    @Override
                    public void onClick(View v) {
                        boolean isUpdate =
myDb.updateData(editTextId.getText().toString(),
                                editName.getText().toString(),
```

```java
        editSurname.getText().toString(),
        editMarks.getText().toString());
                        if (isUpdate == true)
                            Toast.makeText(MainActivity.this,
"Data Update",

                                    Toast.LENGTH_LONG).show();
                        else
                            Toast.makeText(MainActivity.this,
"Data not Updated",

                                    Toast.LENGTH_LONG).show();
                    }
                }
        );
    }
    public void AddData() {
        btnAddData.setOnClickListener(
                new View.OnClickListener() {
                    @Override
                    public void onClick(View v) {
                        boolean isInserted =
myDb.insertData(editName.getText().toString(),
                                editSurname.getText().toString(),
                                editMarks.getText().toString());

                        if (isInserted == true)
                            Toast.makeText(MainActivity.this,
"Data Inserted",

                                    Toast.LENGTH_LONG).show();
                        else
                            Toast.makeText(MainActivity.this,
"Data not Inserted",

                                    Toast.LENGTH_LONG).show();


}
                }
        );
    }
    public void viewAll() {
        btnviewAll.setOnClickListener(
                new View.OnClickListener() {
                    @Override
                    public void onClick(View v) {
```

```java
Cursor res = myDb.getAllData();


if (res.getCount() == 0) {
// show message
                                showMessage("Error", "Nothing
found");
                                return;
                        }

                        StringBuffer buffer = new StringBuffer();

                        while (res.moveToNext()) {
                            buffer.append("Id :" +
res.getString(0) +
                                    "\n");
                            buffer.append("Name :" +
res.getString(1) +
                                    "\n");
                            buffer.append("Surname :" +
res.getString(2) +
                                    "\n");
                            buffer.append("Marks :" +
res.getString(3) +
                                    "\n\n");
                        }

                        showMessage("Data", buffer.toString());

                    }
                }
        );
    }
    public void showMessage(String title, String Message) {
        AlertDialog.Builder builder = new
AlertDialog.Builder(this);
        builder.setCancelable(true);
        builder.setTitle(title);
        builder.setMessage(Message);
        builder.show();
    }
}
```

**DatabaseHelper.java:**

```java
package com.example.myapplication4;
import static android.icu.lang.UProperty.NAME;
import static org.xmlpull.v1.XmlPullParser.TEXT;
import static java.sql.Types.INTEGER;
import android.content.ContentValues;

import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;
import android.content.Context;
public class DatabaseHelper extends SQLiteOpenHelper {
    public static final String DATABASE_NAME = "Student.db";
    public static final String TABLE_NAME = "student_table";
    public static final String COL_1 = "ID";
    public static final String COL_2 = "NAME";
    public static final String COL_3 = "SURNAME";
    public static final String COL_4 = "MARKS";
    public DatabaseHelper(Context context) {
        super(context, DATABASE_NAME, null, 1);
    }
    @Override
    public void onCreate(SQLiteDatabase db) {
        db.execSQL("create table " + TABLE_NAME + " (ID INTEGER PRIMARY KEY
AUTOINCREMENT,NAME TEXT,Surname TEXT,Marks INTEGER)");
    }
    @Override
    public void onUpgrade(SQLiteDatabase db, int i, int i1) {
        db.execSQL("DROP TABLE IF EXISTS " + TABLE_NAME);
        onCreate(db);
    }
    public boolean insertData(String name, String surname, String marks) {
        SQLiteDatabase db = this.getWritableDatabase();
        ContentValues contentValues = new ContentValues();
        contentValues.put(COL_2, name);
        contentValues.put(COL_3, surname);
        contentValues.put(COL_4, marks);
        long result = db.insert(TABLE_NAME, null, contentValues);
        if (result == -1)
            return false;
        else
            return true;
    }
    public Cursor getAllData() {
        SQLiteDatabase db = this.getWritableDatabase();
        Cursor res = db.rawQuery("select * from " + TABLE_NAME, null);
        return res;
    }
    public boolean updateData(String id, String name, String surname, String
            marks) {
        SQLiteDatabase db = this.getWritableDatabase();
        ContentValues contentValues = new ContentValues();
        contentValues.put(COL_1, id);
```

```
        contentValues.put(COL_2, name);
        contentValues.put(COL_3, surname);
        contentValues.put(COL_4, marks);
        db.update(TABLE_NAME, contentValues, "ID = ?", new String[]{id});
        return true;
    }

    public Integer deleteData(String id) {
        SQLiteDatabase db = this.getWritableDatabase();
        return db.delete(TABLE_NAME, "ID = ?", new String[]{id});
    }
}
```

## OUTPUT:

# PRACTICAL No.18

**AIM: Create an Android Application to download an image using HTTPURLConnection**

**CODE:**

**Activity_main.xml:**

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Disha 90"
        android:textSize="25sp" />
    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:text="Web Page Image"
        android:textSize="30sp"
        android:textStyle="bold"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.078" />
    <ImageView
        android:id="@+id/imageView"
        android:layout_width="337dp"
        android:layout_height="487dp"
        android:layout_below="@+id/textView"
        android:layout_centerHorizontal="true"
        app:layout_constraintBottom_toBottomOf="parent"
```

```xml
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerInParent="true"
        android:text="Download"
            android:textAppearance="@style/TextAppearance.AppCompat.Display1"
        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.939" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

**MainActivity.java**:

```java
package com.example.myapplication11;

import androidx.appcompat.app.AppCompatActivity;
import android.annotation.SuppressLint;
import android.app.ProgressDialog;
import android.graphics.Bitmap;
import android.graphics.BitmapFactory;
import android.net.ConnectivityManager;
import android.os.Bundle;
import android.os.Handler;
import android.os.Message;
import android.view.View;
import android.widget.Button;
import android.widget.ImageView;
import android.widget.Toast;
import java.io.IOException;
import java.io.InputStream;
import java.net.HttpURLConnection;
import java.net.MalformedURLException;
import java.net.URL;
import java.net.URLConnection;
public class MainActivity extends AppCompatActivity
```

```java
{
    private ProgressDialog progressDialog;
    private Bitmap bitmap = null;
    Button b1;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        b1 = (Button)findViewById(R.id.button);
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                checkInternetConenction();

downloadImage("https://lh3.googleusercontent.com/pw/ADCreHfyxK4eQokq0Hu8sOZ
U2Bfb_9CH9583N1FkMvWBPwDGo6TgfjD2Zex-
7nnyNsGD19mm2QiQVd1wUKSlxVBBgqnTIUCKXTOMCr
7mfrmWhSqDjSpNdoic- qp
mIBocA62iSj3boO1FwTxte1LNnf98AzC46eRv9cnI9aBLqNZIeqN1o_y99FcHkAT4nAM
QfvQg9h WO9SLdx1RAmk4omono-BgLUmW2_bB3Y6UaPtoBbncnqLe315K-
_abgBxiXW99bIIJaYcD6DnUhIK6mfs5pbpbWklZKB7DSikA
bYGMWiKWNMVluS2NtV5DIrBM06HHrGMcP6R3hRR2HoRJz5FVIT5EV1ELMjUJV
81WoAj8ZrRI5Kg
L_y9HOYvJauyZY9sDZBRl_exScP4ecCggQBWK63a9QSQoTjpHgqHyDcqwswh7yPjK
7pSvjyuxiC 89W2i89YRnuwi1Mv0hsL9k6Mw_lApwBh9yo3S41L
4Qg_2Gcuq3vtgPykBIcT6wWPsCgFzP0lVo37IVHD31yXuEgp46n0ReSsoEq7EAN4dN_
JGWTTjrQ B2-9p2luoaq9A7co9TiHRIEqIsXXP8sNUFIQ7o7bUIzKhv_3ANCc6xy--
WvzbEUjamXEHz8vhKUl77u2Abk6YJTiLRceNetLuARldUHjBx5c33Ifci4rgi4f_sjXUlE5
itOf WTe08Eb1tWqsQK8FTY7v1-
56Y4Eg6_JAvfkBgSVyMSFvrWlZEVLz6aOCIJQRapCM
fA0STOY4a_Y5qsT50O7IK5O9D_yYkzeTqjPJ3ARgKv3-
IxNzh55Hkx1myzUbcBE30Is0nki9rNzGSNplHv0UxJa9e-ytf
WguItgSXUgoXu5DQa3x2INDjl0_VlzrS0C-uKKqfzNx-
J9yfguxZQGSbvnKvPvkcx1xiw=w727- h969-s-no-gm?authuser=2;");
            }
        });
    }
    private void downloadImage(String urlStr)
    {
        progressDialog = ProgressDialog.show(this, "", "Downloading Image from " +
                urlStr);
        final String url = urlStr;
```

```java
new Thread() {
    public void run()
    {
        InputStream in = null;
        Message msg = Message.obtain();
        msg.what = 1;
        try
        {
            in = openHttpConnection(url);
                bitmap = BitmapFactory.decodeStream(in);
            Bundle b = new Bundle();
                b.putParcelable("bitmap", bitmap);
            msg.setData(b);
            in.close();
        }
        catch (Exception e1 )
        {
            e1.printStackTrace();
        }
        messageHandler.sendMessage(msg);
    }
}.start();
}


private InputStream openHttpConnection(String urlStr)
{
    InputStream in = null;
    int resCode = -1;
    try {
        URL url = new URL(urlStr);
            URLConnection urlConn = url.openConnection();
        if(!(urlConn instanceof HttpURLConnection))
        {
            throw new IOException("URL is not an Http URL");
        }
        HttpURLConnection httpConn = (HttpURLConnection) urlConn;
        httpConn.setAllowUserInteraction(false);
        httpConn.setInstanceFollowRedirects(true);
        httpConn.setRequestMethod("GET");
```

```java
                httpConn.connect();
                resCode = httpConn.getResponseCode();
                if (resCode == HttpURLConnection.HTTP_OK)
                {
                     in = httpConn.getInputStream();
                }
        }
        catch (MalformedURLException e)

        {
            e.printStackTrace();
        }
        catch (IOException e)
        {
            e.printStackTrace();
        }
        return in;
    }
    public Handler messageHandler = new Handler()
    {
        public void handleMessage(Message msg)
        {
            super.handleMessage(msg);
              ImageView img=(ImageView)findViewById(R.id.imageView);
            img.setImageBitmap((Bitmap)
                         (msg.getData().getParcelable("bitmap")));
            progressDialog.dismiss();
        }
    };
    private boolean checkInternetConenction() {
// get Connectivity Manager object to check connection
        ConnectivityManager connec =


 (ConnectivityManager)getSystemService(getBaseContext().CONNECTIVITY_SERVICE );
        if (connec.getNetworkInfo(0).getState() ==
                     android.net.NetworkInfo.State.CONNECTED ||
                  connec.getNetworkInfo(0).getState() ==
                         android.net.NetworkInfo.State.CONNECTING ||
```

```java
                    connec.getNetworkInfo(1).getState() ==

                            android.net.NetworkInfo.State.CONNECTING ||
                connec.getNetworkInfo(1).getState()
                            ==android.net.NetworkInfo.State.CONNECTED )
        {
            Toast.makeText(this, "Connected", Toast.LENGTH_LONG).show();
            return true;
        }
        else if (connec.getNetworkInfo(0).getState() ==
                    android.net.NetworkInfo.State.DISCONNECTED ||
                connec.getNetworkInfo(1).getState() ==
                            android.net.NetworkInfo.State.DISCONNECTED )
        {
            Toast.makeText(this,"Not Connected", Toast.LENGTH_LONG).show();
            return false;
        }
        return false;
    }
}
```

**AndroidManifest.xml**

```xml
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.myapplication11">
    <uses-permission android:name="android.permission.INTERNET"/>

    <uses-permission android:name="android.permission.ACCESS_NETWORK_STATE" />
    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.MyApplication11">
        <activity
            android:name=".MainActivity"
            android:exported="true">
            <intent-filter>
                    <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
```

```
            </intent-filter>
        </activity>

    </application>
</manifest>
```

**OUTPUT:**
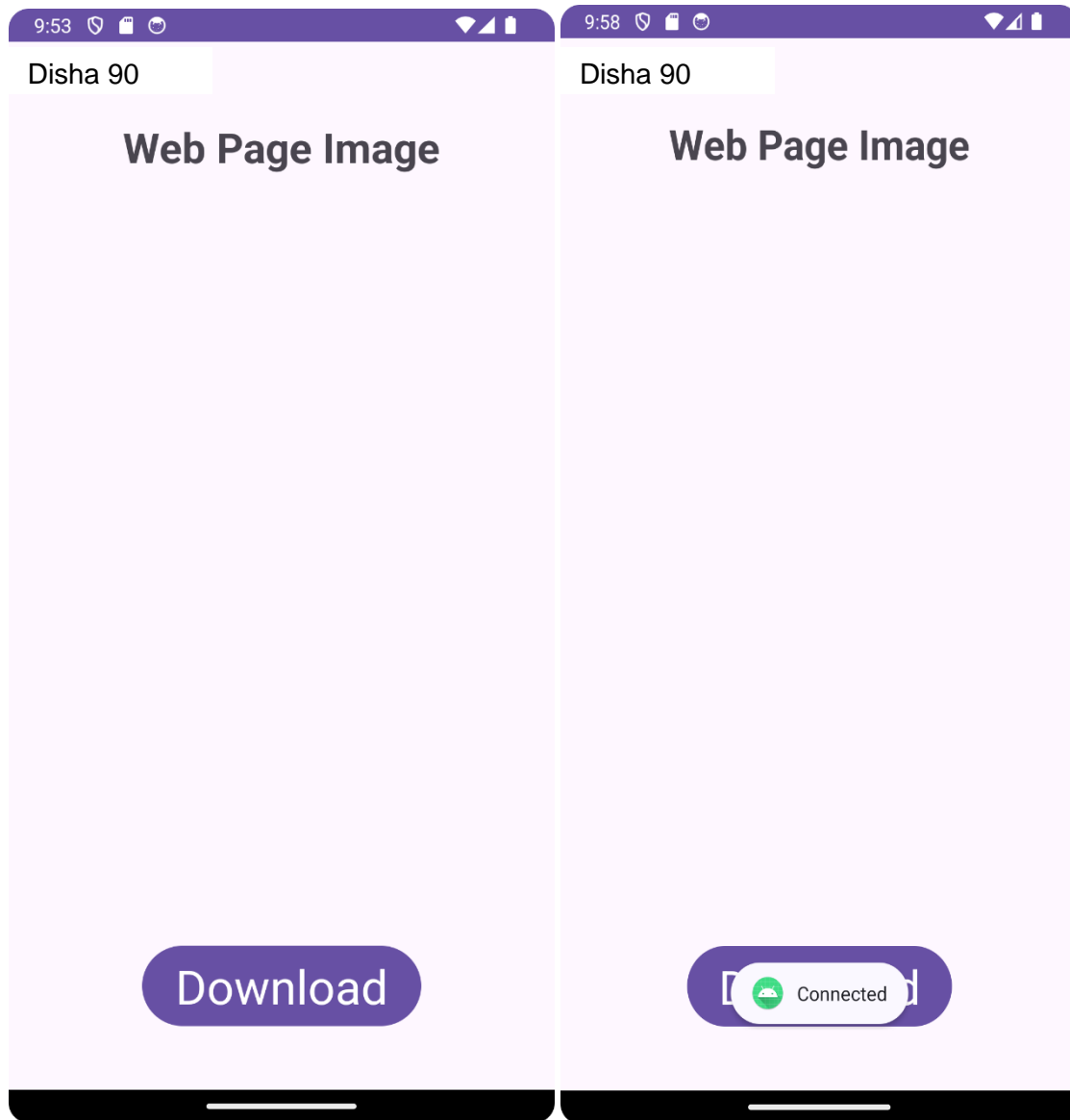
# PRACTICAL No.19

**AIM: Create an Android Application to accept a user name and password and redirect to next page if it is right and 3 attempt only if it is wrong**
**CODE:**
**activity_main.xml**

```xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <EditText
        android:id="@+id/et1"
        android:layout_width="300dp"
        android:layout_height="50dp"
        android:layout_marginTop="120dp"
        android:ems="10"
        android:inputType="textPersonName"
        android:textSize="25sp" />
    <EditText
        android:id="@+id/et2"
        android:layout_width="300dp"
        android:layout_height="50dp"
        android:layout_below="@id/txt4"
        android:ems="10"
        android:inputType="textPassword"
        android:textSize="25sp" />
    <Button
        android:id="@+id/button1"
        android:layout_width="341dp"
        android:layout_height="wrap_content"
        android:layout_below="@id/et2"
        android:layout_centerHorizontal="true"
        android:layout_marginBottom="200dp"
        android:text="Login"
        android:textColor="#01090F"
        android:textSize="36sp" />
    <TextView
        android:id="@+id/txt3"
```

```xml
android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="85dp"
    android:text="User Name"
    android:textSize="25sp" />
  <TextView
    android:id="@+id/txt4"

    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@id/et1"
    android:text="Password"
    android:textSize="25sp" />
</RelativeLayout>
```

**MainActivity.java:**

```java
package com.example.wrongattempts;

import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;
import android.content.DialogInterface;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
public class MainActivity extends AppCompatActivity {
  Button button1;
  EditText et1, et2;
  String username, password;
  int attempt_counter;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    button1 = (Button) findViewById(R.id.button1);
    et1 = (EditText) findViewById(R.id.et1);
    et2 = (EditText) findViewById(R.id.et2);
    button1.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View view) {
        username = et1.getText().toString();
```

```java
password = et2.getText().toString();

if (username.equals("Disha") &password.equals("1234")) {
            Intent intent = new Intent(MainActivity.this,
                welcome.class);
            String message = et1.getText().toString();
            intent.putExtra("hello", message);

            startActivity(intent);

        } else {
          attempt_counter++;
          if (attempt_counter == 3) {
            button1.setEnabled(false);
            AlertDialog.Builder a_builder = new
                  AlertDialog.Builder(MainActivity.this);
            a_builder.setMessage("3 attempt made")
                  .setCancelable(false)


    .setNegativeButton("OK", new DialogInterface.OnClickListener() {
                        @Override
                        public void onClick(DialogInterface dialog, int i) {

                            dialog.cancel();
                        }
                    });
            AlertDialog alert = a_builder.create();

            alert.setTitle("Retry!!");
            alert.show();

        }

        AlertDialog.Builder a_builder = new

              AlertDialog.Builder(MainActivity.this);
        a_builder.setMessage("Incorrect username or password "
                  + attempt_counter + " attempts made")
              .setCancelable(false)

              .setNegativeButton("OK", new DialogInterface.OnClickListener() {
                    public void onClick(DialogInterface dialog, int which) {
```

```java
                dialog.cancel();
                  }
               });



AlertDialog alert = a_builder.create();
            alert.setTitle("Alert!!");
            alert.show();
          }
        }
    });
  }
}
```

**activity_welcome.xml**

```xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
  xmlns:app="http://schemas.android.com/apk/res-auto"
  xmlns:tools="http://schemas.android.com/tools"
  android:layout_width="match_parent"
  android:layout_height="match_parent"
  tools:context=".welcome">
  <TextView
    android:id="@+id/textView"
    android:layout_width="364dp"
    android:layout_height="70dp"
    android:layout_alignParentStart="true"
    android:layout_alignParentLeft="true"




  android:layout_alignParentTop="true"
    android:layout_marginStart="29dp"
    android:layout_marginLeft="29dp"
    android:layout_marginTop="264dp"
    android:textSize="30dp" />
</RelativeLayout>
```

**welcome.java**

```java
package com.example.wrongattempts;

import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.widget.TextView;
public class welcome extends AppCompatActivity {
    TextView textView;

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

        Intent intent = getIntent();
        String message = intent.getStringExtra("hello");
        textView = findViewById(R.id.textView);
        textView.setText("Welcome " + message);
    }
}
```

**OUTPUT:**
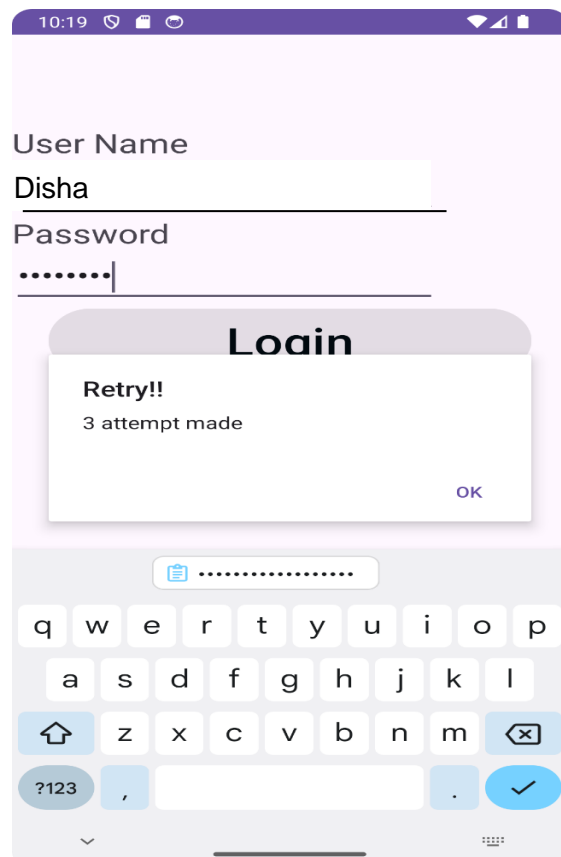
# PRACTICAL No.20

**AIM: Create an Android Application to read and display JSON data**

**CODE:**
**activity_main.xml**

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

  <TextView
    android:id="@+id/tv1"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:gravity="center_horizontal"
    android:text="SaaP Group"
    android:textAlignment="center"
    android:textColor="@android:color/holo_blue_light"
    android:textSize="25sp" />

  <TextView
    android:id="@+id/text_view_result"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@+id/tv1"
    android:textColor="@android:color/holo_blue_light"
    android:textSize="20sp" />

  <Button
    android:id="@+id/button_parse"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentBottom="true"
    android:layout_centerHorizontal="true"
    android:layout_marginBottom="30dp"
    android:text="Parse" />

</RelativeLayout>
```

**MainActivity.java:**

```java
package com.example.json;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;

import androidx.appcompat.app.AppCompatActivity;

import com.android.volley.Request;
import com.android.volley.RequestQueue;
import com.android.volley.Response;
import com.android.volley.VolleyError;
import com.android.volley.toolbox.JsonObjectRequest;
import com.android.volley.toolbox.Volley;

import org.json.JSONArray;
import org.json.JSONException;
import org.json.JSONObject;

public class MainActivity extends AppCompatActivity {
    private TextView mText;
    private RequestQueue mQueue;

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

        mText = findViewById(R.id.text_view_result);
        Button buttonParse = findViewById(R.id.button_parse);
        mQueue = Volley.newRequestQueue(this);

        buttonParse.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                jsonParse();
            }
        });
    }
    private void jsonParse() {
```

```java
String url = "https://api.npoint.io/5dfba5bca6ed3c48c80a";

    JsonObjectRequest request = new JsonObjectRequest(
        Request.Method.GET, url, null,
        new Response.Listener<JSONObject>() {
          @Override
          public void onResponse(JSONObject response) {
            try {
              JSONArray jsonArray = response.getJSONArray("cars");



 for (int i = 0; i < jsonArray.length(); i++) {
                    JSONObject cars = jsonArray.getJSONObject(i);

                    String color = cars.getString("color");
                    String brand = cars.getString("brand");


                    mText.append(color + ", " +brand + "\n\n");
                  }
              } catch (JSONException e) {
                e.printStackTrace();
              }
          }
        },
        new Response.ErrorListener() {
          @Override
          public void onErrorResponse(VolleyError error) {
            error.printStackTrace();
          }
        }
    );

    mQueue.add(request);
  }
}
```

**Build.gradel(app)**

```gradle
plugins {
  alias(libs.plugins.android.application)
}
```

```
android {
  namespace = "com.example.json"

compileSdk = 34

  defaultConfig {
    applicationId = "com.example.json"
    minSdk = 34
    targetSdk = 34
    versionCode = 1
    versionName = "1.0"

    testInstrumentationRunner = "androidx.test.runner.AndroidJUnitRunner"
  }

  buildTypes {
    release {
      isMinifyEnabled = false
      proguardFiles(


 getDefaultProguardFile("proguard-android-optimize.txt"),
        "proguard-rules.pro"
      )
    }
  }
  compileOptions {
    sourceCompatibility = JavaVersion.VERSION_1_8
    targetCompatibility = JavaVersion.VERSION_1_8
  }
}

dependencies {

  implementation(libs.appcompat)
  implementation(libs.material)
  implementation(libs.activity)
  implementation(libs.constraintlayout)
  implementation("com.android.volley:volley:1.2.1")
  testImplementation(libs.junit)
  androidTestImplementation(libs.ext.junit)
  androidTestImplementation(libs.espresso.core)
}
```

**AndroidManifest.xml**

```xml
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools">


    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Json"
        tools:targetApi="31">
        <activity
            android:name=".MainActivity"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>
    <uses-permission android:name="android.permission.INTERNET"/>


</manifest>
```

## OUTPUT:
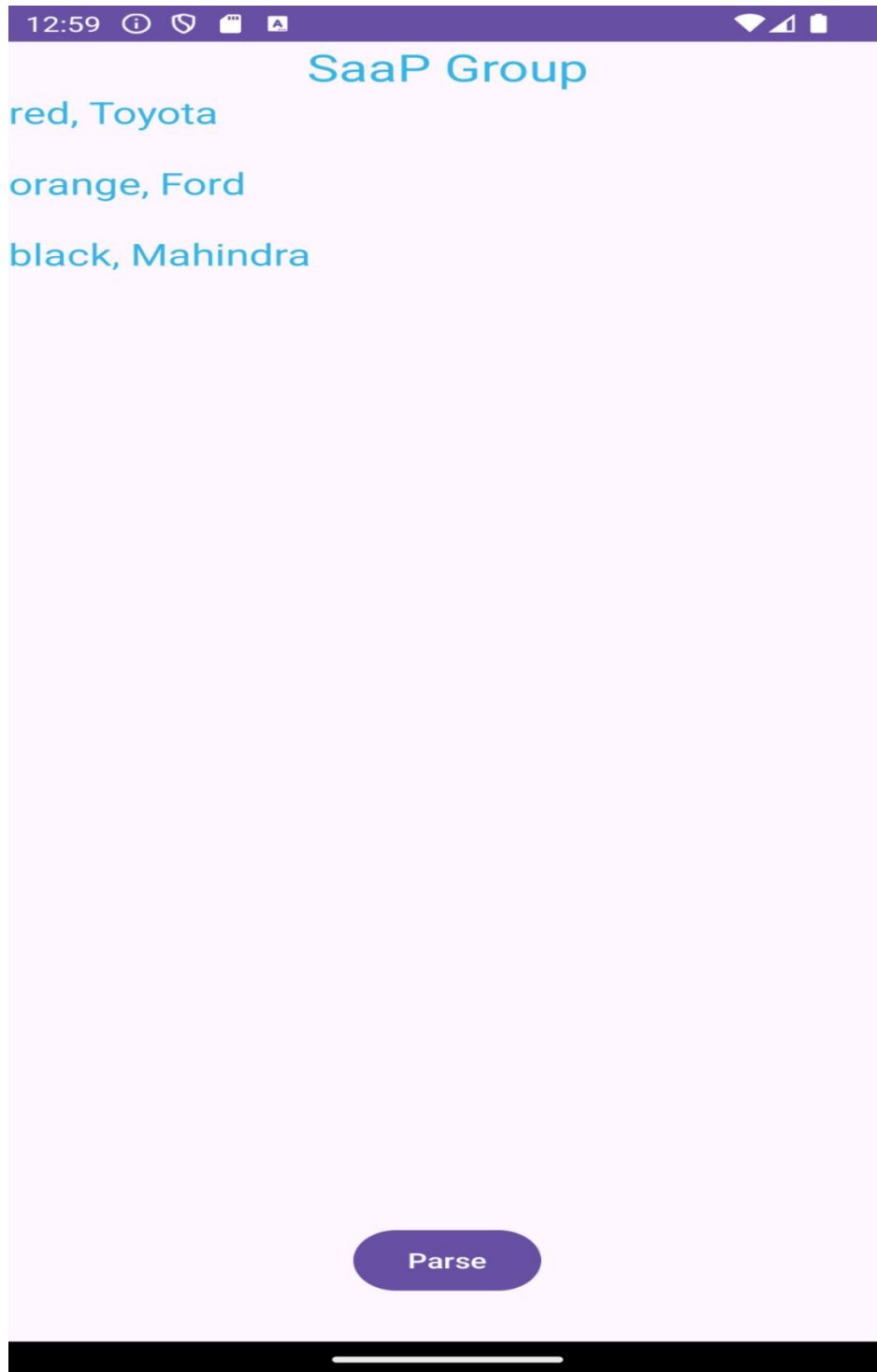
To format and validate your JSON, just copy + paste it below:

```
1 ▾ {
2 ▾    "cars": [
3 ▾        {
4              "color": "red",
5              "brand": "Toyota"
6          },
7 ▾        {
8              "color": "orange",
9              "brand": "Ford"
10         },
11 ▾       {
12             "color": "black",
13             "brand": "Mahindra"
14         }
15      ]
16 }
```

**Validate JSON**    Clear    Compress

JSON is valid!

## OUTPUT:

12:59

# SaaP Group

red, Toyota

orange, Ford

black, Mahindra

**Parse**

# PRACTICAL N0.21

**AIM: Create a Flutter Application to display the message.**
**CODE:**

```dart
import 'package:flutter/material.dart';

void main() {
 runApp(const MyApp()); }
class MyApp extends StatelessWidget {
 const MyApp({super.key});
  @override  Widget build(BuildContext context) {
   return MaterialApp(      title: 'Flutter Demo',
    theme: ThemeData(        colorScheme: ColorScheme.fromSeed(seedColor:
Colors.deepPurple),        useMaterial3: true,      ),      home: const MyHomePage(title: 'Flutter
Demo Home Page'),    );
} }
class MyHomePage extends StatelessWidget {
 const MyHomePage({super.key, required this.title});
 final String title;
@override
Widget build(BuildContext context) {
 return Scaffold(
   appBar: AppBar(        backgroundColor: Theme.of(context).colorScheme.inversePrimary,
title: Text(title),      ),      body: Center(        child: Column(        mainAxisAlignment:
MainAxisAlignment.center,        children: const <Widget>[        Text(          'Hello,
Flutter! Disha Mane 90',          style: TextStyle(fontSize: 24),
),
],
),
),
);
}
}
```
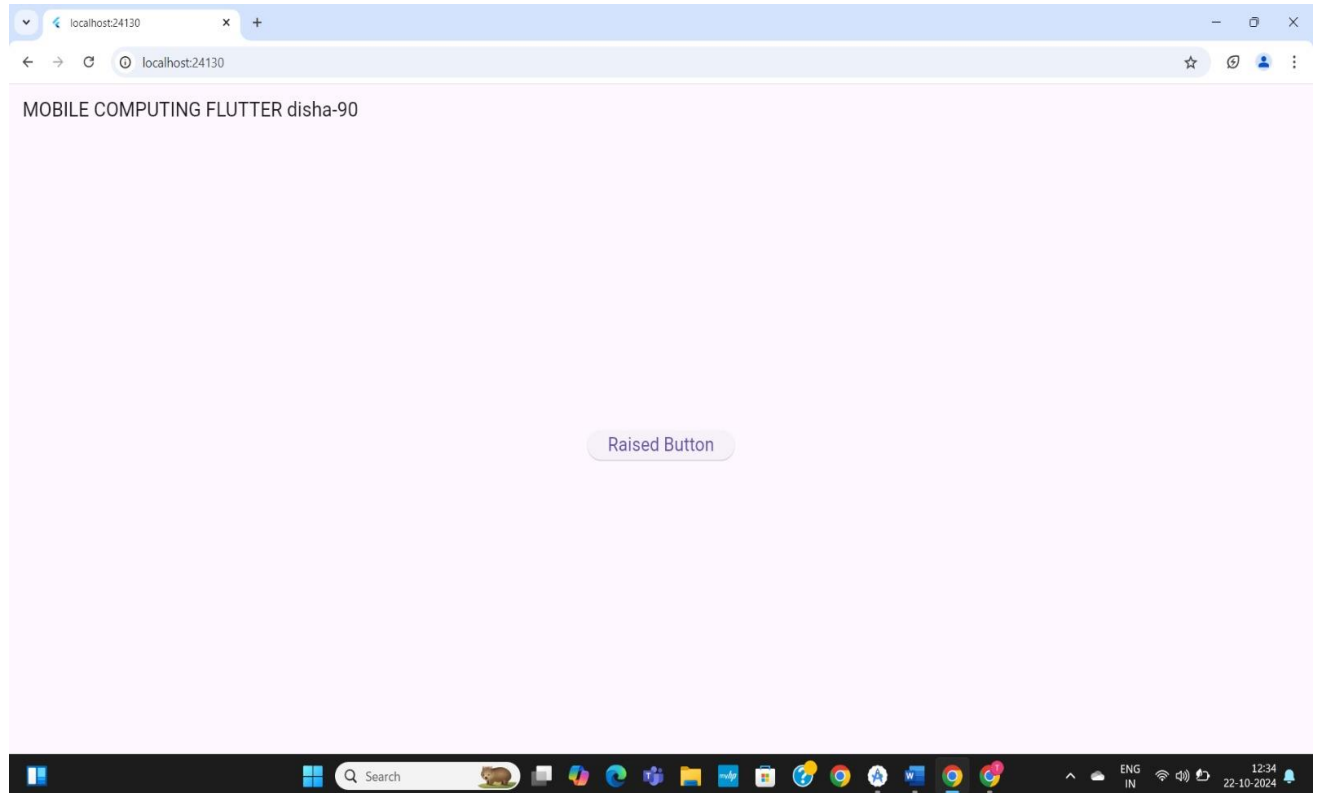
**OUTPUT:**
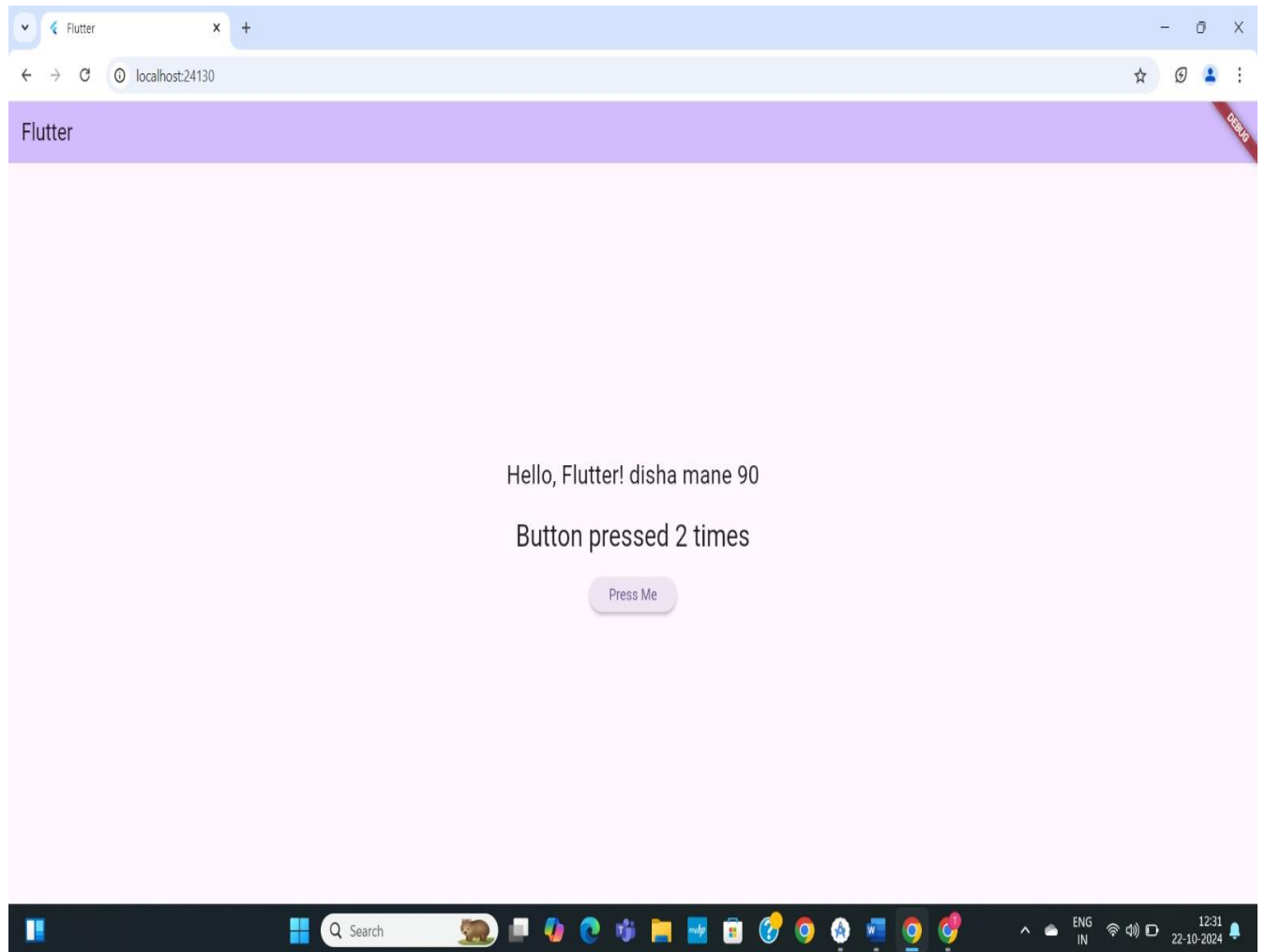
# PRACTICAL No.22

**AIM: Create a Flutter Application to display the Raised Button**
**CODE:**

```
import 'package:flutter/material.dart';

void main() {
 runApp(const MyApp());
}
class MyApp extends StatelessWidget {
 const MyApp({Key? key}) : super(key: key);
 @override
 Widget build(BuildContext context) {
  return MaterialApp(
     debugShowCheckedModeBanner: false,
     home: Scaffold(
      appBar: AppBar(
       title: Text('MOBILE COMPUTING FLUTTER Disha 90),
      ),
      body: Center(
         child: ElevatedButton(
          onPressed: () {},
          child: Text("Raised Button", style: TextStyle(fontSize: 20.0)),
        )),
     ));
 }
}
```
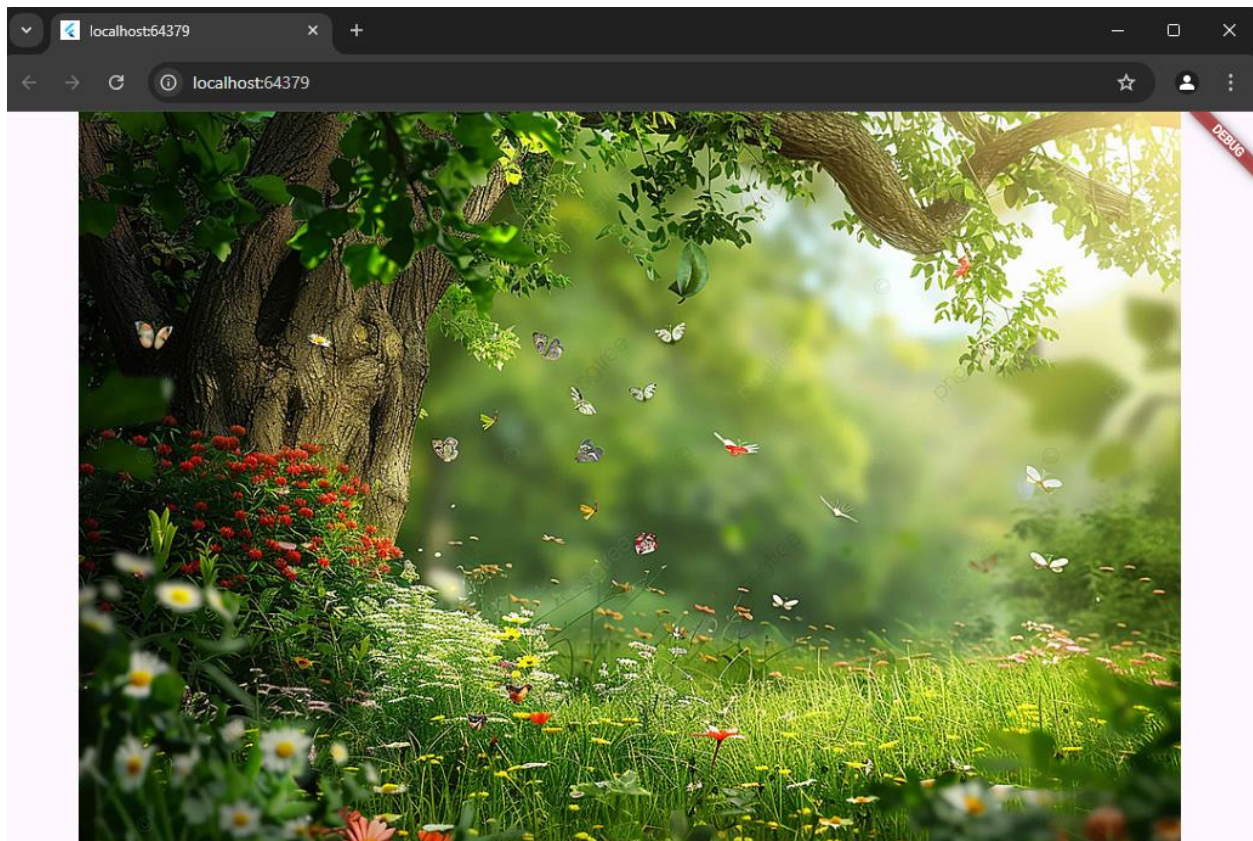
# PRACTICAL No.23

**AIM: Create a Flutter Application to display an image.**
**CODE:**

```
import 'package:flutter/material.dart';

void main() {
 runApp(MaterialApp(
  home: Scaffold(
   body: Center(
      child: Image.network('https://png.pngtree.com/thumb_back/fw800/background/20240601/pngtree-
picsart-editing-background-with-nature-and-tree-google-vignette-photos-image_15846438.jpg')
   ),
  ),
 ));
}
```
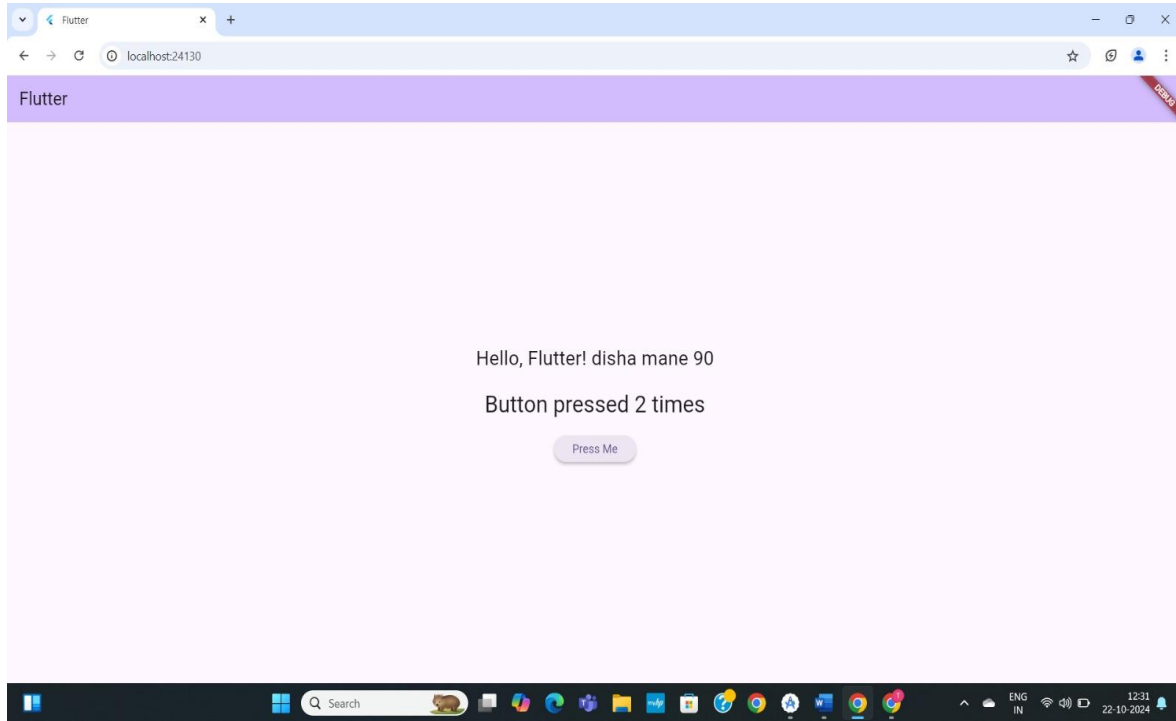
# PRACTICAL No.24

**AIM: Create a Flutter Application to display the message how many times the button has been clicked.**

**CODE:**

```
import 'package:flutter/material.dart';
void main() {  runApp(const MyApp()); }
class MyApp extends StatelessWidget {  const MyApp({super.key});
@override  Widget build(BuildContext context) {  return MaterialApp(   title: 'Flutter',
theme: ThemeData(     colorScheme: ColorScheme.fromSeed(seedColor: Colors.deepPurple),
useMaterial3: true,   ),   home: const MyHomePage(title: 'Flutter'),   );
} }
class MyHomePage extends StatefulWidget {  const MyHomePage({super.key, required
this.title});  final String title;
@override
_MyHomePageState createState() => _MyHomePageState(); }
class _MyHomePageState extends State<MyHomePage> {  int _counter = 0;
void _incrementCounter() {   setState(() {    _counter++;
});
}
@override  Widget build(BuildContext context) {   return Scaffold(    appBar: AppBar(
backgroundColor: Theme.of(context).colorScheme.inversePrimary,    title: Text(widget.title),
),   body: Center(    child: Column(     mainAxisAlignment: MainAxisAlignment.center,
children: <Widget>[     const Text(       'Hello, Flutter! Disha Mane 90,       style:
TextStyle(fontSize: 24),       ),
const SizedBox(height: 20),     Text(       'Button pressed $_counter times',
style: Theme.of(context).textTheme.headlineMedium,       ),
const SizedBox(height: 20),     ElevatedButton(       onPressed: _incrementCounter,
child: const Text('Press Me'),       ),
],
),
),
);
}
}
```

**OUTPUT:**



**OUTPUT:**

# PRACTICAL No.25

**AIM:** Create a Flutter Application to display a form

**CODE:**

```dart
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      debugShowCheckedModeBanner: false,
      theme: ThemeData(
        primarySwatch: Colors.green, // Set the app's primary theme color
      ),
      title: 'Flutter Form Example',
      home: MyForm(),
    );
  }
}

class MyForm extends StatefulWidget {
  @override
  _MyFormState createState() => _MyFormState();
}

class _MyFormState extends State<MyForm> {
  final GlobalKey<FormState> _formKey = GlobalKey<FormState>(); // A key for managing the form
  String _name = ''; // Variable to store the entered name
  String _email = ''; // Variable to store the entered email

  void _submitForm() {
    // Check if the form is valid
    if (_formKey.currentState!.validate()) {
      _formKey.currentState!.save(); // Save the form data
      // You can perform actions with the form data here and extract the details
      print('Name: $_name'); // Print the name
      print('Email: $_email'); // Print the email
    }
  }
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text('Flutter Form Example'),
```

```
      ),

  body: Form(
      key: _formKey, // Associate the form key with this Form widget
      child: Padding(
        padding: EdgeInsets.all(16.0),
        child: Column(
          children: <Widget>[
            TextFormField(
              decoration: InputDecoration(labelText: 'Name'), // Label for the name field
              validator: (value) {
                // Validation function for the name field
                if (value!.isEmpty) {
                  return 'Please enter your name.'; // Return an error message if the name is empty
                }
                return null; // Return null if the name is valid
              },
              onSaved: (value) {
                _name = value!; // Save the entered name
              },
            ),
            TextFormField(
              decoration: InputDecoration(labelText: 'Email'), // Label for the email field
              validator: (value) {
                // Validation function for the email field
                if (value!.isEmpty) {
                  return 'Please enter your email.'; // Return an error message if the email is empty
                }
                // You can add more complex validation logic here
                return null; // Return null if the email is valid
              },
              onSaved: (value) {
                _email = value!; // Save the entered email
              },
            ),
            SizedBox(height: 20.0),
            ElevatedButton(
              onPressed: _submitForm, // Call the _submitForm function when the button is pressed
              child: Text('Submit'), // Text on the button
            ),
          ],
        ),
      ),
    ),
  );
 }
}
```

**OUTPUT:**