MOBILE PROGRAMMING LAB

PRACTICAL 8

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ROLL NO: 69

BATCH: A4

PRACTICAL 8

AIM:-

8. Demonstrate the use of Shared Preference in Android Application
i) Create an application for Blood Donation Registration Camp. The user will enter the signup details as given below in the UI. Create an application in such a way that user has to enter the details only first time. Store these values in a shared preference file. Next time onwards the signup page should not be visible to the user.
ii) Also make use of the internal storage to store the information of the Blood Donation Registration form and give the count of the different Blood Group by reading the contents of the file.

---

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent">

    <TextView
        android:id="@+id/titleTextView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Blood Donation Registration"
        android:textSize="20sp"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="20dp"/>

    <EditText
        android:id="@+id/nameEditText"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_below="@id/titleTextView"
        android:hint="Name"
        android:layout_marginTop="20dp"
        android:layout_marginLeft="20dp"
        android:layout_marginRight="20dp"/>

    <EditText
```

```
        android:id="@+id/bloodGroupEditText"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_below="@id/nameEditText"
        android:hint="Blood Group"
        android:layout_marginTop="20dp"
        android:layout_marginLeft="20dp"
        android:layout_marginRight="20dp"/>

    <Button
        android:id="@+id/signUpButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@id/bloodGroupEditText"
        android:text="Sign Up"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="20dp"/>
</RelativeLayout>
```

MainActivity.java

```
package com.example.myapplication;
import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

// MainActivity.java

import android.content.Context;
import android.content.Intent;
import android.content.SharedPreferences;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;

import androidx.appcompat.app.AppCompatActivity;

import java.io.FileOutputStream;
import java.io.IOException;

public class MainActivity extends AppCompatActivity {

    private static final String PREF_NAME = "BloodDonationPrefss";
    private static final String KEY_FIRST_TIME = "FirstTime";
    private static final String FILE_NAME = "blood_donation_info1.txt";

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);

        SharedPreferences preferences = getSharedPreferences(PREF_NAME,
Context.MODE_PRIVATE);

        // Check if it's the first time
        if (preferences.getBoolean(KEY_FIRST_TIME, true)) {
            // User needs to enter details
            setupSignUpPage();
        } else {
```

```
            // User has already signed up, navigate to HomeActivity
            redirectToHome();
        }
    }

    private void setupSignUpPage() {
        setContentView(R.layout.activity_main);

        Button signUpButton = findViewById(R.id.signUpButton);
        signUpButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                // Save user details in Shared Preferences and internal
storage
                saveUserDetails();

                // Redirect to HomeActivity
                redirectToHome();
            }
        });
    }

    private void saveUserDetails() {
        // Get user details from UI components
        EditText nameEditText = findViewById(R.id.nameEditText);
        EditText bloodGroupEditText =
findViewById(R.id.bloodGroupEditText);

        String name = nameEditText.getText().toString();
        String bloodGroup = bloodGroupEditText.getText().toString();

        // Save details in Shared Preferences
        SharedPreferences preferences = getSharedPreferences(PREF_NAME,
Context.MODE_PRIVATE);
        SharedPreferences.Editor editor = preferences.edit();
        editor.putString("Name", name);
        editor.putString("BloodGroup", bloodGroup);
        editor.putBoolean(KEY_FIRST_TIME, false); // Set first time to
false
        editor.apply();

        // Save details in internal storage
        saveToFile(name, bloodGroup);
    }

    private void saveToFile(String name, String bloodGroup) {
        try {
            FileOutputStream fileOutputStream = openFileOutput(FILE_NAME,
Context.MODE_APPEND);
            String data = "Name: " + name + " BloodGroup: " + bloodGroup +
"\n";
            fileOutputStream.write(data.getBytes());
            fileOutputStream.close();
        } catch (IOException e) {
            e.printStackTrace();
        }
    }

    private void redirectToHome() {
        // Redirect to HomeActivity
        Intent intent = new Intent(MainActivity.this, HomeActivity.class);
```

```
        startActivity(intent);
        finish(); // Finish the current activity so the user can't navigate
back
    }
}
```

activity_home.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent">

    <TextView
        android:id="@+id/titleTextView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Blood Group Counts"
        android:textSize="20sp"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="20dp"/>

    <TextView
        android:id="@+id/countTextView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@id/titleTextView"
        android:layout_marginTop="20dp"
        android:layout_marginLeft="20dp"
        android:layout_marginRight="20dp"/>
</RelativeLayout>
```

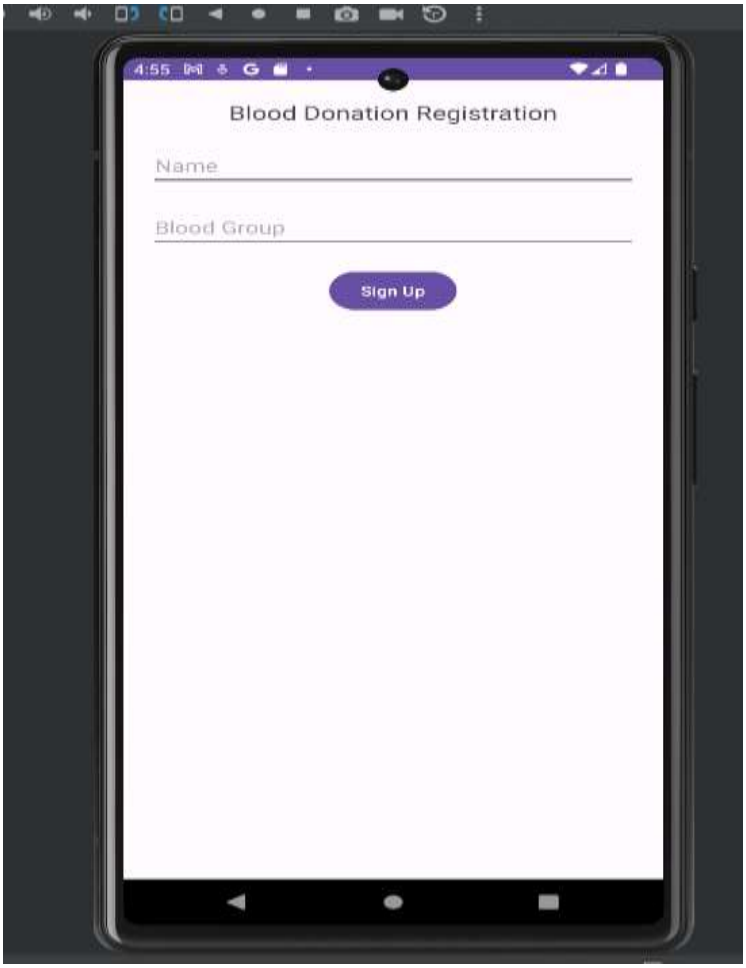
HomeActivity.java

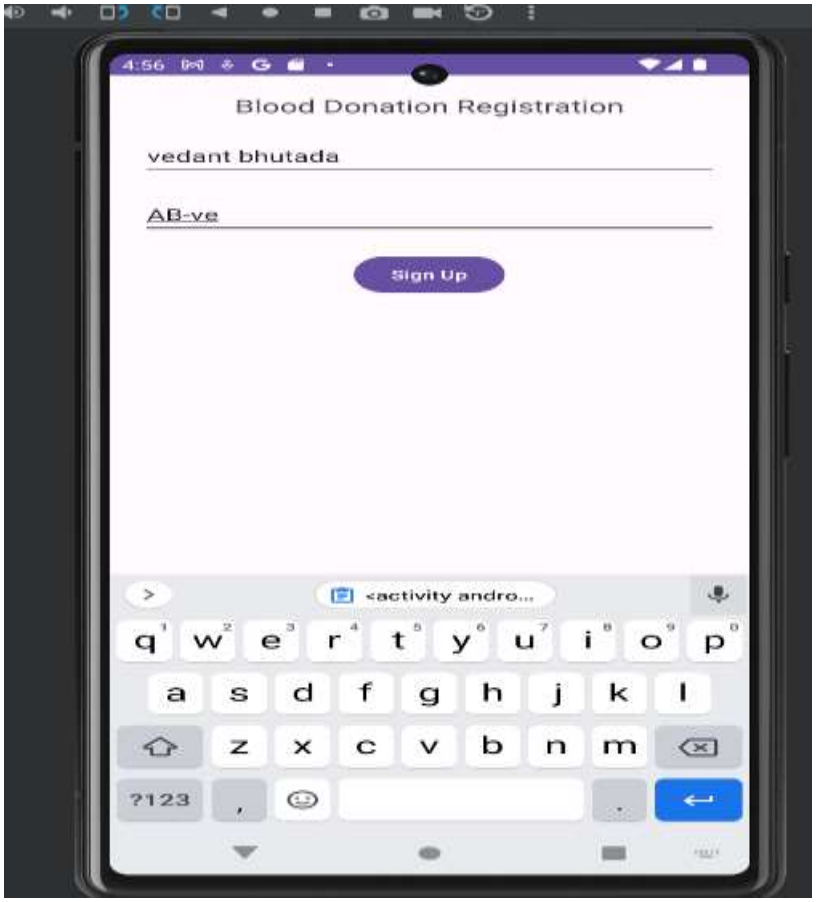
```
package com.example.myapplication;

import androidx.appcompat.app.AppCompatActivity;

import android.annotation.SuppressLint;
import android.os.Bundle;

// HomeActivity.java

import android.os.Bundle;
import android.widget.TextView;

import java.io.BufferedReader;
import java.io.FileInputStream;
import java.io.IOException;
import java.io.InputStreamReader;

public class HomeActivity extends AppCompatActivity {

    private static final String FILE_NAME = "blood_donation_info1.txt";

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_home);
```

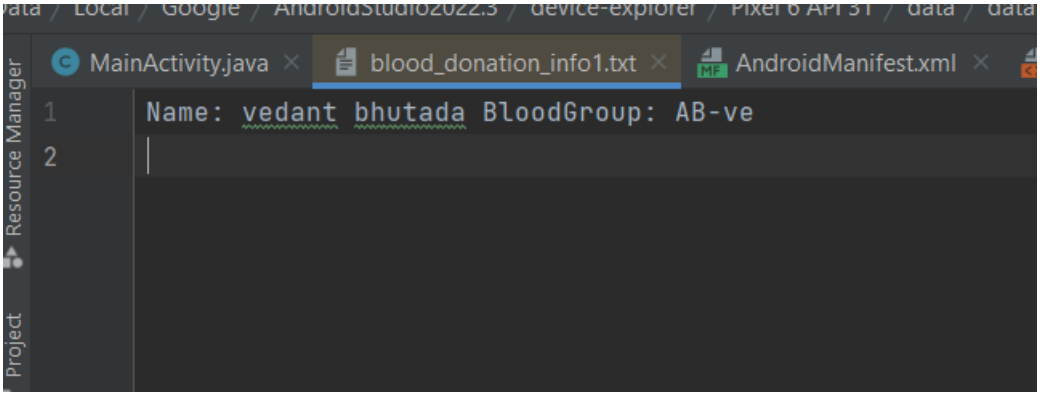
```
        // Display blood group count
        displayBloodGroupCount();
    }

    private void displayBloodGroupCount() {
        TextView countTextView = findViewById(R.id.countTextView);

        try {
            FileInputStream fileInputStream = openFileInput(FILE_NAME);
            InputStreamReader inputStreamReader = new
InputStreamReader(fileInputStream);
            BufferedReader bufferedReader = new
BufferedReader(inputStreamReader);

            // Variables to count blood groups
            int groupACount = 0, groupBCount = 0, groupABCount = 1,
groupOCount = 0;

            String line;
            while ((line = bufferedReader.readLine()) != null) {
                // Assuming each line contains a pair like "Name: vedant
bhutada BloodGroup: AB-ve"
                String[] parts = line.split(" ");

                String bloodGroup = null;
                for (int i = 0; i < parts.length; i++) {
                    if ("BloodGroup:".equals(parts[i]) && i < parts.length
- 1) {
                        bloodGroup = parts[i + 1].trim();
                        break;
                    }
                }

                // Increment the count based on the blood group
                if (bloodGroup != null) {
                    switch (bloodGroup) {
                        case "A":
                            groupACount++;
                            break;
                        case "B":
                            groupBCount++;
                            break;
                        case "AB":
                            groupABCount++;
                            break;
                        case "O":
                            groupOCount++;
                            break;
                        // Add more cases for other blood groups if needed
                    }
                }
            }

            // Display the counts
            countTextView.setText("Group A: " + groupACount + "\n"
                    + "Group B: " + groupBCount + "\n"
                    + "Group AB: " + groupABCount + "\n"
                    + "Group O: " + groupOCount);

            // Close the streams
            fileInputStream.close();
```

```
            inputStreamReader.close();
            bufferedReader.close();
        } catch (IOException e) {
            e.printStackTrace();
        }
    }


}
```

Output:




4:56
Blood Donation Registration
vedant bhutada
AB-ve
Sign Up
<activity andro...


MainActivity.java
blood_donation_info1.txt
AndroidManifest.xml
Name: vedant bhutada BloodGroup: AB-ve
Resource Manager
Project

Conclusion: In this practical we successfully implemented shared preferences using android studio.