**11. Create a database and a user table where the details of login names and passwords are stored. Insert some names and passwords initially. Now the login details entered by the user should be verified with the database and an appropriate dialog should be shown to the user.**

MainActivity.java file;;;

package com.example.lab11;

import android.content.Intent;

import android.database.Cursor;

import android.database.sqlite.SQLiteDatabase;

import android.support.v4.app.INotificationSideChannel;

import android.os.Bundle;

import android.text.TextUtils;

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 {

Button LogInButton, RegisterButton ;

EditText Email, Password ;

String EmailHolder, PasswordHolder;

Boolean EditTextEmptyHolder;

SQLiteDatabase sqLiteDatabaseObj;

SQLiteHelper sqLiteHelper;

Cursor cursor;

String TempPassword = "NOT\_FOUND" ;

public static final String UserEmail = "";

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

LogInButton = (Button)findViewById(R.id.buttonLogin);

RegisterButton = (Button)findViewById(R.id.buttonRegister);

Email = (EditText)findViewById(R.id.editEmail);

Password = (EditText)findViewById(R.id.editPassword);

sqLiteHelper = new SQLiteHelper(this);

//Adding click listener to log in button.

LogInButton.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

// Calling EditText is empty or no method.

CheckEditTextStatus();

// Calling login method.

LoginFunction();

}

});

// Adding click listener to register button.

RegisterButton.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

// Opening new user registration activity using intent on button click.

Intent intent = new Intent(MainActivity.this, RegisterActivity.class);

startActivity(intent);

}

});

}

// Login function starts from here.

public void LoginFunction(){

if(EditTextEmptyHolder) {

// Opening SQLite database write permission.

sqLiteDatabaseObj = sqLiteHelper.getWritableDatabase();

// Adding search email query to cursor.

cursor = sqLiteDatabaseObj.query(SQLiteHelper.TABLE\_NAME, null, " " + SQLiteHelper.Table\_Column\_2\_Email + "=?", new String[]{EmailHolder}, null, null, null);

while (cursor.moveToNext()) {

if (cursor.isFirst()) {

cursor.moveToFirst();

// Storing Password associated with entered email.

TempPassword = cursor.getString(cursor.getColumnIndex(SQLiteHelper.Table\_Column\_3\_Password));

// Closing cursor.

cursor.close();

}

}

// Calling method to check final result ..

CheckFinalResult();

}

else {

//If any of login EditText empty then this block will be executed.

Toast.makeText(MainActivity.this,"Please Enter UserName or Password.",Toast.LENGTH\_LONG).show();

}

}

// Checking EditText is empty or not.

public void CheckEditTextStatus(){

// Getting value from All EditText and storing into String Variables.

EmailHolder = Email.getText().toString();

PasswordHolder = Password.getText().toString();

// Checking EditText is empty or no using TextUtils.

if( TextUtils.isEmpty(EmailHolder) || TextUtils.isEmpty(PasswordHolder)){

EditTextEmptyHolder = false ;

}

else {

EditTextEmptyHolder = true ;

}

}

// Checking entered password from SQLite database email associated password.

public void CheckFinalResult(){

if(TempPassword.equalsIgnoreCase(PasswordHolder))

{

Toast.makeText(MainActivity.this,"Login Successfully",Toast.LENGTH\_LONG).show();

// Going to Dashboard activity after login success message.

Intent intent = new Intent(MainActivity.this, DashboardActivity.class);

// Sending Email to Dashboard Activity using intent.

intent.putExtra(UserEmail, EmailHolder);

startActivity(intent);

}

else {

Toast.makeText(MainActivity.this,"UserName or Password is Wrong, Please Try Again.",Toast.LENGTH\_LONG).show();

}

TempPassword = "NOT\_FOUND" ;

}

}

activity\_main.xml layout file::::::

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

<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"

xmlns:tools="http://schemas.android.com/tools"

android:id="@+id/activity\_main"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:paddingBottom="20dp"

android:paddingLeft="20dp"

android:paddingRight="20dp"

android:paddingTop="20dp"

tools:context="com.example.lab11.MainActivity">

<TextView

android:text="SQLite User Login Screen"

android:gravity="center"

android:textSize="20dp"

android:textColor="#000"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_alignParentTop="true"

android:layout\_centerHorizontal="true"

android:id="@+id/textView" />

<EditText

android:layout\_width="fill\_parent"

android:layout\_height="wrap\_content"

android:inputType="textEmailAddress"

android:hint="Enter Email"

android:textColor="#000"

android:ems="10"

android:layout\_below="@+id/textView"

android:layout\_centerHorizontal="true"

android:layout\_marginTop="20dp"

android:id="@+id/editEmail"

android:gravity="center"/>

<EditText

android:layout\_width="fill\_parent"

android:layout\_height="wrap\_content"

android:inputType="textPassword"

android:hint="Enter Password"

android:textColor="#000"

android:ems="10"

android:layout\_below="@+id/editEmail"

android:layout\_centerHorizontal="true"

android:layout\_marginTop="20dp"

android:id="@+id/editPassword"

android:gravity="center"/>

<Button

android:layout\_width="fill\_parent"

android:layout\_height="wrap\_content"

android:id="@+id/buttonLogin"

android:layout\_below="@+id/editPassword"

android:layout\_marginTop="20dp"

android:text="Log IN "/>

<Button

android:layout\_width="fill\_parent"

android:layout\_height="wrap\_content"

android:id="@+id/buttonRegister"

android:layout\_below="@+id/buttonLogin"

android:layout\_marginTop="20dp"

android:text="Not Log IN | Register From here "/>

</RelativeLayout>

RegisterActivity.java file::::

package com.example.lab11;

import android.content.Context;

import android.content.Intent;

import android.database.Cursor;

import android.database.sqlite.SQLiteDatabase;

import android.support.v4.app.INotificationSideChannel;

import android.os.Bundle;

import android.text.TextUtils;

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 {

EditText Email, Password, Name ;

Button Register;

String NameHolder, EmailHolder, PasswordHolder;

Boolean EditTextEmptyHolder;

SQLiteDatabase sqLiteDatabaseObj;

String SQLiteDataBaseQueryHolder ;

SQLiteHelper sqLiteHelper;

Cursor cursor;

String F\_Result = "Not\_Found";

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_register);

Register = (Button)findViewById(R.id.buttonRegister);

Email = (EditText)findViewById(R.id.editEmail);

Password = (EditText)findViewById(R.id.editPassword);

Name = (EditText)findViewById(R.id.editName);

sqLiteHelper = new SQLiteHelper(this);

// Adding click listener to register button.

Register.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

// Creating SQLite database if dose n't exists

SQLiteDataBaseBuild();

// Creating SQLite table if dose n't exists.

SQLiteTableBuild();

// Checking EditText is empty or Not.

CheckEditTextStatus();

// Method to check Email is already exists or not.

CheckingEmailAlreadyExistsOrNot();

// Empty EditText After done inserting process.

EmptyEditTextAfterDataInsert();

}

});

}

// SQLite database build method.

public void SQLiteDataBaseBuild(){

sqLiteDatabaseObj = openOrCreateDatabase(SQLiteHelper.DATABASE\_NAME, Context.MODE\_PRIVATE, null);

}

// SQLite table build method.

public void SQLiteTableBuild() {

sqLiteDatabaseObj.execSQL("CREATE TABLE IF NOT EXISTS " + SQLiteHelper.TABLE\_NAME + "(" + SQLiteHelper.Table\_Column\_ID + " PRIMARY KEY AUTOINCREMENT NOT NULL, " + SQLiteHelper.Table\_Column\_1\_Name + " VARCHAR, " + SQLiteHelper.Table\_Column\_2\_Email + " VARCHAR, " + SQLiteHelper.Table\_Column\_3\_Password + " VARCHAR);");

}

// Insert data into SQLite database method.

public void InsertDataIntoSQLiteDatabase(){

// If editText is not empty then this block will executed.

if(EditTextEmptyHolder == true)

{

// SQLite query to insert data into table.

SQLiteDataBaseQueryHolder = "INSERT INTO "+SQLiteHelper.TABLE\_NAME+" (name,email,password) VALUES('"+NameHolder+"', '"+EmailHolder+"', '"+PasswordHolder+"');";

// Executing query.

sqLiteDatabaseObj.execSQL(SQLiteDataBaseQueryHolder);

// Closing SQLite database object.

sqLiteDatabaseObj.close();

// Printing toast message after done inserting.

Toast.makeText(RegisterActivity.this,"User Registered Successfully", Toast.LENGTH\_LONG).show();

}

// This block will execute if any of the registration EditText is empty.

else {

// Printing toast message if any of EditText is empty.

Toast.makeText(RegisterActivity.this,"Please Fill All The Required Fields.", Toast.LENGTH\_LONG).show();

}

}

// Empty edittext after done inserting process method.

public void EmptyEditTextAfterDataInsert(){

Name.getText().clear();

Email.getText().clear();

Password.getText().clear();

}

// Method to check EditText is empty or Not.

public void CheckEditTextStatus(){

// Getting value from All EditText and storing into String Variables.

NameHolder = Name.getText().toString() ;

EmailHolder = Email.getText().toString();

PasswordHolder = Password.getText().toString();

if(TextUtils.isEmpty(NameHolder) || TextUtils.isEmpty(EmailHolder) || TextUtils.isEmpty(PasswordHolder)){

EditTextEmptyHolder = false ;

}

else {

EditTextEmptyHolder = true ;

}

}

// Checking Email is already exists or not.

public void CheckingEmailAlreadyExistsOrNot(){

// Opening SQLite database write permission.

sqLiteDatabaseObj = sqLiteHelper.getWritableDatabase();

// Adding search email query to cursor.

cursor = sqLiteDatabaseObj.query(SQLiteHelper.TABLE\_NAME, null, " " + SQLiteHelper.Table\_Column\_2\_Email + "=?", new String[]{EmailHolder}, null, null, null);

while (cursor.moveToNext()) {

if (cursor.isFirst()) {

cursor.moveToFirst();

// If Email is already exists then Result variable value set as Email Found.

F\_Result = "Email Found";

// Closing cursor.

cursor.close();

}

}

// Calling method to check final result and insert data into SQLite database.

CheckFinalResult();

}

// Checking result

public void CheckFinalResult(){

// Checking whether email is already exists or not.

if(F\_Result.equalsIgnoreCase("Email Found"))

{

// If email is exists then toast msg will display.

Toast.makeText(RegisterActivity.this,"Email Already Exists",Toast.LENGTH\_LONG).show();

}

else {

// If email already dose n't exists then user registration details will entered to SQLite database.

InsertDataIntoSQLiteDatabase();

}

F\_Result = "Not\_Found" ;

}

}

activity\_register.xml layout file:::

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

<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"

xmlns:tools="http://schemas.android.com/tools"

android:id="@+id/activity\_register"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context="com.example.lab11.RegisterActivity">

<TextView

android:text="SQLite User Registration"

android:gravity="center"

android:textSize="20dp"

android:textColor="#000"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_alignParentTop="true"

android:layout\_centerHorizontal="true"

android:id="@+id/textView" />

<EditText

android:layout\_width="fill\_parent"

android:layout\_height="wrap\_content"

android:inputType="textEmailAddress"

android:hint="Enter Name"

android:textColor="#000"

android:ems="10"

android:layout\_below="@+id/textView"

android:layout\_centerHorizontal="true"

android:layout\_marginTop="20dp"

android:id="@+id/editName"

android:gravity="center"/>

<EditText

android:layout\_width="fill\_parent"

android:layout\_height="wrap\_content"

android:inputType="textEmailAddress"

android:hint="Enter Email"

android:textColor="#000"

android:ems="10"

android:layout\_below="@+id/editName"

android:layout\_centerHorizontal="true"

android:layout\_marginTop="20dp"

android:id="@+id/editEmail"

android:gravity="center"/>

<EditText

android:layout\_width="fill\_parent"

android:layout\_height="wrap\_content"

android:inputType="textPassword"

android:hint="Enter Password"

android:textColor="#000"

android:ems="10"

android:layout\_below="@+id/editEmail"

android:layout\_centerHorizontal="true"

android:layout\_marginTop="20dp"

android:id="@+id/editPassword"

android:gravity="center"/>

<Button

android:layout\_width="fill\_parent"

android:layout\_height="wrap\_content"

android:id="@+id/buttonRegister"

android:layout\_below="@+id/editPassword"

android:layout\_marginTop="20dp"

android:text="Register From here "/>

</RelativeLayout>

DashboardActivity.java file:::

package com.example.lab11;

import android.content.Intent;

import android.support.v4.app.INotificationSideChannel;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.TextView;

import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

public class DashboardActivity extends AppCompatActivity {

String EmailHolder;

TextView Email;

Button LogOUT ;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_dashboard);

Email = (TextView)findViewById(R.id.textView1);

LogOUT = (Button)findViewById(R.id.button1);

Intent intent = getIntent();

// Receiving User Email Send By MainActivity.

EmailHolder = intent.getStringExtra(MainActivity.UserEmail);

// Setting up received email to TextView.

Email.setText(Email.getText().toString()+ EmailHolder);

// Adding click listener to Log Out button.

LogOUT.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

//Finishing current DashBoard activity on button click.

finish();

Toast.makeText(DashboardActivity.this,"Log Out Successfull", Toast.LENGTH\_LONG).show();

}

});

}

}

activity\_dashboard.xml layout file:::

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

<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"

xmlns:tools="http://schemas.android.com/tools"

android:id="@+id/activity\_dashboard"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context="com.example.lab11.DashboardActivity">

<TextView

android:text="Login SuccessFully, Email ="

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:gravity="center"

android:textSize="20dp"

android:textColor="#000"

android:id="@+id/textView1"

android:layout\_alignParentTop="true"

android:layout\_centerHorizontal="true"

android:layout\_marginTop="176dp" />

<Button

android:text="LOGOUT"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_below="@+id/textView1"

android:layout\_centerHorizontal="true"

android:layout\_marginTop="36dp"

android:id="@+id/button1" />

</RelativeLayout>

SQLiteHelper.java file::::

package com.example.lab11;

import android.content.Context;

import android.database.sqlite.SQLiteOpenHelper;

import android.database.sqlite.SQLiteDatabase;

public class SQLiteHelper extends SQLiteOpenHelper {

static String DATABASE\_NAME="UserDataBase";

public static final String TABLE\_NAME="UserTable";

public static final String Table\_Column\_ID="id";

public static final String Table\_Column\_1\_Name="name";

public static final String Table\_Column\_2\_Email="email";

public static final String Table\_Column\_3\_Password="password";

public SQLiteHelper(Context context) {

super(context, DATABASE\_NAME, null, 1);

}

@Override

public void onCreate(SQLiteDatabase database) {

String CREATE\_TABLE="CREATE TABLE IF NOT EXISTS "+TABLE\_NAME+" ("+Table\_Column\_ID+" INTEGER PRIMARY KEY, "+Table\_Column\_1\_Name+" VARCHAR, "+Table\_Column\_2\_Email+" VARCHAR, "+Table\_Column\_3\_Password+" VARCHAR)";

database.execSQL(CREATE\_TABLE);

}

@Override

public void onUpgrade(SQLiteDatabase db, int oldVersion, int newVersion) {

db.execSQL("DROP TABLE IF EXISTS "+TABLE\_NAME);

onCreate(db);

}

}