UCS6611 - MOBILE APPLICATION DEVELOPMENT LABORATORY

Ex. No. 7 Implement an application that writes data to the SD card

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Question:

Implement an application that writes data to the SD card

Code:

Mainactivity.java:

```
package com.example.ex7_ajay;
import android.content.Intent;
import android.os.Bundle;
import android.os.Environment;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;
import java.io.File;
import java.io.FileInputStream;
import java.io.FileOutputStream;
import java.io.OutputStreamWriter;
public class MainActivity extends AppCompatActivity {
    Button readButton, writeButton;
    EditText fileContentText, fileNameText;
    String fileContent, fileName;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity main);
        readButton = findViewById(R.id.readButton);
        writeButton = findViewById(R.id.writeButton);
        fileContentText = findViewById(R.id.contentEditText);
        fileNameText = findViewById(R.id.fileNameText);
        readButton.setOnClickListener(new View.OnClickListener() {
```

```
@Override
            public void onClick(View v) {
                Intent readPage = new Intent(MainActivity.this,
ReadActivity.class);
                startActivity(readPage);
        });
        writeButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                fileContent = fileContentText.getText().toString();
                fileName = fileNameText.getText().toString();
                System.out.println("File name "+fileName);
                System.out.println("File contents: "+fileContent);
                try
                {
                    File myFile = new File("/sdcard/"+fileName);
                    if(!myFile.exists()) {
                        myFile.createNewFile();
                    }
                    FileOutputStream fileOutputStream = new
FileOutputStream(myFile);
                    OutputStreamWriter outputStreamWriter = new
OutputStreamWriter(fileOutputStream);
                    outputStreamWriter.append(fileContent);
                    outputStreamWriter.close();
                    Toast.makeText(MainActivity.this, "File " +fileName+"
written into SD Card!", Toast.LENGTH_SHORT).show();
                } catch (Exception e) {
                    e.printStackTrace();
                    Toast.makeText(MainActivity.this, "Error:
"+e.getMessage(), Toast.LENGTH_SHORT).show();
                }
        });
    }
}
readactivity.java:
package com.example.ex7_ajay;
import androidx.appcompat.app.AppCompatActivity;
```

```
import android.content.Intent;
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.BufferedReader;
import java.io.File;
import java.io.FileInputStream;
import java.io.InputStreamReader;
public class ReadActivity extends AppCompatActivity {
    Button goBackButton, readButton;
    EditText fileNameText;
    String fileName;
    TextView fileContent;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_read);
        goBackButton = findViewById(R.id.goBackButton);
        readButton = findViewById(R.id.readFileButton);
        fileNameText = findViewById(R.id.fileEditText);
        fileContent = findViewById(R.id.fileContentTextView);
        goBackButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent mainPage = new Intent(ReadActivity.this,
MainActivity.class);
                startActivity(mainPage);
            }
        });
        readButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                fileName = fileNameText.getText().toString();
                System.out.println("File name: "+fileName);
                File myFile = new File("/sdcard/"+fileName);
                try {
```

```
FileInputStream fileInputStream = new
FileInputStream(myFile);
                    BufferedReader bufferedReader = new BufferedReader(new
InputStreamReader(fileInputStream));
                    String dataRow = "";
                    String dataBuffer = "Contents of file \n\n";
                    while((dataRow = bufferedReader.readLine())!=null) {
                        dataBuffer += dataRow+"\n";
                    }
                    Toast.makeText(ReadActivity.this, "File "+fileName+" read
from SD Card!", Toast.LENGTH_SHORT).show();
                    fileContent.setText(dataBuffer);
                    bufferedReader.close();
                    fileInputStream.close();
                } catch (Exception e) {
                    e.printStackTrace();
                    Toast.makeText(ReadActivity.this, "Error:
"+e.getMessage(), Toast.LENGTH_SHORT).show();
                }
            }
        });
    }
}
activity main.xml:
<?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">
    <TextView
        android:id="@+id/contentTextView"
        android:layout_width="80dp"
        android:layout height="34dp"
        android:layout_marginStart="16dp"
        android:layout_marginTop="96dp"
        android:text="@string/content_of_file"
        android:textAlignment="center"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
    <EditText
        android:id="@+id/contentEditText"
```

```
android:layout width="235dp"
   android:layout height="86dp"
   android:layout_marginTop="72dp"
   android:layout marginEnd="44dp"
   android:ems="10"
   android:maxLines="15"
   android:inputType="text|textMultiLine"
   app:layout_constraintEnd_toEndOf="parent"
   app:layout_constraintTop_toTopOf="parent"
   tools:ignore="SpeakableTextPresentCheck" />
<TextView
   android:id="@+id/fileNameTextView"
   android:layout_width="wrap_content"
   android:layout height="wrap content"
   android:layout marginStart="28dp"
   android:layout marginTop="172dp"
   android:text="@string/file_name"
   android:textAlignment="center"
   app:layout_constraintStart_toStartOf="parent"
   app:layout_constraintTop_toBottomOf="@+id/contentTextView" />
<EditText
   android:id="@+id/fileNameText"
   android:layout width="wrap content"
   android:layout_height="wrap_content"
   android:layout_marginTop="132dp"
   android:layout_marginEnd="56dp"
   android:ems="10"
   android:inputType="textPersonName|text"
   android:minHeight="48dp"
   app:layout constraintEnd toEndOf="parent"
   app:layout_constraintTop_toBottomOf="@+id/contentEditText"
   tools:ignore="SpeakableTextPresentCheck" />
<Button
   android:id="@+id/writeButton"
   android:layout width="wrap content"
   android:layout_height="wrap_content"
   android:layout_marginStart="208dp"
   android:layout_marginTop="96dp"
   android:text="@string/write"
   android:textAllCaps="false"
   app:layout_constraintEnd_toEndOf="parent"
   app:layout constraintHorizontal bias="0.0"
   app:layout_constraintStart_toStartOf="parent"
   app:layout_constraintTop_toBottomOf="@+id/fileNameText" />
```

```
<Button
        android:id="@+id/readButton"
        android:layout width="wrap content"
        android:layout height="wrap content"
        android:layout marginTop="68dp"
        android:text="@string/read"
        android:textAllCaps="false"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.643"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/writeButton" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

Activity_read.xml:

```
<?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=".ReadActivity">
    <Button
        android:id="@+id/goBackButton"
        android:layout_width="wrap_content"
        android:layout height="wrap content"
        android:layout marginTop="88dp"
        android:text="@string/go_back"
        android:textAllCaps="false"
        app:layout constraintEnd toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.777"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/fileContentTextView" />
    <TextView
        android:id="@+id/fileNameTextView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout marginStart="44dp"
        android:layout marginTop="88dp"
        android:text="@string/file_name"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
```

```
<EditText
        android:id="@+id/fileEditText"
        android:layout width="wrap content"
        android:layout height="wrap content"
        android:layout marginTop="72dp"
        android:layout marginEnd="32dp"
        android:ems="10"
        android:inputType="textPersonName|text"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
    <TextView
        android:id="@+id/fileContentTextView"
        android:layout_width="306dp"
        android:layout height="197dp"
        android:layout marginTop="76dp"
        android:textColor="@color/black"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout constraintStart toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/readFileButton" />
    <Button
        android:id="@+id/readFileButton"
        android:layout_width="wrap_content"
        android:layout height="wrap content"
        android:layout_marginTop="60dp"
        android:layout_marginEnd="72dp"
        android:text="Enter"
        android:textAllCaps="false"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="1.0"
        app:layout constraintStart toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/fileEditText" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

Outputs:



