**Android Application Development**

**End Sem Lab Exam**

**Experiment 5:**

1. Create a registration page

2. Based on dummy gmail as user name and password – Login

3. Logout

4. Then login again and the session should be maintained the Welcome back “gmail id” should be display

Codes:

**MainActivity.java:**package com.example.end\_sem;  
  
import android.content.Intent;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
public class MainActivity extends AppCompatActivity {  
  
 Button registerButton, loginButton;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.activity\_main);  
  
 // Initialize buttons  
 registerButton = findViewById(R.id.register\_button);  
 loginButton = findViewById(R.id.login\_button);  
  
 // Navigate to RegisterActivity when Register button is clicked  
 registerButton.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 Intent registerIntent = new Intent(MainActivity.this, RegisterActivity.class);  
 startActivity(registerIntent);  
 }  
 });  
  
 // Navigate to LoginActivity when Login button is clicked  
 loginButton.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 Intent loginIntent = new Intent(MainActivity.this, LoginActivity.class);  
 startActivity(loginIntent);  
 }  
 });  
 }  
}

**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="16dp"  
 android:gravity="center"  
 android:background="@drawable/background\_gradient">  
  
 <!-- Logo -->  
 <ImageView  
 android:id="@+id/logo\_image"  
 android:layout\_width="150dp"  
 android:layout\_height="150dp"  
 android:layout\_marginBottom="20dp"  
 android:src="@drawable/img"  
 android:contentDescription="App Logo"  
 android:layout\_gravity="center"/>  
  
 <!-- App Name -->  
 <TextView  
 android:id="@+id/app\_name"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Pasupuleti Harini [CYS21054]"  
 android:textSize="24sp"  
 android:textColor="#000000"  
 android:layout\_marginBottom="40dp"  
 android:layout\_gravity="center"

android:textAlignment="center"  
 android:textStyle="bold"/>  
  
 <!-- Buttons for Login and Register -->  
 <Button  
 android:id="@+id/register\_button"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Register"  
 android:layout\_marginBottom="20dp"  
 android:layout\_gravity="center" />  
  
 <Button  
 android:id="@+id/login\_button"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Login"  
 android:layout\_gravity="center" />  
  
</LinearLayout>

**RegisterActivity.java:**

package com.example.end\_sem;  
  
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 android.widget.Toast;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
public class RegisterActivity extends AppCompatActivity {  
  
 SharedPreferences sharedPreferences;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_register*);  
  
 // Initialize shared preferences  
 sharedPreferences = getSharedPreferences("LoginApp", *MODE\_PRIVATE*);  
  
 EditText emailEditText = findViewById(R.id.*email*); // Corrected ID  
 EditText passwordEditText = findViewById(R.id.*password*); // Corrected ID  
 Button registerButton = findViewById(R.id.*register\_button*);  
  
 // Handle register button click  
 registerButton.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 String email = emailEditText.getText().toString().trim();  
 String password = passwordEditText.getText().toString().trim();  
  
 // Validate inputs  
 if (email.isEmpty() || password.isEmpty()) {  
 Toast.*makeText*(RegisterActivity.this, "Please enter email and password", Toast.*LENGTH\_SHORT*).show();  
 return;  
 }  
  
 // Save the email and password to SharedPreferences  
 SharedPreferences.Editor editor = sharedPreferences.edit();  
 editor.putString("email", email);  
 editor.putString("password", password);  
 editor.apply(); // Apply changes asynchronously  
  
 Toast.*makeText*(RegisterActivity.this, "Registration Successful", Toast.*LENGTH\_SHORT*).show();  
  
 // Redirect to login activity  
 Intent intent = new Intent(RegisterActivity.this, LoginActivity.class);  
 startActivity(intent);  
 finish();  
 }  
 });  
 }  
}

**activity\_register.xml:**

<LinearLayout  
 xmlns:android="http://schemas.android.com/apk/res/android"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="vertical"  
 android:gravity="center"  
 android:padding="20dp"  
 android:background="@drawable/background\_gradient">  
  
 <EditText  
 android:id="@+id/name"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Name"  
 android:inputType="textPersonName" />  
  
 <EditText  
 android:id="@+id/phone"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Phone number"  
 android:inputType="phone" />  
  
 <EditText  
 android:id="@+id/email"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Gmail"  
 android:inputType="textEmailAddress" />  
  
 <EditText  
 android:id="@+id/password"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Password"  
 android:inputType="textPassword" />  
  
 <Button  
 android:id="@+id/register\_button"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Register" />  
  
 <Button  
 android:id="@+id/login\_button"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Login" />  
</LinearLayout>

**LoginActivity.java:**  
package com.example.end\_sem;  
  
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 android.widget.Toast;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
public class LoginActivity extends AppCompatActivity {  
  
 SharedPreferences sharedPreferences;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.activity\_login);  
  
 sharedPreferences = getSharedPreferences("LoginApp", MODE\_PRIVATE);  
  
 EditText emailEditText = findViewById(R.id.login\_email);  
 EditText passwordEditText = findViewById(R.id.login\_password);  
 Button loginButton = findViewById(R.id.login\_button);  
  
 loginButton.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 String enteredEmail = emailEditText.getText().toString().trim();  
 String enteredPassword = passwordEditText.getText().toString().trim();  
  
 // Get stored credentials from SharedPreferences  
 String storedEmail = sharedPreferences.getString("email", "");  
 String storedPassword = sharedPreferences.getString("password", "");  
  
 // Check if entered email and password are correct  
 if (enteredEmail.isEmpty() || enteredPassword.isEmpty()) {  
 Toast.makeText(LoginActivity.this, "Please enter both email and password", Toast.LENGTH\_SHORT).show();  
 } else if (enteredEmail.equals(storedEmail) && enteredPassword.equals(storedPassword)) {  
 // Credentials are valid, log in and navigate to WelcomeActivity  
 Toast.makeText(LoginActivity.this, "Login Successful", Toast.LENGTH\_SHORT).show();  
 Intent intent = new Intent(LoginActivity.this, WelcomeActivity.class);  
 startActivity(intent);  
 finish();  
 } else {  
 // Invalid credentials  
 Toast.makeText(LoginActivity.this, "Invalid Credentials", Toast.LENGTH\_SHORT).show();  
 }  
 }  
 });  
 }  
}

**activity\_login.xml:**

<LinearLayout  
 xmlns:android="http://schemas.android.com/apk/res/android"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="vertical"  
 android:gravity="center"  
 android:padding="20dp"  
 android:background="@drawable/background\_gradient">  
  
 <EditText  
 android:id="@+id/login\_email"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Email"  
 android:inputType="textEmailAddress" />  
  
 <EditText  
 android:id="@+id/login\_password"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Password"  
 android:inputType="textPassword" />  
  
 <Button  
 android:id="@+id/login\_button"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Login" />  
</LinearLayout>

**WelcomeActivity.java:**

package com.example.end\_sem;  
  
import android.content.Intent;  
import android.content.SharedPreferences;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.TextView;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
public class WelcomeActivity extends AppCompatActivity {  
  
 SharedPreferences sharedPreferences;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_welcome*);  
  
 sharedPreferences = getSharedPreferences("LoginApp", *MODE\_PRIVATE*);  
  
 TextView welcomeText = findViewById(R.id.*welcome\_text*);  
 Button logoutButton = findViewById(R.id.*logout\_button*);  
  
 // Get the email stored in SharedPreferences  
 String email = sharedPreferences.getString("email", "Guest");  
  
 // Display the welcome message with the email  
 welcomeText.setText("Welcome back, " + email);  
  
 logoutButton.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 // Clear the SharedPreferences (logout the user)  
 SharedPreferences.Editor editor = sharedPreferences.edit();  
 editor.clear(); // Clear the stored session  
 editor.apply();  
  
 // Redirect to login page after logout  
 Intent intent = new Intent(WelcomeActivity.this, LoginActivity.class);  
 startActivity(intent);  
 finish();  
 }  
 });  
 }  
}

**activity\_welcome.xml:**

<LinearLayout  
 xmlns:android="http://schemas.android.com/apk/res/android"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="vertical"  
 android:gravity="center"  
 android:padding="20dp">  
  
 <TextView  
 android:id="@+id/welcome\_text"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Welcome back!"  
 android:textSize="20sp" />  
  
 <Button  
 android:id="@+id/logout\_button"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Logout" />  
</LinearLayout>

**AndroidManifest.xml:**  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
 package="com.example.end\_sem">  
  
 <application  
 android:allowBackup="true"  
 android:icon="@mipmap/ic\_launcher"  
 android:label="@string/app\_name"  
 android:roundIcon="@mipmap/ic\_launcher\_round"  
 android:supportsRtl="true"  
 android:theme="@style/Theme.end\_sem">  
 <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>  
 <!-- RegisterActivity -->  
 <activity android:name=".RegisterActivity"  
 android:exported="true">  
 <intent-filter>  
 <action android:name="android.intent.action.MAIN" />  
 <category android:name="android.intent.category.LAUNCHER" />  
 </intent-filter>  
 </activity>  
  
 <activity android:name=".LoginActivity"  
 android:exported="true" />  
  
 <activity android:name=".WelcomeActivity"  
 android:exported="true" />  
  
  
 </application>  
</manifest>

**Res/drawable/background\_gradient.xml:**<?xml version="1.0" encoding="utf-8"?>  
<shape xmlns:android="http://schemas.android.com/apk/res/android"  
 android:shape="rectangle">  
 <gradient  
 android:type="linear"  
 android:angle="90"  
 android:startColor="#f1707f"  
 android:centerColor="#db7aab"  
 android:endColor="#9e4ddc" />  
</shape>

Output screenshots:

 

 

 