

Ex. No. : 06

Date:26-04-25

Register No.: 221701008

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SD Card

Aim

Implement an application to write the Register Number, Name and CGPA to SD card in text file format.

Procedure:

Step 1 : File -> NewProject

Provide the application name and Click “Next”

Step 2 : Select the target android devices

Select the minimum SDK to run the application. Click “Next”.

Step 3 : Choose the activity for the application (By default choose “Blank Activity”).

Click “Next”.

Step 4 : Enter activity name and click “Finish”

Step 5 : Edit the program.

Step 6 : Run the application, 2-ways to run the application.

1. Running through emulator
2. Running through mobile device

MainActivity.kt

```
package com.example.mad6
//MainActivity.kt
import android.os.Bundle
import android.widget.Button
import android.widget.EditText
import android.widget.Toast
import androidx.appcompat.app.AppCompatActivity
import java.io.File

class MainActivity : AppCompatActivity() {

    private lateinit var nameEditText: EditText
    private lateinit var rollnoEditText: EditText
    private lateinit var cgpaEditText: EditText
    private lateinit var saveButton: Button
    private lateinit var loadButton: Button

    private val fileName = "student_data.txt"

    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)

        nameEditText = findViewById(R.id.editTextText)
        rollnoEditText = findViewById(R.id.editTextText2)
        cgpaEditText = findViewById(R.id.editTextText3)
        saveButton = findViewById(R.id.button)
        loadButton = findViewById(R.id.button2)

        saveButton.setOnClickListener {
            saveData()
        }

        loadButton.setOnClickListener {
            loadData()
        }
    }

    private fun saveData() {
        val name = nameEditText.text.toString()
        val rollNo = rollnoEditText.text.toString()
        val cgpa = cgpaEditText.text.toString()
    }
}
```

```

if (name.isBlank() || rollNo.isBlank() || cgpa.isBlank()) {
    Toast.makeText(this, "Please fill all fields", Toast.LENGTH_SHORT).show()
    return
}

val data = "$name\n$rollNo\n$cgpa"

try {
    val file = File(filesDir, fileName)
    file.writeText(data)
    Toast.makeText(this, "Data Saved Successfully", Toast.LENGTH_SHORT).show()

    // 👉 Clear the EditTexts after saving
    nameEditText.text.clear()
    rollnoEditText.text.clear()
    cgpaEditText.text.clear()

} catch (e: Exception) {
    e.printStackTrace()
    Toast.makeText(this, "Failed to Save Data", Toast.LENGTH_SHORT).show()
}

}

private fun loadData() {
    try {
        val file = File(filesDir, fileName)
        if (!file.exists()) {
            Toast.makeText(this, "No saved data found", Toast.LENGTH_SHORT).show()
            return
        }

        val lines = file.readlines()

        if (lines.size >= 3) {
            nameEditText.setText(lines[0])
            rollnoEditText.setText(lines[1])
            cgpaEditText.setText(lines[2])
            Toast.makeText(this, "Data Loaded Successfully", Toast.LENGTH_SHORT).show()
        }
    }
}

```

```
else {  
    Toast.makeText(this, "Saved data is incomplete", Toast.LENGTH_SHORT).show()  
}  
} catch (e: Exception) {  
    e.printStackTrace()  
    Toast.makeText(this, "Failed to Load Data", Toast.LENGTH_SHORT).show()  
}  
}  
}
```

ActivityMain.xml

```
<?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:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:padding="16dp"
    tools:context=".MainActivity">

    <EditText
        android:id="@+id/editTextText"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:hint="Name"
        android:inputType="text"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toEndOf="parent" />

    <EditText
        android:id="@+id/editTextText2"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:hint="Roll No"
        android:inputType="text"
        android:layout_marginTop="16dp"
        app:layout_constraintTop_toBottomOf="@id/editTextText"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toEndOf="parent" />

    <EditText
        android:id="@+id/editTextText3"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:hint="CGPA"
        android:inputType="text"
        android:layout_marginTop="16dp"
        app:layout_constraintTop_toBottomOf="@id/editTextText2"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toEndOf="parent" />

    <Button
        android:id="@+id/button"
```

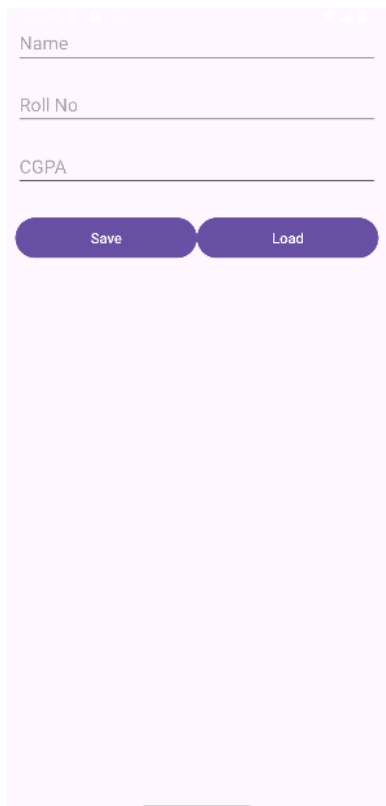
```
android:layout_width="0dp"
android:layout_height="wrap_content"
android:text="Save"
```

```
android:layout_marginTop="24dp"
app:layout_constraintTop_toBottomOf="@id/editTextText3"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintEnd_toStartOf="@id/button2" />
```

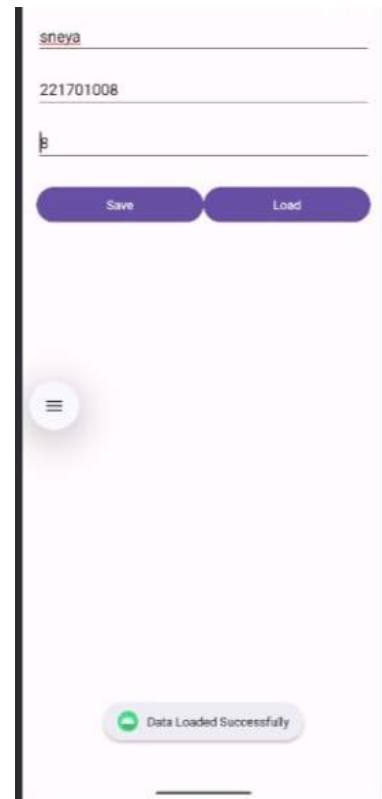
```
<Button
    android:id="@+id/button2"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:text="Load"
    android:layout_marginTop="24dp"
    app:layout_constraintTop_toBottomOf="@id/editTextText3"
    app:layout_constraintStart_toEndOf="@id/button"
    app:layout_constraintEnd_toEndOf="parent" />
```

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


Output



Mobile app interface showing input fields for Name, Roll No, and CGPA. Below the fields are two buttons: Save and Load.



Mobile app interface showing the data after loading: Name (sneha), Roll No (221701008), and CGPA (8). Below the fields are two buttons: Save and Load. A hamburger menu icon is visible on the left. At the bottom, a green message bubble says "Data Loaded Successfully".

Result:

The experiment was conducted successfully

