Practical No.: 7

Aim: Create an android application for File Handling (Read & Write)

Source Code:

Granting Permission to Read and Write in Internal Storage

AndroidManifest.xml

```xml
<uses-permission android:name="android.permission.WRITE_INTERNAL_STORAGE"/>
<uses-permission android:name="android.permission.READ_INTERNAL_STORAGE"/>
```

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:layout_width="349dp"
        android:layout_height="wrap_content"
        android:id="@+id/edt1"
        android:hint="@string/type_here"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="88dp"/>

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/btn2"
        android:text="@string/write"
        android:layout_alignParentEnd="true"
        android:layout_alignTop="@id/btn1"
        android:layout_marginEnd="136dp"
        android:textSize="18sp"
        android:textStyle="bold"
        android:layout_marginRight="136dp"
        android:layout_alignParentRight="true" />

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/btn3"
        android:text="@string/delete"
        android:textStyle="bold"
        android:layout_alignParentEnd="true"
        android:layout_alignTop="@+id/btn1"
        android:layout_marginEnd="30dp"
        android:textSize="18sp"
```

```xml
        android:layout_alignParentRight="true"
        android:layout_marginRight="30dp" />

    <TextView
        android:layout_width="340dp"
        android:layout_height="219dp"
        android:id="@+id/txtVw"
        android:layout_alignParentBottom="true"
        android:layout_alignStart="@+id/btn1"
        android:layout_marginBottom="58dp"
        android:layout_marginStart="-25dp"
        android:scrollbars="horizontal|vertical"
        android:singleLine="false"
        android:visibility="visible"
        android:layout_marginLeft="-25dp"
        android:layout_alignLeft="@+id/btn1" />

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/btn1"
        android:text="Read"
        android:layout_marginStart="18dp"
        android:textSize="18sp"
        android:textStyle="bold"
        android:layout_above="@+id/txtVw"
        android:layout_alignStart="@id/edt1"
        android:layout_alignLeft="@id/edt1"
        android:layout_marginLeft="18dp" />
</RelativeLayout>
```

MainActivity.java

```java
package com.example.practical_no_7;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;

import java.io.File;
import java.io.FileInputStream;
import java.io.FileNotFoundException;
import java.io.FileOutputStream;
import java.io.IOException;

public class MainActivity extends AppCompatActivity {

    EditText e1;
    Button b1,b2,b3;
    TextView txt1;
```

```java
    String fileName="LabFile.txt";
    String message;
    FileOutputStream fos;
    FileInputStream fin;
    File file;

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

    e1=findViewById(R.id.edt1);
    b1=findViewById(R.id.btn1);
    b2=findViewById(R.id.btn2);
    b3=findViewById(R.id.btn3);
    txt1=findViewById(R.id.txtVw);

    b2.setOnClickListener(
        new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                message=e1.getText().toString();
                try {
                    fos=openFileOutput(fileName,MODE_PRIVATE);
                    fos.write(message.getBytes());
                    fos.close();
                    Toast.makeText(MainActivity.this, "File Written and Saved Successfully!",
Toast.LENGTH_SHORT).show();
                } catch (IOException e) {
                    e.printStackTrace();
                }
            }
        }
    );

    b1.setOnClickListener(
        new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                try {
                    fin=openFileInput(fileName);
                    int c;
                    String temp="";
                    while((c=fin.read())!=1)
                    {
                        temp=temp+ (char) c;
                    }
                    txt1.setText(temp);
                    Toast.makeText(MainActivity.this, "File Read and Saved Successfully!",
Toast.LENGTH_SHORT).show();
                } catch (FileNotFoundException e) {
                    e.printStackTrace();
                } catch (IOException e) {
                    e.printStackTrace();
                }
```

```
                }
            }
        );

        b3.setOnClickListener(
            new View.OnClickListener() {
                @Override
                public void onClick(View v) {
                    file=new File(getFilesDir(),fileName);
                    if(file.exists())
                    {
                        deleteFile(fileName);
                        Toast.makeText(MainActivity.this, "File Deleted Successfully!",
Toast.LENGTH_SHORT).show();
                    }
                    else
                    {
                        Toast.makeText(MainActivity.this, "File does not exist!",
Toast.LENGTH_SHORT).show();
                    }
                }
            }
        );
    }
}
```

Strings.xml

```xml
<resources>
    <string name="app_name">Practical_No_7</string>
    <string name="type_here">Type Here</string>
    <string name="write">Write</string>
    <string name="delete">Delete</string>
</resources>
```