

Android Lab

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Code:

```
package com.example.endsemlabapp;

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 MainActivity extends AppCompatActivity {

    EditText name, phoneNumber, email, password;
    Button registerButton, loginButton;
    SharedPreferences sharedPreferences;

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

        name = findViewById(R.id.name);
        phoneNumber = findViewById(R.id.phone);
        email = findViewById(R.id.email);
        password = findViewById(R.id.password);
        registerButton = findViewById(R.id.btnRegister);
        loginButton = findViewById(R.id.btnLogin);

        sharedPreferences = getSharedPreferences("MyPrefs", MODE_PRIVATE);

        registerButton.setOnClickListener(new View.OnClickListener() {
            @Override
```

```

        public void onClick(View view) {
            String userName = name.getText().toString();
            String userPhone = phoneNumber.getText().toString();
            String userEmail = email.getText().toString();
            String userPassword = password.getText().toString();

            if (!userEmail.isEmpty() && !userPassword.isEmpty()) {
                SharedPreferences.Editor editor = sharedPreferences.edit();
                editor.putString("email", userEmail);
                editor.putString("password", userPassword);
                editor.apply();

                Toast.makeText(MainActivity.this, "Registration Successful",
Toast.LENGTH_SHORT).show();
            } else {
                Toast.makeText(MainActivity.this, "Please fill in all
fields", Toast.LENGTH_SHORT).show();
            }
        }
    });

    loginButton.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            Intent intent = new Intent(MainActivity.this,
LoginActivity.class);
            startActivity(intent);
        }
    });
}
}

```

activity_main.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:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <!-- Label for Name -->
    <TextView
        android:id="@+id/label_name"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Name:"
        android:textSize="16sp"
    >

```

```

        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        android:layout_marginTop="24dp"
        android:layout_marginStart="24dp" />

<!-- Name Input -->
<EditText
    android:id="@+id/name"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:hint="Enter your name"
    app:layout_constraintTop_toBottomOf="@id/label_name"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    android:layout_marginStart="24dp"
    android:layout_marginEnd="24dp"
    android:layout_marginTop="8dp" />

<!-- Label for Phone -->
<TextView
    android:id="@+id/label_phone"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Phone:"
    android:textSize="16sp"
    app:layout_constraintTop_toBottomOf="@id/name"
    app:layout_constraintStart_toStartOf="parent"
    android:layout_marginTop="24dp"
    android:layout_marginStart="24dp" />

<!-- Phone Input -->
<EditText
    android:id="@+id/phone"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:hint="Enter your phone number"
    app:layout_constraintTop_toBottomOf="@id/label_phone"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    android:layout_marginStart="24dp"
    android:layout_marginEnd="24dp"
    android:layout_marginTop="8dp" />

<!-- Label for Gmail -->
<TextView
    android:id="@+id/label_gmail"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Gmail:"

```

```

        android:textSize="16sp"
        app:layout_constraintTop_toBottomOf="@id/phone"
        app:layout_constraintStart_toStartOf="parent"
        android:layout_marginTop="24dp"
        android:layout_marginStart="24dp" />

<!-- Gmail Input -->
<EditText
    android:id="@+id/email"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:hint="Enter your Gmail"
    app:layout_constraintTop_toBottomOf="@id/label_gmail"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    android:layout_marginStart="24dp"
    android:layout_marginEnd="24dp"
    android:layout_marginTop="8dp" />

<!-- Label for Password -->
<TextView
    android:id="@+id/label_password"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Password:"
    android:textSize="16sp"
    app:layout_constraintTop_toBottomOf="@id/email"
    app:layout_constraintStart_toStartOf="parent"
    android:layout_marginTop="24dp"
    android:layout_marginStart="24dp" />

<!-- Password Input -->
<EditText
    android:id="@+id/password"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:hint="Enter your password"
    android:inputType="textPassword"
    app:layout_constraintTop_toBottomOf="@id/label_password"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    android:layout_marginStart="24dp"
    android:layout_marginEnd="24dp"
    android:layout_marginTop="8dp" />

<!-- Register Button -->
<Button
    android:id="@+id/btnRegister"
    android:layout_width="0dp"

```

```

        android:layout_height="wrap_content"
        android:text="Register"
        app:layout_constraintTop_toBottomOf="@id/password"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        android:layout_marginTop="24dp"
        android:layout_marginStart="24dp"
        android:layout_marginEnd="24dp" />

<!-- Login Button -->
<Button
    android:id="@+id/btnLogin"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_marginStart="24dp"
    android:layout_marginTop="8dp"
    android:layout_marginEnd="24dp"
    android:text="Login"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@id/btnRegister" />

</androidx.constraintlayout.widget.ConstraintLayout>

```

Login_activity.java

```

package com.example.endsemlabapp;

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 {

    EditText email, password;
    Button loginButton, goToRegisterButton;
    SharedPreferences sharedPreferences;

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

```

```

        email = findViewById(R.id.login_email);
        password = findViewById(R.id.login_password);
        loginButton = findViewById(R.id.btnLogin);
        goToRegisterButton = findViewById(R.id.btnGoToRegister);

        sharedPreferences = getSharedPreferences("MyPrefs", MODE_PRIVATE);

        loginButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                String userEmail = email.getText().toString();
                String userPassword = password.getText().toString();

                String registeredEmail = sharedPreferences.getString("email",
                "");

                String registeredPassword =
                sharedPreferences.getString("password", "");

                if (userEmail.equals(registeredEmail) &&
                userPassword.equals(registeredPassword)) {
                    Intent intent = new Intent(LoginActivity.this,
                WelcomeActivity.class);
                    intent.putExtra("email", userEmail);
                    startActivity(intent);
                } else {
                    Toast.makeText(LoginActivity.this, "Login Failed",
                Toast.LENGTH_SHORT).show();
                }
            }
        });

        // Handle Go to Registration Button Click
        goToRegisterButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                // Navigate back to the registration page
                Intent intent = new Intent(LoginActivity.this,
                MainActivity.class);
                startActivity(intent);
                finish(); // Optional: Close the login activity
            }
        });
    }
}

```

Login.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:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".LoginActivity">

    <!-- Label for Email -->
    <TextView
        android:id="@+id/label_email"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Email:"
        android:textSize="16sp"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        android:layout_marginTop="24dp"
        android:layout_marginStart="24dp" />

    <!-- Email Input -->
    <EditText
        android:id="@+id/login_email"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:hint="Enter your email"
        app:layout_constraintTop_toBottomOf="@id/label_email"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        android:layout_marginStart="24dp"
        android:layout_marginEnd="24dp"
        android:layout_marginTop="8dp" />

    <!-- Label for Password -->

    <!-- Password Input -->

    <!-- Login Button -->

    <!-- Button to go back to Registration -->

    <Button
        android:id="@+id/btnGoToRegister"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_marginStart="24dp"
        android:layout_marginTop="4dp"
        android:layout_marginEnd="24dp"
```

```

        android:text="Go to Registration"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@id/btnLogin" />

<TextView
    android:id="@+id/label_password"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="24dp"
    android:layout_marginTop="12dp"
    android:text="Password:"
    android:textSize="16sp"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@id/login_email" />

<EditText
    android:id="@+id/login_password"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_marginStart="24dp"
    android:layout_marginTop="4dp"
    android:layout_marginEnd="24dp"
    android:hint="Enter your password"
    android:inputType="textPassword"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@id/label_password" />

<Button
    android:id="@+id/btnLogin"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_marginStart="24dp"
    android:layout_marginTop="20dp"
    android:layout_marginEnd="24dp"
    android:text="Login"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@id/login_password" />

</androidx.constraintlayout.widget.ConstraintLayout>

```

welcome_activity.java

```
package com.example.endsemlabapp;
```



```

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

import androidx.appcompat.app.AppCompatActivity;

public class WelcomeActivity extends AppCompatActivity {

    TextView welcomeText;
    SharedPreferences sharedPreferences;

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

        welcomeText = findViewById(R.id.welcome_text);
        String email = getIntent().getStringExtra("email");

        welcomeText.setText("Welcome back " + email);
    }
}

```

Activity_welcome.java

```

<?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:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".WelcomeActivity">

    <!-- Welcome Message -->
    <TextView
        android:id="@+id/welcome_text"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Welcome back"
        android:textSize="24sp"
        android:textStyle="bold"
        android:textColor="@android:color/black"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
    >

```

```
        android:layout_marginBottom="16dp" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

SplashActivity.java

```
package com.example.endsemlabapp;

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

import androidx.appcompat.app.AppCompatActivity;

public class SplashActivity extends AppCompatActivity {

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

        // Button to navigate to the main activity
        Button proceedButton = findViewById(R.id.btnProceed);
        proceedButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                // Navigate to the main activity and finish this activity so
                // user can't come back
                Intent intent = new Intent(SplashActivity.this,
                MainActivity.class);
                startActivity(intent);
                finish(); // Prevent going back to splash screen
            }
        });
    }
}
```

Activity_splash.java

```
<?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:layout_width="match_parent"
```

```
android:layout_height="match_parent"
tools:context=".SplashActivity">

<!-- College Logo -->

<!-- Name -->

<ImageView
    android:id="@+id/college_logo"
    android:layout_width="422dp"
    android:layout_height="452dp"
    android:layout_marginTop="16dp"
    android:contentDescription="College Logo"
    android:src="@drawable/college_logo"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />

<TextView
    android:id="@+id/name_text"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Pranav A N"
    android:textSize="20sp"
    android:textStyle="bold"
    android:layout_marginTop="20dp"
    app:layout_constraintTop_toBottomOf="@id/college_logo"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent" />

<!-- Roll Number -->
<TextView
    android:id="@+id/roll_number_text"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="CH.EN.U4CYS21056"
    android:textSize="16sp"
    android:layout_marginTop="10dp"
    app:layout_constraintTop_toBottomOf="@id/name_text"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent" />

<!-- Button to Navigate to Main Activity -->
<Button
    android:id="@+id/btnProceed"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Proceed"
```

```

        app:layout_constraintTop_toBottomOf="@id/roll_number_text"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        android:layout_marginTop="40dp" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

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.Endsemlabapp"
        tools:targetApi="31">

        <!-- Main Activity (Registration Page) -->
        <activity
            android:name=".SplashActivity"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>

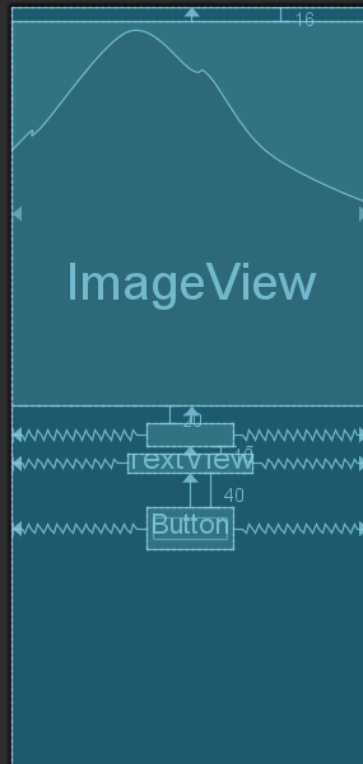
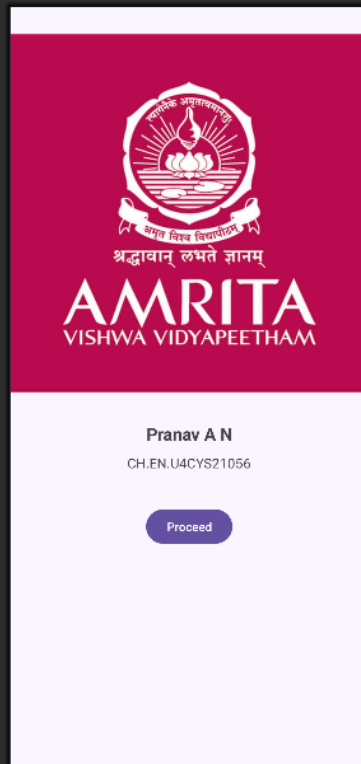
        <!-- Main Activity (Registration/Login functionality) -->
        <activity android:name=".MainActivity" android:exported="true" />

        <!-- Login Activity -->
        <activity android:name=".LoginActivity" android:exported="true"/>

        <!-- Welcome Activity -->
        <activity android:name=".WelcomeActivity" android:exported="true"/>

    </application>
</manifest>

```



Name:

Enter your name

Phone:

Enter your phone number

Gmail:

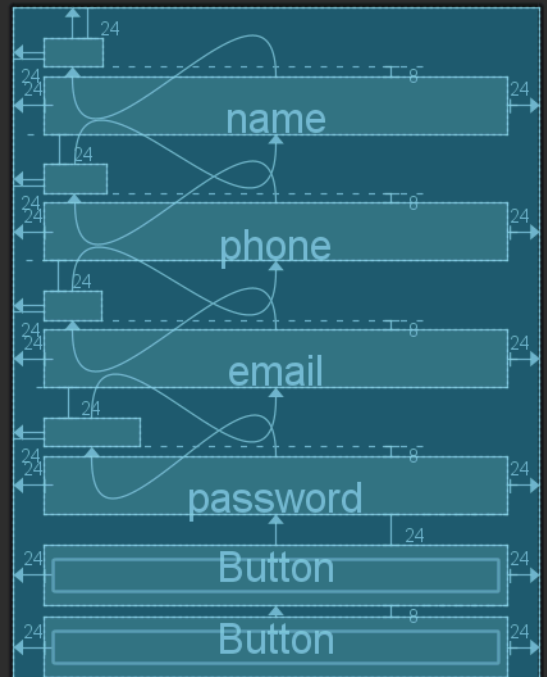
Enter your Gmail

Password:

Enter your password

Register

Login



Email:

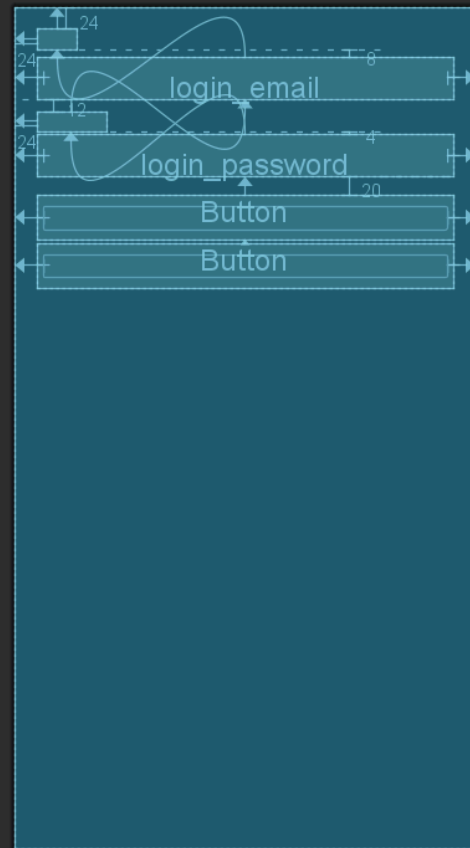
Enter your email

Password:

Enter your password

Login

Go to Registration



75%
Reset

Welcome back

