

Mobile Application Development

Practical 12: Login Register with PHP

CODE:

Andriod_manifest.xml

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

    <uses-permission android:name="android.permission.INTERNET" />

    <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.Login"
        android:usesCleartextTraffic="true">
        <activity
            android:name=".ProfileActivity"
            android:exported="true" />
        <activity
            android:name=".LoginActivity"
            android:exported="true" />
        <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"?>
<RelativeLayout 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">
```

```
<LinearLayout
```

```
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:layout_alignParentTop="true"  
    android:layout_alignParentBottom="true"  
    android:layout_marginTop="58dp"  
    android:layout_marginBottom="289dp"  
    android:orientation="vertical"  
    android:padding="10dp">
```

```
<EditText
```

```
    android:id="@+id/editTextUsername"  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:layout_marginTop="8dp"  
    android:layout_marginBottom="8dp"  
    android:hint="Username"  
    android:inputType="text" />
```

```
<EditText
```

```
    android:id="@+id/editTextEmail"  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:layout_marginTop="8dp"  
    android:layout_marginBottom="8dp"  
    android:hint="Email"  
    android:inputType="textEmailAddress" />
```

```
<EditText
```

```
    android:id="@+id/editTextPassword"  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:layout_marginTop="8dp"  
    android:layout_marginBottom="8dp"  
    android:fontFamily="cursive"  
    android:hint="Password"  
    android:inputType="textPassword" />
```

```
<RadioGroup
```

```
    android:id="@+id/radioGender"  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:layout_marginTop="8dp"  
    android:layout_marginBottom="8dp"  
    android:orientation="horizontal">
```

```
<RadioButton
```

```
    android:id="@+id/radioButtonMale"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:checked="true"  
    android:text="Male" />
```

```

        <RadioButton
            android:id="@+id/radioButtonFemale"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Female" />

    </RadioGroup>

    <Button
        android:id="@+id/buttonRegister"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="8dp"
        android:layout_marginBottom="8dp"
        android:text="Register" />

    <TextView
        android:id="@+id/textViewLogin"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="8dp"
        android:layout_marginBottom="8dp"
        android:text="Already Registered?\nLogin Here"
        android:textAlignment="center"

        android:textAppearance="@style/Base.TextAppearance.AppCompat.Medium" />
    </LinearLayout>

    <ProgressBar
        android:visibility="gone"
        android:id="@+id/progressBar"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_centerVertical="true" />

</RelativeLayout>

```

Activity_login.xml

```

<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout 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">

```

```

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="359dp"
    android:layout_alignParentTop="true"
    android:layout_alignParentBottom="true"
    android:layout_marginTop="134dp"
    android:layout_marginBottom="238dp"
    android:orientation="vertical"
    android:padding="10dp">

    <EditText
        android:id="@+id/editTextUsername"
        android:layout_width="323dp"
        android:layout_height="wrap_content"
        android:layout_marginTop="8dp"
        android:layout_marginBottom="8dp"
        android:hint="Username"
        android:inputType="text" />

    <EditText
        android:id="@+id/editTextPassword"
        android:layout_width="326dp"
        android:layout_height="wrap_content"
        android:layout_marginTop="8dp"
        android:layout_marginBottom="8dp"
        android:fontFamily="cursive"
        android:hint="Password"
        android:inputType="textPassword" />

    <Button
        android:id="@+id/buttonLogin"
        android:layout_width="332dp"
        android:layout_height="wrap_content"
        android:layout_marginTop="8dp"
        android:layout_marginBottom="8dp"
        android:background="#B9EBF1"
        android:backgroundTint="#C0EDF3"
        android:text="Login" />

    <TextView
        android:id="@+id/textViewRegister"
        android:layout_width="328dp"
        android:layout_height="wrap_content"
        android:layout_marginTop="8dp"
        android:layout_marginBottom="8dp"
        android:text="Dont' have an account?\nRegister Here"
        android:textAlignment="center"

    android:textAppearance="@style/Base.TextAppearance.AppCompat.Medium" />

</LinearLayout>

<ProgressBar
    android:visibility="gone"

```

```

        android:id="@+id/progressBar"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_centerVertical="true" />
    </RelativeLayout>

```

Activity_profile.xml

```

<?xml version="1.0" encoding="utf-8" ?>
<RelativeLayout 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=".ProfileActivity">

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="vertical"
        android:layout_marginTop="250dp">

        <TableLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content">

            <TableRow
                android:layout_width="match_parent"
                android:layout_height="match_parent">

                <TextView
                    android:layout_width="wrap_content"
                    android:layout_height="wrap_content"
                    android:padding="10dp"
                    android:text="Id"

                    android:textAppearance="@style/Base.TextAppearance.AppCompat.Large" />

                <TextView
                    android:id="@+id/textViewId"
                    android:layout_width="wrap_content"
                    android:layout_height="wrap_content"
                    android:padding="10dp"
                    android:text="1"

                    android:textAppearance="@style/Base.TextAppearance.AppCompat.Large" />

            </TableRow>

            <TableRow
                android:layout_width="match_parent"

```

```
        android:layout_height="match_parent">

        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:padding="10dp"
            android:text="Username"

        android:textAppearance="@style/Base.TextAppearance.AppCompat.Large" />

        <TextView
            android:id="@+id/textViewUsername"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:padding="10dp"
            android:text="Arjun"

        android:textAppearance="@style/Base.TextAppearance.AppCompat.Large" />

    </TableRow>

    <TableRow>

        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:padding="10dp"
            android:text="Email"

        android:textAppearance="@style/Base.TextAppearance.AppCompat.Large" />

        <TextView
            android:id="@+id/textViewEmail"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:padding="10dp"
            android:text="arjunvankani@gmail.com"

        android:textAppearance="@style/Base.TextAppearance.AppCompat.Large" />

    </TableRow>

    <TableRow>

        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:padding="10dp"
            android:text="Gender"

        android:textAppearance="@style/Base.TextAppearance.AppCompat.Large" />

        <TextView
            android:id="@+id/textViewGender"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:padding="10dp"
```

```

        android:text="Male"

        android:textAppearance="@style/Base.TextAppearance.AppCompat.Large" />

    </TableRow>
</TableLayout>

<Button
    android:id="@+id/buttonLogout"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Logout" />
</LinearLayout>
</RelativeLayout>

```

MainActivity.java

```

package com.example.login;

import android.content.Intent;
import android.os.AsyncTask;
import android.os.Bundle;
import android.text.TextUtils;
import android.view.View;
import android.widget.EditText;
import android.widget.ProgressBar;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

import org.json.JSONException;
import org.json.JSONObject;

import java.util.HashMap;

public class MainActivity extends AppCompatActivity {

    EditText editTextUsername, editTextEmail, editTextPassword;
    RadioGroup radioGroupGender;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        if (SharedPreferences.getInstance(this).isLoggedIn()) {
            finish();
            startActivity(new Intent(this, ProfileActivity.class));
            return;
        }

        editTextUsername = (EditText) findViewById(R.id.editTextUsername);
        editTextEmail = (EditText) findViewById(R.id.editTextEmail);

```

```

editTextPassword = (EditText) findViewById(R.id.editTextPassword);
radioGroupGender = (RadioGroup) findViewById(R.id.radioGender);

    findViewById(R.id.buttonRegister).setOnClickListener(new
View.OnClickListener() {
    @Override
    public void onClick(View view) {
        registerUser();
    }
});

    findViewById(R.id.textViewLogin).setOnClickListener(new
View.OnClickListener() {
    @Override
    public void onClick(View view) {
        finish();
        startActivity(new Intent(MainActivity.this,
LoginActivity.class));
    }
});

}

private void registerUser() {
    final String username = editTextUsername.getText().toString().trim();
    final String email = editTextEmail.getText().toString().trim();
    final String password = editTextPassword.getText().toString().trim();

    final String gender = ((RadioButton)
findViewById(radioGroupGender.getCheckedRadioButtonId())).getText().toString(
);

    if (TextUtils.isEmpty(username)) {
        editTextUsername.setError("Please enter username");
        editTextUsername.requestFocus();
        return;
    }

    if (TextUtils.isEmpty(email)) {
        editTextEmail.setError("Please enter your email");
        editTextEmail.requestFocus();
        return;
    }

    if (!android.util.Patterns.EMAIL_ADDRESS.matcher(email).matches()) {
        editTextEmail.setError("Enter a valid email");
        editTextEmail.requestFocus();
        return;
    }

    if (TextUtils.isEmpty(password)) {
        editTextPassword.setError("Enter a password");
        editTextPassword.requestFocus();
        return;
    }
}

```



```

class RegisterUser extends AsyncTask<Void, Void, String> {

    private ProgressBar progressBar;

    @Override
    protected String doInBackground(Void... voids) {
        RequestHandler requestHandler = new RequestHandler();

        HashMap<String, String> params = new HashMap<>();
        params.put("username", username);
        params.put("email", email);
        params.put("password", password);
        params.put("gender", gender);

        return requestHandler.sendPostRequest(URLs.URL_REGISTER,
params);
    }

    @Override
    protected void onPreExecute() {
        super.onPreExecute();
        progressBar = (ProgressBar) findViewById(R.id.progressBar);
        progressBar.setVisibility(View.VISIBLE);
    }

    @Override
    protected void onPostExecute(String s) {
        super.onPostExecute(s);
        progressBar.setVisibility(View.GONE);

        try {
            JSONObject obj = new JSONObject(s);

            if (!obj.getBoolean("error")) {
                Toast.makeText(getApplicationContext(),
obj.getString("message"), Toast.LENGTH_SHORT).show();

                JSONObject userJson = obj.getJSONObject("user");

                User user = new User(
                    userJson.getInt("id"),
                    userJson.getString("username"),
                    userJson.getString("email"),
                    userJson.getString("gender")
                );

                SharedPreferencesManager.getInstance(getApplicationContext()).userLogin(user);

                finish();
                startActivity(new Intent(getApplicationContext(),
ProfileActivity.class));
            } else {
                Toast.makeText(getApplicationContext(), "Some error
occurred", Toast.LENGTH_SHORT).show();
            }
        }
    }
}

```

```

    }
    } catch (JSONException e) {
        e.printStackTrace();
    }
}

RegisterUser ru = new RegisterUser();
ru.execute();
}
}

```

LoginActivity.java

```

package com.example.login;

import android.content.Intent;
import android.os.AsyncTask;
import android.os.Bundle;
import android.text.TextUtils;
import android.view.View;
import android.widget.EditText;
import android.widget.ProgressBar;
import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

import org.json.JSONException;
import org.json.JSONObject;

import java.util.HashMap;

public class LoginActivity extends AppCompatActivity {

    EditText editTextUsername, editTextPassword;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_login);

        editTextUsername = (EditText) findViewById(R.id.editTextUsername);
        editTextPassword = (EditText) findViewById(R.id.editTextPassword);

        findViewById(R.id.buttonLogin).setOnClickListener(new
        View.OnClickListener() {
            @Override
            public void onClick(View view) {
                userLogin();
            }
        }
    }
}

```

```

    });

    findViewById(R.id.textViewRegister).setOnClickListener(new
View.OnClickListener() {
    @Override
    public void onClick(View view) {
        finish();
        startActivity(new Intent(getApplicationContext(),
MainActivity.class));
    }
    });
}

private void userLogin() {
    final String username = editTextUsername.getText().toString();
    final String password = editTextPassword.getText().toString();

    if (TextUtils.isEmpty(username)) {
        editTextUsername.setError("Please enter your username");
        editTextUsername.requestFocus();
        return;
    }

    if (TextUtils.isEmpty(password)) {
        editTextPassword.setError("Please enter your password");
        editTextPassword.requestFocus();
        return;
    }

    class UserLogin extends AsyncTask<Void, Void, String> {

        ProgressBar progressBar;

        @Override
        protected void onPreExecute() {
            super.onPreExecute();
            progressBar = (ProgressBar) findViewById(R.id.progressBar);
            progressBar.setVisibility(View.VISIBLE);
        }

        @Override
        protected void onPostExecute(String s) {
            super.onPostExecute(s);
            progressBar.setVisibility(View.GONE);

            try {
                JSONObject obj = new JSONObject(s);

                if (!obj.getBoolean("error")) {
                    Toast.makeText(getApplicationContext(),
obj.getString("message"), Toast.LENGTH_SHORT).show();

                    JSONObject userJson = obj.getJSONObject("user");

                    User user = new User(

```

```

        userJson.getInt("id"),
        userJson.getString("username"),
        userJson.getString("email"),
        userJson.getString("gender")
    );

SharedPreferences.getInstance(getApplicationContext()).userLogin(user);

        finish();
        startActivity(new Intent(getApplicationContext(),
ProfileActivity.class));
    } else {
        Toast.makeText(getApplicationContext(), "Invalid
username or password", Toast.LENGTH_SHORT).show();
    }
} catch (JSONException e) {
    e.printStackTrace();
}
}

@Override
protected String doInBackground(Void... voids) {
    RequestHandler requestHandler = new RequestHandler();

    HashMap<String, String> params = new HashMap<>();
    params.put("username", username);
    params.put("password", password);

    return requestHandler.sendPostRequest(URLs.URL_LOGIN,
params);
}
}

UserLogin ul = new UserLogin();
ul.execute();
}
}

```

ProfileActivity.java

```

package com.example.login;

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

import androidx.appcompat.app.AppCompatActivity;

public class ProfileActivity extends AppCompatActivity {

```

```

TextView textViewId, textViewUsername, textViewEmail, textViewGender;
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_profile);

    if (!SharedPreferences.getInstance(this).isLoggedIn()) {
        finish();
        startActivity(new Intent(this, LoginActivity.class));
    }

    textViewId = (TextView) findViewById(R.id.textViewId);
    textViewUsername = (TextView) findViewById(R.id.textViewUsername);
    textViewEmail = (TextView) findViewById(R.id.textViewEmail);
    textViewGender = (TextView) findViewById(R.id.textViewGender);

    User user = SharedPreferences.getInstance(this).getUser();

    textViewId.setText(String.valueOf(user.getId()));
    textViewUsername.setText(user.getUsername());
    textViewEmail.setText(user.getEmail());
    textViewGender.setText(user.getGender());

    findViewById(R.id.buttonLogout).setOnClickListener(new
View.OnClickListener() {
    @Override
    public void onClick(View view) {
        finish();
    }
});

SharedPreferences.getInstance(getApplicationContext()).logout();
}
}
}

```

RequestHadndler.java

```

package com.example.login;
import java.io.BufferedReader;
import java.io.BufferedWriter;
import java.io.InputStreamReader;
import java.io.OutputStream;
import java.io.OutputStreamWriter;
import java.io.UnsupportedEncodingException;
import java.net.HttpURLConnection;
import java.net.URL;
import java.net.URLEncoder;
import java.util.HashMap;
import java.util.Map;

```

```

import javax.net.ssl.HttpURLConnection;
public class RequestHandler {
    public String sendPostRequest(String requestURL, HashMap<String, String>
postDataParams) {
        URL url;

        StringBuilder sb = new StringBuilder();
        try {
            url = new URL(requestURL);
            HttpURLConnection conn = (HttpURLConnection)
url.openConnection();
            conn.setReadTimeout(15000);
            conn.setConnectTimeout(15000);
            conn.setRequestMethod("POST");
            conn.setDoInput(true);
            conn.setDoOutput(true);

            OutputStream os = conn.getOutputStream();

            BufferedWriter writer = new BufferedWriter(
                new OutputStreamWriter(os, "UTF-8"));
            writer.write(getPostDataString(postDataParams));

            writer.flush();
            writer.close();
            os.close();
            int responseCode = conn.getResponseCode();

            if (responseCode == HttpURLConnection.HTTP_OK) {

                BufferedReader br = new BufferedReader(new
InputStreamReader(conn.getInputStream()));
                sb = new StringBuilder();
                String response;

                while ((response = br.readLine()) != null) {
                    sb.append(response);
                }

            } catch (Exception e) {
                e.printStackTrace();
            }
            return sb.toString();
        }

        private String getPostDataString(HashMap<String, String> params) throws
UnsupportedEncodingException {
            StringBuilder result = new StringBuilder();
            boolean first = true;
            for (Map.Entry<String, String> entry : params.entrySet()) {
                if (first)
                    first = false;
                else
                    result.append("&");
            }
        }
    }
}

```

```

        result.append(URLEncoder.encode(entry.getKey(), "UTF-8"));
        result.append("=");
        result.append(URLEncoder.encode(entry.getValue(), "UTF-8"));
    }

    return result.toString();
}
}

```

SharedPreferencesManager

```

package com.example.login;

import android.content.Context;
import android.content.Intent;
import android.content.SharedPreferences;

public class SharedPreferencesManager {
    private static final String SHARED_PREF_NAME =
"simplifiedcodingsharedpref";
    private static final String KEY_USERNAME = "keyusername";
    private static final String KEY_EMAIL = "keyemail";
    private static final String KEY_GENDER = "keygender";
    private static final String KEY_ID = "keyid";

    private static SharedPreferences mInstance;
    private static Context mContext;

    private SharedPreferencesManager(Context context) {
        mContext = context;
    }

    public static synchronized SharedPreferencesManager getInstance(Context context)
    {
        if (mInstance == null) {
            mInstance = new SharedPreferencesManager(context);
        }
        return mInstance;
    }

    public void userLogin(User user) {
        SharedPreferences sharedPreferences =
mContext.getSharedPreferences(SHARED_PREF_NAME, Context.MODE_PRIVATE);
        SharedPreferences.Editor editor = sharedPreferences.edit();
        editor.putInt(KEY_ID, user.getId());
        editor.putString(KEY_USERNAME, user.getUsername());
        editor.putString(KEY_EMAIL, user.getEmail());
        editor.putString(KEY_GENDER, user.getGender());
        editor.apply();
    }

    public boolean isLoggedIn() {

```

```

        SharedPreferences sharedPreferences =
mCtx.getSharedPreferences(SHARED_PREF_NAME, Context.MODE_PRIVATE);
        return sharedPreferences.getString(KEY_USERNAME, null) != null;
    }

    public User getUser() {
        SharedPreferences sharedPreferences =
mCtx.getSharedPreferences(SHARED_PREF_NAME, Context.MODE_PRIVATE);
        return new User(
            sharedPreferences.getInt(KEY_ID, -1),
            sharedPreferences.getString(KEY_USERNAME, null),
            sharedPreferences.getString(KEY_EMAIL, null),
            sharedPreferences.getString(KEY_GENDER, null)
        );
    }

    public void logout() {
        SharedPreferences sharedPreferences =
mCtx.getSharedPreferences(SHARED_PREF_NAME, Context.MODE_PRIVATE);
        SharedPreferences.Editor editor = sharedPreferences.edit();
        editor.clear();
        editor.apply();
        mCtx.startActivity(new Intent(mCtx, LoginActivity.class));
    }
}

```

URLS

```

package com.example.login;

public class URLs {
    private static final String ROOT_URL =
"http://192.168.124.201/Android/Api.php?apicall=";

    public static final String URL_REGISTER = ROOT_URL + "signup";
    public static final String URL_LOGIN = ROOT_URL + "login";
}

```

User

```

package com.example.login;

public class User {
    private int id;
    private String username, email, gender;
}

```



```

public User(int id, String username, String email, String gender) {
    this.id = id;
    this.username = username;
    this.email = email;
    this.gender = gender;
}

public int getId() {
    return id;
}

public String getUsername() {
    return username;
}

public String getEmail() {
    return email;
}

public String getGender() {
    return gender;
}
}

```

Output

The screenshot shows the phpMyAdmin interface for a database named 'android'. The 'users' table is selected, and the query results are displayed. The table has 3 rows of data, showing columns for id, username, email, password, and gender.

	id	username	email	password	gender
	1	arjun	arjun@gmail.com	81dc9bdb52d04dc20036dbd8313ed055	Male
	2	arjunvankani	vankanlarjun0103@gmail.com	81dc9bdb52d04dc20036dbd8313ed055	Male
	3	arjunvankani	vankanlarjun@gmail.com	b0f07fe0f7de991bfca0de50391eb328	Male

Android APP



arjunvankanii

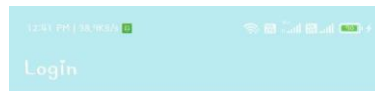
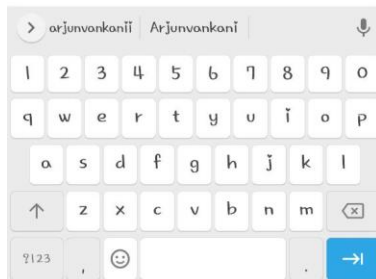
vankaniarjun@gmail.com

....

☒ Male ☐ Female

REGISTER

Already Registered?
Login Here



arjunvankanii

....

LOGIN

Don't have an account?
Register Here



Id 3

Username arjunvankanii

Email vankaniarjun@gmail.com

Gender Male

LOGOUT