#### 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();
       }
   }
  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"</pre>
   package="com.example.sdcard">
   <uses-permission</pre>
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">

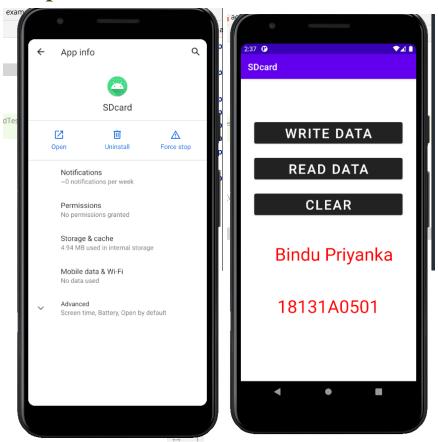
<EditText</pre>
```

```
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:**

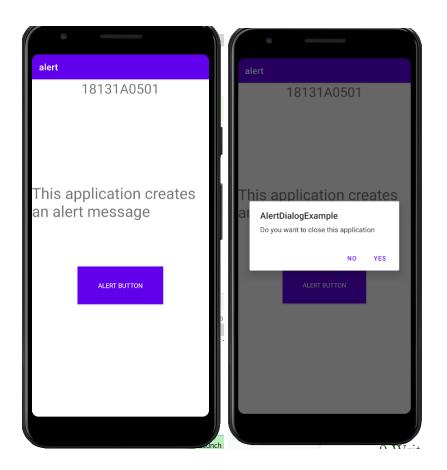
```
package com.example.alert;
import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;
```

```
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() {
                           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</pre>
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 android.widget.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</pre>
   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"</pre>
  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:**

