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

Activity\_main.xml

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| *<?***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"   tools:context="com.example.lab10.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**> |

Activity\_register.xml:

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| *<?***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.lab10.register"**>   <**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**> |

Activity\_dashboard.xml:

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| *<?***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.lab10.dashboard"**>    <**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

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| **package** com.example.lab10;  **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);   }  } |

MainActivity.java:

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| **package** com.example.lab10;  **import** android.content.Intent; **import** android.database.Cursor; **import** android.database.sqlite.SQLiteDatabase; **import** androidx.appcompat.app.AppCompatActivity; **import** android.os.Bundle; **import** android.text.TextUtils; **import** android.view.View; **import** android.widget.Button; **import** android.widget.EditText; **import** android.widget.Toast;  **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**, register.**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**, dashboard.**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"** ;   }  } |

Register.java

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| **package** com.example.lab10;  **import** androidx.appcompat.app.AppCompatActivity;  **import** android.content.Context; **import** android.content.Intent; **import** android.database.Cursor; **import** android.database.sqlite.SQLiteDatabase; **import** android.os.Bundle; **import** android.text.TextUtils; **import** android.view.View; **import** android.widget.Button; **import** android.widget.EditText; **import** android.widget.Toast;  **public class** register **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*(register.**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*(register.**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*(register.**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"** ;   }  } |

Dashboard.java

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| **package** com.example.lab10;  **import** androidx.appcompat.app.AppCompatActivity;  **import** android.os.Bundle;  **import** android.content.Intent; **import** android.os.Bundle; **import** android.view.View; **import** android.widget.Button; **import** android.widget.TextView; **import** android.widget.Toast;  **public class** dashboard **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*(dashboard.**this**,**"Log Out Successfull"**, Toast.***LENGTH\_LONG***).show();   }  });   } } |

Outputs: 



