Ex. No. : 06 **Date: 15/04/2025**

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SD Card

Aim

Implement an application to write the 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.*

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

AndroidManifest.xml

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools">

    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme._6exp23"
        tools:targetApi="31">
        <activity
            android:name=".MainActivity"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>

</manifest>
```

Activity_main.xml

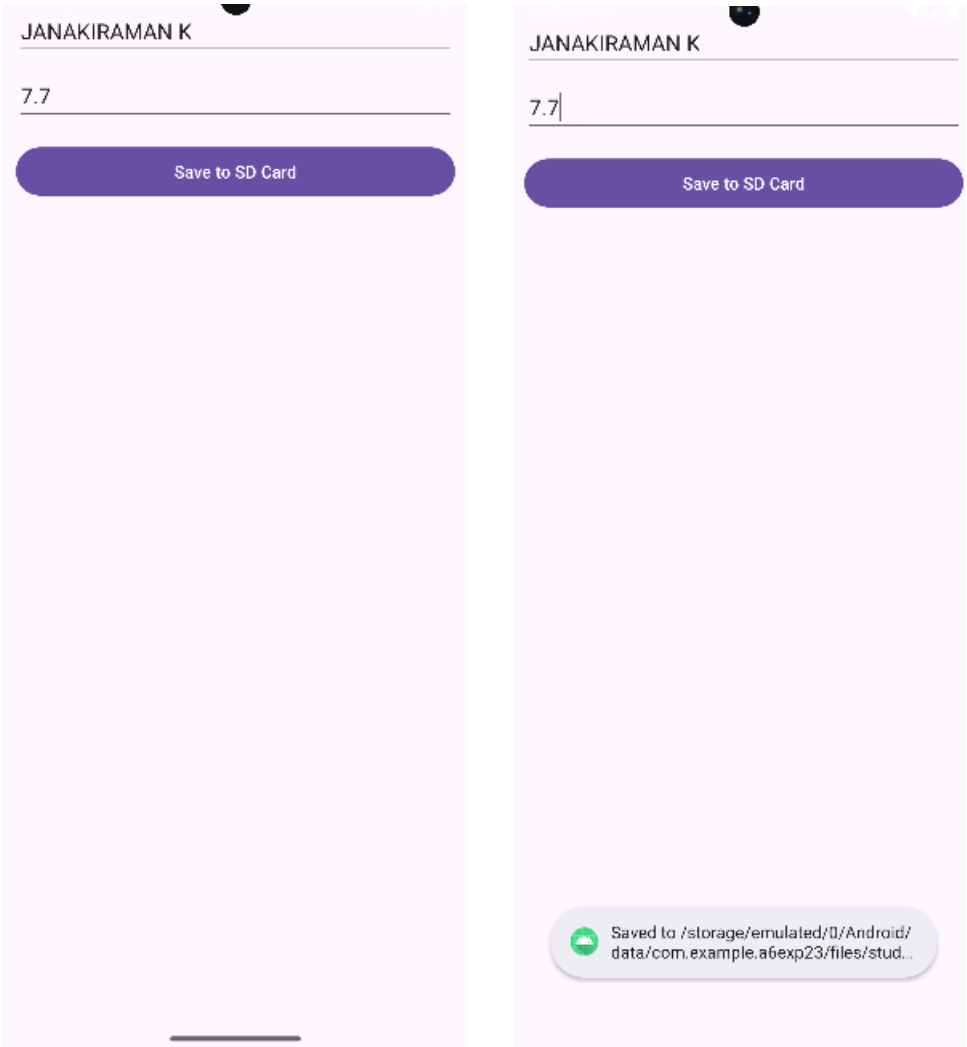
```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="24dp">

    <EditText
        android:id="@+id/etName"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter Name" />

    <EditText
        android:id="@+id/etCgpa"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter CGPA"
        android:inputType="numberDecimal"
        android:layout_marginTop="8dp"/>

    <Button
        android:id="@+id/btnSave"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Save to SD Card"
        android:layout_marginTop="16dp"/>
</LinearLayout>
```

MainActivity.kt

```
package com.example.a6exp23

import android.os.Bundle
import android.os.Environment
import android.widget.Button
import android.widget.EditText
import android.widget.Toast
import androidx.appcompat.app.AppCompatActivity
import java.io.File
import java.io.FileOutputStream

class MainActivity : AppCompatActivity() {

    private lateinit var etName: EditText
    private lateinit var etCgpa: EditText
    private lateinit var btnSave: Button

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

        etName = findViewById(R.id.etName)
        etCgpa = findViewById(R.id.etCgpa)
        btnSave = findViewById(R.id.btnSave)

        btnSave.setOnClickListener {
            val name = etName.text.toString()
            val cgpa = etCgpa.text.toString()

            if (name.isNotEmpty() && cgpa.isNotEmpty()) {
                saveToFile(name, cgpa)
            } else {
                Toast.makeText(this, "Please enter both Name and CGPA",
Toast.LENGTH_SHORT).show()
            }
        }
    }

    private fun saveToFile(name: String, cgpa: String) {
        val fileName = "student_data.txt"
        val fileContents = "Name: $name\nCGPA: $cgpa"
```

```
        // Save in app-specific external storage
        val file = File(getExternalFilesDir(null), fileName)

        try {
            FileOutputStream(file).use { it.write(fileContents.toByteArray()) }
            Toast.makeText(this, "Saved to ${file.absolutePath}", Toast.LENGTH_LONG).show()
        } catch (e: Exception) {
            Toast.makeText(this, "Error: ${e.message}", Toast.LENGTH_LONG).show()
        }
    }
}
```

Output



Result:

The SD card experiment has been successfully completed