Department of Computer Science and Engineering

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UCS1711 - Mobile Application Development Lab

Exercise 7: application that writes data to the SD card

Aim:

Implement an application that writes data to the SD card

Code:

Main Activity:

Design:

```
<?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">

    <EditText
        android:id="@+id/edittext_data"
        android:layout_width="339dp"
        android:layout_height="52dp"
        android:layout_marginTop="192dp"
        android:singleLine="true"
        android:textSize="30dp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <Button
        android:id="@+id/button_write"
        android:layout_width="286dp"
        android:layout_height="70dp"
        android:layout_margin="10dp"
        android:layout_marginTop="32dp"
        android:text="Write Data"
        android:textSize="30dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.496"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/button_read
    "
        app:layout_constraintVertical_bias="0.025" />

    <Button
        android:id="@+id/button_read"
        android:layout_width="295dp"
        android:layout_height="62dp"
        android:layout_margin="10dp"
        android:text="Read data"
        android:textSize="30dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
```

```
        app:layout_constraintHorizontal_bias="0.491"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <Button
        android:id="@+id/button_clear"
        android:layout_width="297dp"
        android:layout_height="53dp"
        android:layout_margin="10dp"
        android:text="Clear"
        android:textSize="30dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/
    button_write"
        app:layout_constraintVertical_bias="0.061" />

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

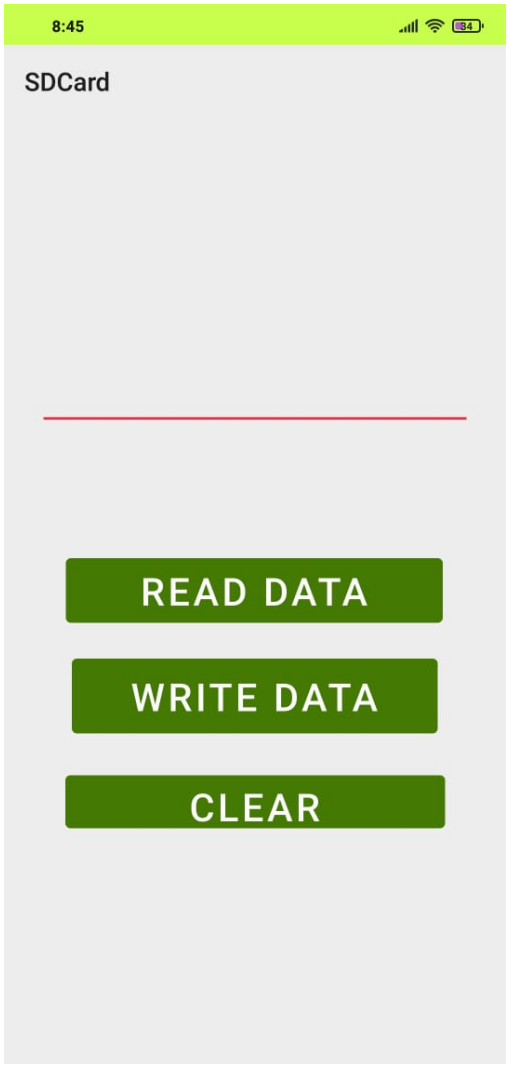
Behaviour:

```
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;

public class MainActivity extends AppCompatActivity {

    EditText e1;
    Button write,read,clear;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
```

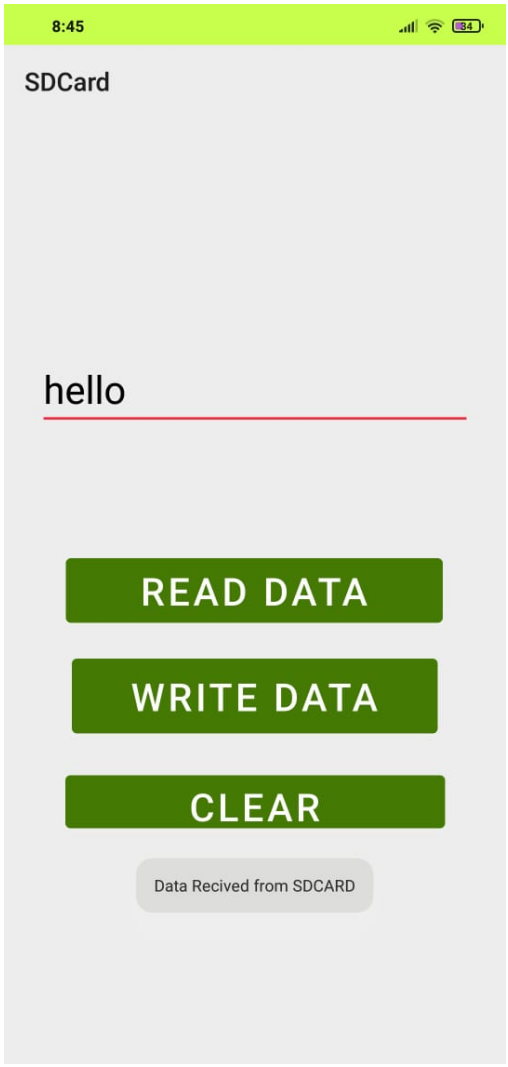
```
24          setContentView(R.layout.activity_main);
25          e1= (EditText) findViewById(R.id.edittext_data);
26          write= (Button) findViewById(R.id.button_write);
27          read= (Button) findViewById(R.id.button_read);
28          clear= (Button) findViewById(R.id.button_clear);
29
30          write.setOnClickListener(new View.OnClickListener()
31          {
32              @Override
33              public void onClick(View v)
34              {
35                  String message=e1.getText().toString();
36                  try
37                  {
38                      File f=new File("/sdcard/myfile.txt");
39                      f.createNewFile();
40                      FileOutputStream fout=new
    FileOutputStream(f);
41                      fout.write(message.getBytes());
42                      fout.close();
43                      Toast.makeText(getBaseContext(),"Data
    Written in SDCARD",Toast.LENGTH_LONG).show();
44                  }
45                  catch (Exception e)
46                  {
47                      Toast.makeText(getBaseContext(),e.
    getMessage(),Toast.LENGTH_LONG).show();
48                  }
49              }
50          });
51
52          read.setOnClickListener(new View.OnClickListener()
53          {
54              @Override
55              public void onClick(View v)
56              {
57                  String message;
58                  String buf = "";
59                  try
60                  {
61                      File f = new File("/sdcard/myfile.txt");
62                      FileInputStream fin = new FileInputStream
    (f);
63                      BufferedReader br = new BufferedReader(
    new InputStreamReader(fin));
```

```
64                      while ((message = br.readLine()) != null)
65                      {
66                          buf += message;
67                      }
68                      e1.setText(buf);
69                      br.close();
70                      fin.close();
71                      Toast.makeText(getBaseContext(),"Data
    Recived from SDCARD",Toast.LENGTH_LONG).show();
72                  }
73                  catch (Exception e)
74                  {
75                      Toast.makeText(getBaseContext(), e.
    getMessage(), Toast.LENGTH_LONG).show();
76                  }
77              }
78          });
79
80          clear.setOnClickListener(new View.OnClickListener()
81          {
82              @Override
83              public void onClick(View v)
84              {
85                  e1.setText("");
86              }
87          });
88
89      }
90  }
```

Output:




8:45
SDCard
hello
READ DATA
WRITE DATA
hello
Hello
hellow
Data Written in SDCARD
English


8:45
SDCard
hello
READ DATA
WRITE DATA
CLEAR
Data Recived from SDCARD