



<b>BATCH AND ROLL NO: P8 42405</b>
<b>EXPERIMENT NO.: 03</b>
<b>TITLE: Design a mobile application to create the login page using sqlite /firebase</b>
<b>DATE OF PERFORMANCE:</b>
<b>DATE OF CHECKING:</b>

**Title:** Design a mobile application to create the login page using sqlite /firebase

**Requirements:**

- 1 Android studio
2. Sqlite /firebase

**Theory:**

In software applications, it is mostly required to store users and app data locally. Android SDK provides several APIs for developers to save user and app data, So SQLite is one of the ways of storing data. For many applications, SQLite is the backbone of the app whether it's used directly or via some third-party wrapper. SQLite is a lightweight database that comes with android. It is an Open-Source embedded SQL database engine. This provides a relational database management structure for storing user-defined records in the form of tables.

Here are the general steps to create login page using SQLite in Android Studio:

1. Create a Home Screen JAVA Activity, Which will hold 'Sign In'and 'Sign Up'options.
2. Create XML layouts for home screen and 'Sign In'and 'Sign Up'Screens.
3. Create a SQLite Database in the application's context, so that we can save all required user data ('Sign In'and 'Sign Up'details).
4. Code Logic in Application's Java files.
5. Run Android Login Registration app on Device/Emulator.



**Code:**

DatabaseHelper.java

```
package com.example.assign3;
```

```
import android.content.ContentValues;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;
import androidx.annotation.Nullable;

public class DatabaseHelper extends SQLiteOpenHelper {
    public static final String databaseName = "SignLog.db";
    public DatabaseHelper(@Nullable Context context) {
        super(context, "SignLog.db", null, 1);
    }
    @Override
    public void onCreate(SQLiteDatabase MyDatabase) {
        MyDatabase.execSQL("create Table users(email TEXT primary key, password TEXT)");
    }
    @Override
    public void onUpgrade(SQLiteDatabase MyDB, int i, int i1) {
        MyDB.execSQL("drop Table if exists users");
    }
    public Boolean insertData(String email, String password){
        SQLiteDatabase MyDatabase = this.getWritableDatabase();
        ContentValues contentValues = new ContentValues();
        contentValues.put("email", email);
        contentValues.put("password", password);
        long result = MyDatabase.insert("users", null, contentValues);
        if (result == -1) {
            return false;
        } else {
            return true;
        }
    }
    public Boolean checkEmail(String email){
        SQLiteDatabase MyDatabase = this.getWritableDatabase();
        Cursor cursor = MyDatabase.rawQuery("Select * from users where email = ?", new
String[]{email});
        if(cursor.getCount() > 0) {
            return true;
        }else {
            return false;
        }
    }
    public Boolean checkEmailPassword(String email, String password){
        SQLiteDatabase MyDatabase = this.getWritableDatabase();
        Cursor cursor = MyDatabase.rawQuery("Select * from users where email = ? and password = ?",
new String[]{email, password});
        if (cursor.getCount() > 0) {
            return true;
        }else {
            return false;
        }
    }
}
```

}

LoginActivity.java

```
package com.example.assign3;
```

```
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;
import com.example.assign3.databinding.ActivityLoginBinding;
public class LoginActivity extends AppCompatActivity {
    ActivityLoginBinding binding;
    DatabaseHelper databaseHelper;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        binding = ActivityLoginBinding.inflate(getLayoutInflater());
        setContentView(binding.getRoot());
        databaseHelper = new DatabaseHelper(this);
        binding.loginButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                String email = binding.loginEmail.getText().toString();
                String password = binding.loginPassword.getText().toString();
                if(email.equals("")||password.equals(""))
                    Toast.makeText(LoginActivity.this, "All fields are mandatory",
Toast.LENGTH_SHORT).show();
                else{
                    Boolean checkCredentials = databaseHelper.checkEmailPassword(email, password);
                    if(checkCredentials == true){
                        Toast.makeText(LoginActivity.this, "Login Successfully!",
Toast.LENGTH_SHORT).show();
                        Intent intent = new Intent(getApplicationContext(), MainActivity.class);
                        startActivity(intent);
                    }else{
                        Toast.makeText(LoginActivity.this, "Invalid Credentials",
Toast.LENGTH_SHORT).show();
                    }
                }
            }
        });
        binding.signupRedirectText.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Intent intent = new Intent(LoginActivity.this, SignupActivity.class);
                startActivity(intent);
            }
        });
    }
}
```

SignupActivity.java

```
package com.example.assign3;
```

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```
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;
import com.example.assign3.databinding.ActivitySignupBinding;

public class SignupActivity extends AppCompatActivity {
    ActivitySignupBinding binding;
    DatabaseHelper databaseHelper;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        binding = ActivitySignupBinding.inflate(getLayoutInflater());
        setContentView(binding.getRoot());
        databaseHelper = new DatabaseHelper(this);
        binding.signupButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                String email = binding.signupEmail.getText().toString();
                String password = binding.signupPassword.getText().toString();
                String confirmPassword = binding.signupConfirm.getText().toString();
                if(email.equals("")||password.equals("")||confirmPassword.equals(""))
                    Toast.makeText(SignupActivity.this, "All fields are mandatory",
Toast.LENGTH_SHORT).show();
                else{
                    if(password.equals(confirmPassword)){
                        Boolean checkUserEmail = databaseHelper.checkEmail(email);
                        if(checkUserEmail == false){
                            Boolean insert = databaseHelper.insertData(email, password);
                            if(insert == true){
                                Toast.makeText(SignupActivity.this, "Signup Successfully!",
Toast.LENGTH_SHORT).show();
                                Intent intent = new Intent(getApplicationContext(), LoginActivity.class);
                                startActivity(intent);
                            }else{
                                Toast.makeText(SignupActivity.this, "Signup Failed!",
Toast.LENGTH_SHORT).show();
                            }
                        }
                        else{
                            Toast.makeText(SignupActivity.this, "User already exists! Please login",
Toast.LENGTH_SHORT).show();
                        }
                    }else{
                        Toast.makeText(SignupActivity.this, "Invalid Password!",
Toast.LENGTH_SHORT).show();
                    }
                }
            }
        });
        binding.loginRedirectText.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Intent intent = new Intent(SignupActivity.this, LoginActivity.class);
                startActivity(intent);
            }
        });
    }
}
```

}

Activity\_login.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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"
    android:background="@drawable/login"
    android:orientation="vertical"
    tools:context=".LoginActivity">
    <ScrollView
        android:layout_width="match_parent"
        android:layout_height="wrap_content">
        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:orientation="vertical">
            <LinearLayout
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:layout_marginTop="500dp"
                android:orientation="vertical"
                android:padding="20dp">
                <EditText
                    android:id="@+id/login_email"
                    android:layout_width="350dp"
                    android:layout_height="60dp"
                    android:layout_marginTop="30dp"
                    android:background="@drawable/lavender_border"
                    android:drawableLeft="@drawable/baseline_email_24"
                    android:drawablePadding="8dp"
                    android:hint="Email"
                    android:padding="8dp"/>
                <EditText
                    android:id="@+id/login_password"
                    android:layout_width="350dp"
                    android:layout_height="60dp"
                    android:layout_marginTop="20dp"
                    android:background="@drawable/lavender_border"
                    android:drawableLeft="@drawable/baseline_lock_24"
                    android:drawablePadding="8dp"
                    android:hint="Password"
                    android:inputType="textPassword"
                    android:padding="8dp" />
                <Button
                    android:id="@+id/login_button"
                    android:layout_width="350dp"
                    android:layout_height="70dp"
                    android:layout_marginTop="30dp"
                    android:text="Login"
                    android:textSize="18sp"
                    app:cornerRadius="30dp" />
            <TextView
                android:id="@+id/signupRedirectText"
                android:layout_width="wrap_content"
```

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```
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:layout_marginTop="14dp"
        android:padding="8dp"
        android:text="Not yet registered? Signup"
        android:textColor="@color/lavender"
        android:textSize="18sp" />
    </LinearLayout>
</LinearLayout>
</ScrollView>
</LinearLayout>
```

Activity\_signup.xml

```
<?xml version="1.0" encoding="utf-8"?>
<ScrollView
    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"
    android:orientation="vertical"
    android:background="@drawable/signup"
    tools:context=".SignupActivity">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="vertical">
        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:orientation="vertical"
            android:layout_marginTop="380dp"
            android:padding="20dp">

            <EditText
                android:id="@+id/signup_email"
                android:layout_width="350dp"
                android:layout_height="60dp"
                android:layout_marginTop="30dp"
                android:background="@drawable/lavender_border"
                android:drawableLeft="@drawable/baseline_email_24"
                android:drawablePadding="8dp"
                android:hint="Email"
                android:padding="8dp" />

            <EditText
                android:layout_width="350dp"
                android:layout_height="60dp"
                android:id="@+id/signup_password"
                android:background="@drawable/lavender_border"
                android:layout_marginTop="20dp"
                android:padding="8dp"
                android:hint="Password"
                android:inputType="textPassword"
                android:drawableLeft="@drawable/baseline_lock_24"
                android:drawablePadding="8dp"/>

            <EditText
```

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```
android:layout_width="350dp"
android:layout_height="60dp"
android:id="@+id/signup_confirm"
android:background="@drawable/lavender_border"
android:layout_marginTop="20dp"
android:padding="8dp"
android:hint="Confirm Password"
android:inputType="textPassword"
android:drawableLeft="@drawable/baseline_password_24"
android:drawablePadding="8dp"/>
```

```
<Button
    android:id="@+id/signup_button"
    android:layout_width="350dp"
    android:layout_height="70dp"
    android:layout_marginTop="30dp"
    android:text="Sign Up"
    android:textSize="18sp"
    app:cornerRadius="30dp" />
```

```
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/loginRedirectText"
    android:text="Already an user? Login"
    android:layout_gravity="center"
    android:padding="8dp"
    android:textSize="18sp"
    android:layout_marginTop="8dp"
    android:textColor="@color/lavender"/>
```

```
</LinearLayout>
```

```
</LinearLayout>
```

```
</ScrollView>
```

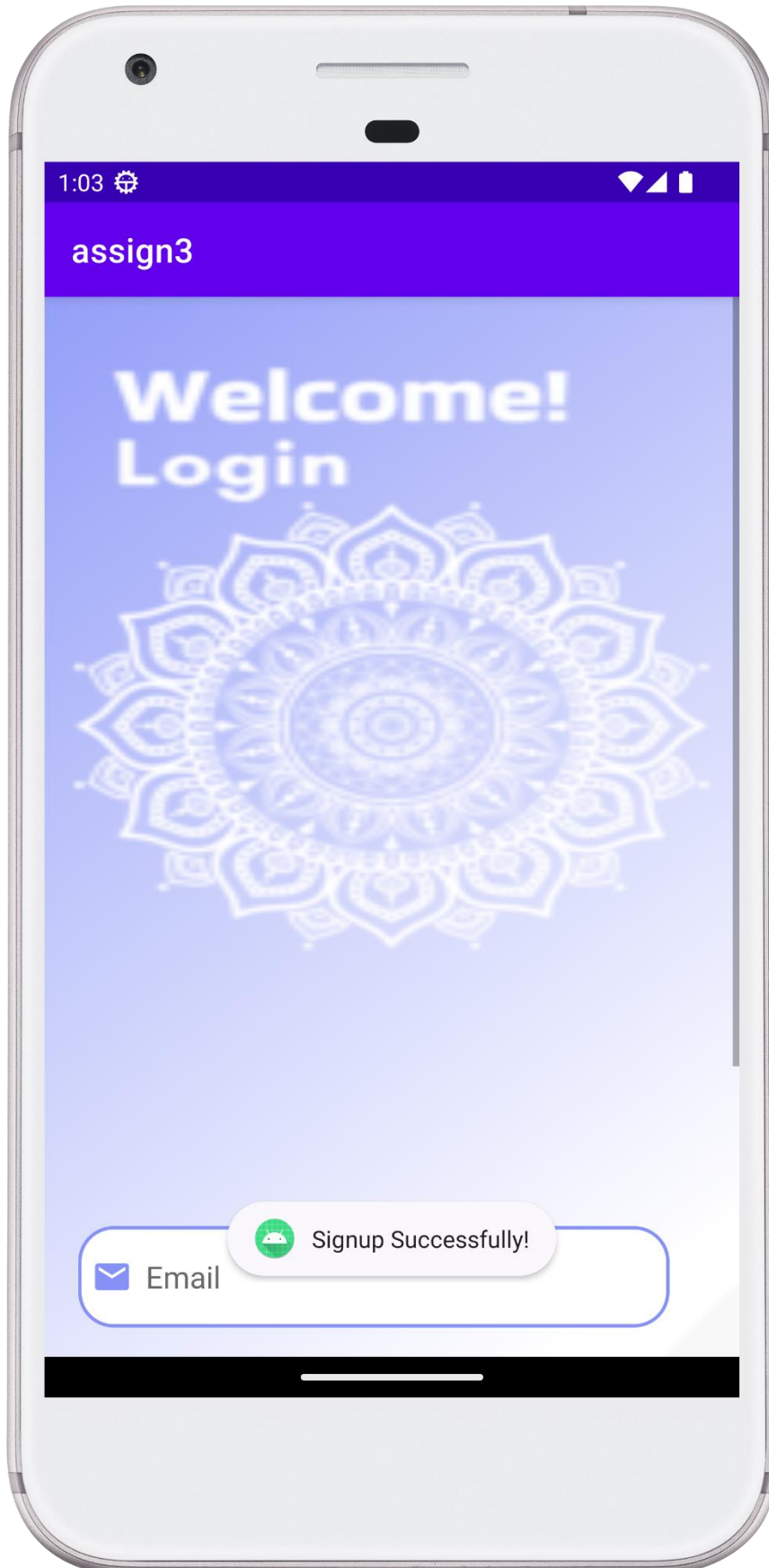
Activity\_main.xml

```
<?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">
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Home"
        android:textSize="36sp"
        android:textColor="@color/lavender"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintBottom_toBottomOf="parent"/>
</androidx.constraintlayout.widget.ConstraintLayout>
```

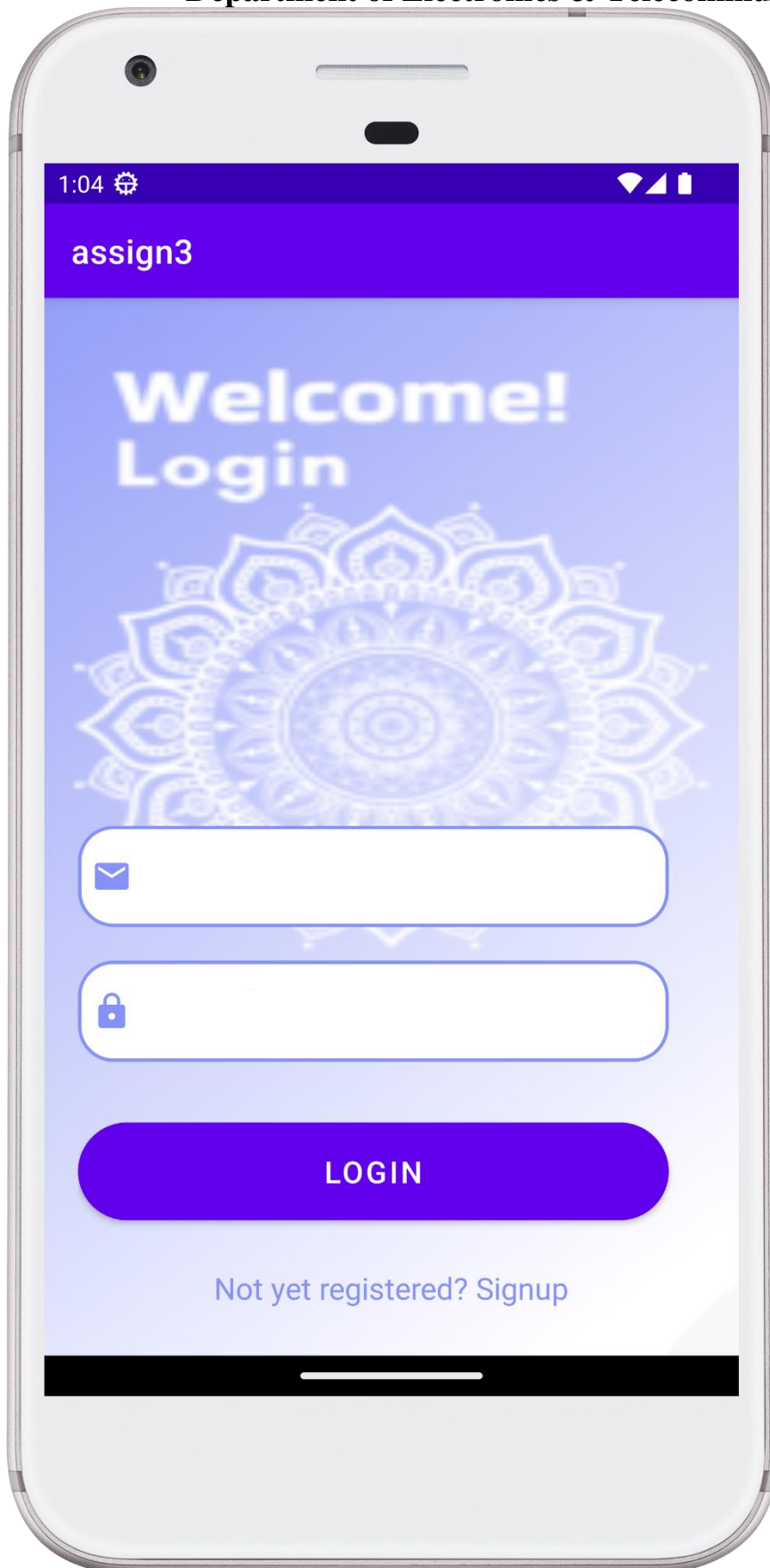


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**Output:**







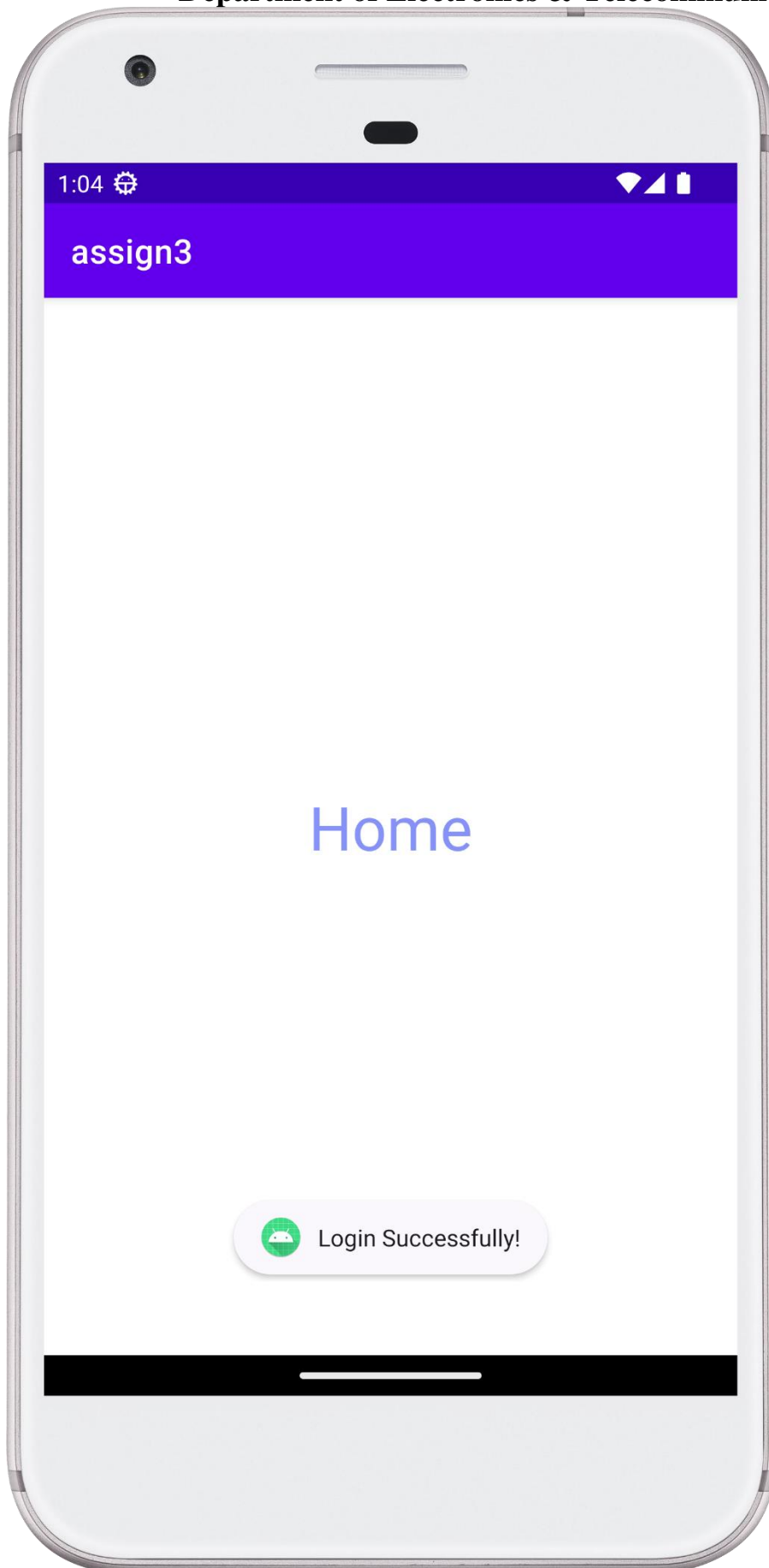


Table: users ▼ Page:  Jump << < 1-1 > >>

email	password
admin@admin.com	admin1234
abhijeetgupta0120@gmail.com	final.cpp@



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**CONCLUSION:**

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