

Ex. No. : 06

Date: 26/04/25

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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" />

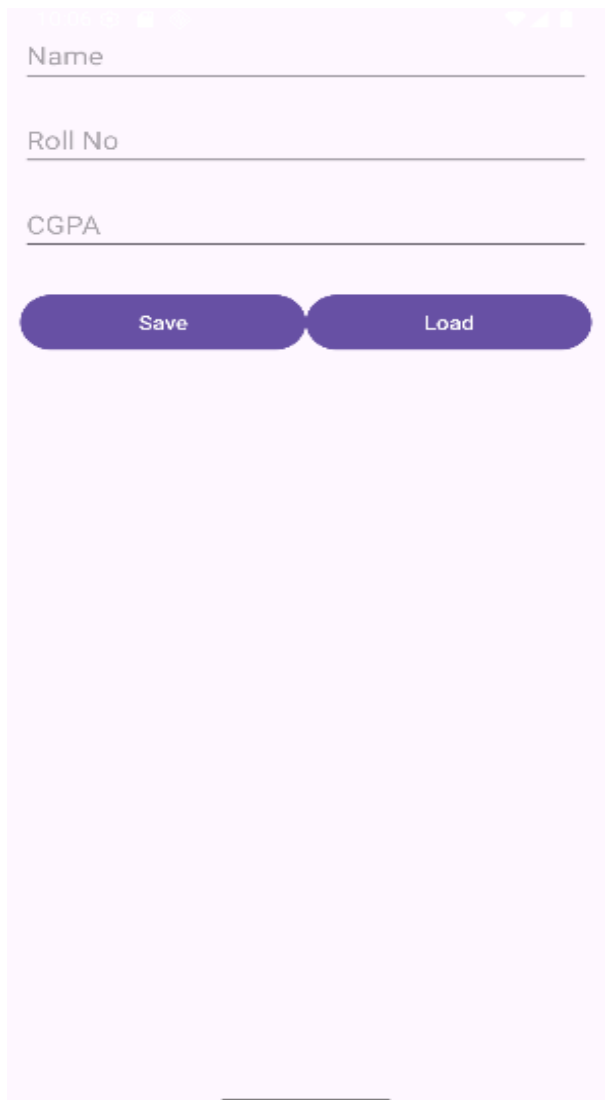
    <Button
        android:id="@+id/button"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:text="Save"
```

```
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



A mobile application interface with a light pink background. At the top, there are three status bar icons. Below them are three input fields labeled "Name", "Roll No", and "CGPA". At the bottom, there are two purple buttons labeled "Save" and "Load".

Result:

The experiment was conducted successfully

