APP DEVELOPMENT

Lab Programs WEEK(7-9)

A.BINDU PRIYANKA

18131A0501

CSE-1

7.Implement an application that writes data to the SD card.

JAVA File:

```
package com.example.sdcard;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;



import java.io.BufferedReader;
import java.io.File;
import java.io.FileInputStream;
import java.io.FileOutputStream;
import java.io.InputStreamReader;
import java.io.OutputStreamWriter;

public class MainActivity extends AppCompatActivity {
   EditText E1;
   Button write,read,clear;

   @Override
   protected void onCreate(Bundle savedInstanceState) {
       super.onCreate(savedInstanceState);
       setContentView(R.layout.activity_main);
       E1= (EditText) findViewById(R.id.editText);
       write= (Button) findViewById(R.id.button);
       read= (Button) findViewById(R.id.button2);
       clear= (Button) findViewById(R.id.button3);
```

```
    }



    public void writedata(View view) {
        try {
            File f = new File("/sdcard/myfile.txt");
            f.createNewFile();
            FileOutputStream fout = new FileOutputStream(f);
            OutputStreamWriter mout=new OutputStreamWriter(fout);
            mout.append(E1.getText().toString());
            mout.close();
            fout.close();
            Toast.makeText(getBaseContext(),"Data Written to
SDCARD",Toast.LENGTH_LONG).show();
        }
        catch (Exception e)
        {

Toast.makeText(getBaseContext(),e.getMessage(),Toast.LENGTH_LONG).show();

        }
    }

    public void readdata(View view) {
        try {
            File f = new File("/sdcard/myfile.txt");
            FileInputStream fin=new FileInputStream(f);
            BufferedReader bf=new BufferedReader(new InputStreamReader(fin));
            String drow="";
            String dbuf="";
            while ((drow=bf.readLine())==null);
            {
                dbuf+=drow+"\n";
            }
            E1.setText(dbuf);
            bf.close();
            fin.close();
        }
        catch (Exception e)
        {

Toast.makeText(getBaseContext(),e.getMessage(),Toast.LENGTH_LONG).show();

        }

    }
```

```
    public void clear(View view) {
        E1.setText("");
    }
}
```

ANDROID Manifest XML File:

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

    <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.SDcard">
        <activity android:name=".MainActivity">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

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

</manifest>
```

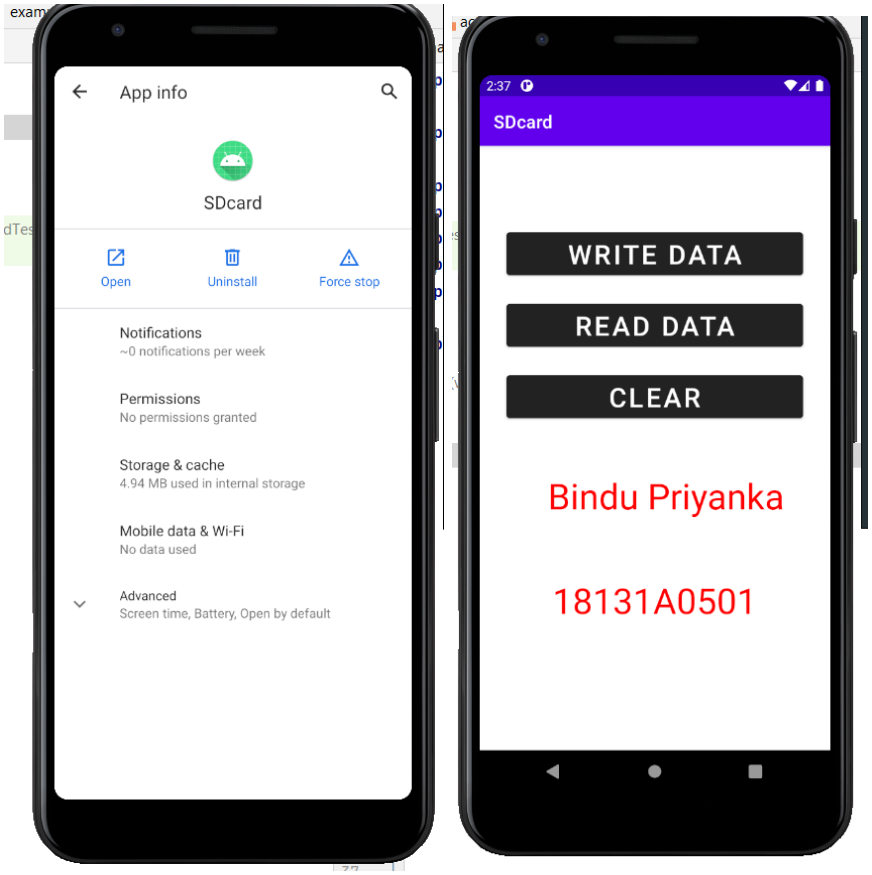
XML File:

```
<?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:layout_margin="20dp"
    android:orientation="vertical"
    android:theme="@style/Theme.AppCompat">

    <EditText
```

```
        android:textColor="#FF0000"
        android:id="@+id/editText"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:singleLine="true"
        android:textSize="30dp" />

    <Button
        android:id="@+id/button"
        android:onClick="writedata"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_margin="10dp"
        android:text="Write Data"
        android:textSize="30dp" />

    <Button
        android:id="@+id/button2"
        android:onClick="readdata"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_margin="10dp"
        android:text="Read data"
        android:textSize="30dp" />

    <Button
        android:id="@+id/button3"
        android:onClick="clear"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_margin="10dp"
        android:text="Clear"
        android:textSize="30dp" />


    <TextView
        android:textColor="#FF0000"
        android:layout_width="318dp"
        android:layout_height="81dp"
        android:layout_row="3"
        android:layout_column="2"
        android:layout_margin="30dp"
        android:gravity="center"
        android:text="Bindu Priyanka"
        android:textSize="40sp" />
    <TextView
        android:textColor="#FF0000"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
```

```
        android:layout_margin="20dp"
        android:gravity="center"
        android:text="18131A0501"
        android:textSize="40sp" />

</LinearLayout>
```

Output:



8.Implement an application that creates an alert upon receiving a message.

JAVA File:

```
package com.example.alert;

import androidx.appcompat.app.AlertDialog;

import androidx.appcompat.app.AppCompatActivity;
```

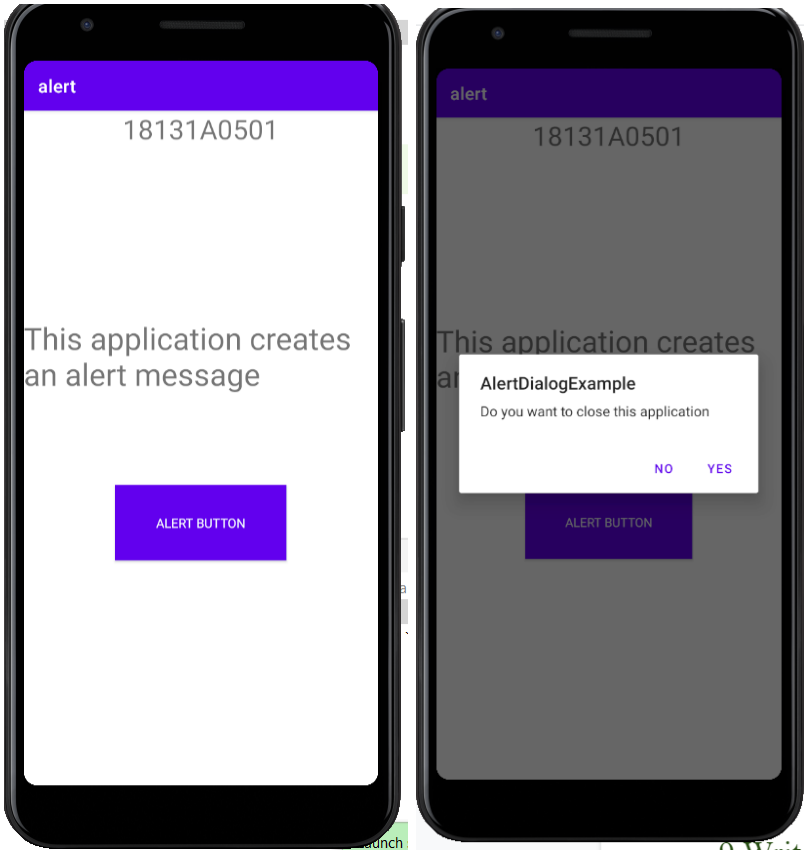
```
import android.content.DialogInterface;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;


public class MainActivity extends AppCompatActivity {
   Button closeButton;
   AlertDialog.Builder builder;

   @Override
   protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        closeButton=(Button)findViewById(R.id.button);
        builder=new AlertDialog.Builder(this);
        closeButton.setOnClickListener(new View.OnClickListener()
        {
            @Override
            public void onClick(View v)
            {
                builder.setMessage("Do you want to close this application")
                        .setCancelable(false)
                        .setPositiveButton("Yes", new
DialogInterface.OnClickListener()
                        {
                            @Override
                            public void onClick(DialogInterface dialog, int id)
                            {
                                finish();
                            }
                        })
                        .setNegativeButton("No", new
DialogInterface.OnClickListener() {
                            @Override
                            public void onClick(DialogInterface dialog, int
which) {
                                dialog.cancel();
                            }
                        });
                AlertDialog alert=builder.create();
                alert.setTitle("AlertDialogExample");
                alert.show();
            }
       });   }
}
```

XML File:

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

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

    <Button
        android:layout_width="190dp"
        android:layout_height="84dp"
        android:id="@+id/button"
        android:layout_marginBottom="250dp"
        android:background="#F44336"
        android:text="ALERT BUTTON"
        android:textAppearance="@style/TextAppearance.AppCompat.Body1"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.5"
        app:layout_constraintStart_toStartOf="parent"
        app:strokeColor="#9C2700"/>
    <TextView
        android:layout_width="393dp"
        android:layout_height="87dp"
        android:id="@+id/textView"
        android:layout_marginBottom="100dp"
        android:text="This application creates an alert message"
        android:textAppearance="@style/TextAppearance.AppCompat.Display1"
        app:layout_constraintBottom_toTopOf="@+id/button"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.5"
        app:layout_constraintStart_toStartOf="parent"/>

    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="18131A0501"
        android:gravity="center"
        android:textSize="30sp"
        tools:ignore="MissingConstraints" />


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

Output:



9.Write a mobile application that creates an alarm clock.

JAVA File:

```
package com.example.alarmclock;

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

import java.util.Calendar;

public class MainActivity extends AppCompatActivity
{
```

```
    TimePicker alarmTimePicker;
    PendingIntent pendingIntent;
    AlarmManager alarmManager;

    @Override
    protected void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        alarmTimePicker = (TimePicker) findViewById(R.id.timePicker);
        alarmManager = (AlarmManager) getSystemService(ALARM_SERVICE);
    }
    public void OnToggleClicked(View view)
    {
        long time;
        if (((ToggleButton) view).isChecked())
        {
            Toast.makeText(MainActivity.this, "ALARM ON",
Toast.LENGTH_SHORT).show();
            Calendar calendar = Calendar.getInstance();
            calendar.set(Calendar.HOUR_OF_DAY,
alarmTimePicker.getCurrentHour());
            calendar.set(Calendar.MINUTE, alarmTimePicker.getCurrentMinute());
            Intent intent = new Intent(this, AlarmReceiver.class);
            pendingIntent = PendingIntent.getBroadcast(this, 0, intent, 0);


time=(calendar.getTimeInMillis()-(calendar.getTimeInMillis()%60000));
            if(System.currentTimeMillis()>time)
            {
                if (calendar.AM_PM == 0)
                    time = time + (1000*60*60*12);
                else
                    time = time + (1000*60*60*24);
            }
            alarmManager.setRepeating(AlarmManager.RTC_WAKEUP, time, 10000,
pendingIntent);
        }
        else
        {
            alarmManager.cancel(pendingIntent);
            Toast.makeText(MainActivity.this, "ALARM OFF",
Toast.LENGTH_SHORT).show();
        }
 }
}
```

XML File:

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

   <TimePicker
       android:layout_height="wrap_content"
       android:layout_width="wrap_content"
       android:layout_gravity="center"
       android:id="@+id/timePicker"/>

   <ToggleButton
       android:layout_height="wrap_content"
       android:layout_width="wrap_content"
       android:layout_gravity="center"
       android:id="@+id/toggleButton"
       android:onClick="OnToggleClicked"
       android:checked="false"
       android:layout_margin="20dp"/>
   <TextView
       android:layout_width="match_parent"
       android:layout_height="wrap_content"
       android:text="18131A0501"
       android:textSize="25sp"
       android:textStyle="bold"/>
</LinearLayout>
```

Alarm Receiver JAVA File:

```
package com.example.alarmclock;
import android.content.BroadcastReceiver;
import android.content.Context;
import android.content.Intent;
import android.media.Ringtone;
import android.media.RingtoneManager;
import android.net.Uri;
import android.widget.Toast;

public class AlarmReceiver extends BroadcastReceiver
{
   @Override
   public void onReceive(Context context, Intent intent)
   {
```

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

Andriod Manifest XML File:

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

    <uses-permission android:name="android.permission.VIBRATE" />
    <uses-permission android:name="android.permission.VIBRATE" />

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:supportsRtl="true"
        android:theme="@style/Theme.Alarmclock" >
        <activity android:name=".MainActivity" >
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
        <receiver android:name=".AlarmReceiver" >
        </receiver>
    </application>
</manifest>
```

Output: