

**LAPORAN  
WORKSHOP APLIKASI MOBILE  
SQLITE & SHARED PREFERENCE**



***OLEH :***  
**ALIF IRHASSHOEFI NASIHUL UMAM    E41190530**

**PRODI TEKNIK INFORMATIKA  
JURUSAN TEKNOLOGI INFORMASI  
POLITEKNIK NEGERI JEMBER  
2021**

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## **DESKRIPSI APLIKASI**

Pembuatan aplikasi dilakukan sebagai sarana latihan menggunakan SQLite dan shared preference secara bersamaan pada android studio. Pada aplikasi dalam laporan ini terdapat 2 fungsi atau fitur yaitu: (1) Login menggunakan fungsi shared preference, (2) Penyimpanan biodata menggunakan SQLite.

Ketika membuka untuk pertama kali user/pengguna akan ditampilkan sebuah halaman login dimana user bisa melakukan login di halaman tersebut. User kemudian menekan tombol register dan memulai melakukan proses registrasi. Data registrasi akan disimpan pada shared preference. Setelah proses registrasi selesai user akan dikembalikan ke halaman login untuk melakukan proses login sesuai data yang telah dimasukkan sebelumnya di register.

Setelah melakukan login user akan dibawa ke halaman utama dimana user bisa melakukan kegiatan dasar dari CRUD pada biodata. Data akan disimpan pada database SQLite.

## SOURCE CODE

### A. Activity

#### 1. activity\_biodata

```
<?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=".BuatBiodata"
    android:layout_marginTop="16dp"
    android:layout_marginBottom="16dp"
    android:layout_marginStart="16dp"
    android:layout_marginEnd="16dp">

    <TextView
        android:id="@+id/Lnama"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Nama"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <EditText
        android:id="@+id/Fnama"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
```

```

        android:hint="Nama"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/Lnama" />

```

<TextView

```

        android:id="@+id/Ltgl"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="20dp"
        android:text="Tanggal Lahir"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/Fnama" />

```

<EditText

```

        android:id="@+id/Ftgl"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="date"
        android:hint="2001-01-01"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/Ltgl" />

```

<TextView

```

        android:id="@+id/Ljkl"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="20dp"
        android:text="Jenis Kelamin"

```

```
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/Ftgl" />
```

<EditText

```
    android:id="@+id/Fjkl"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="text"
    android:hint="L atau P"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/Ljkl" />
```

<TextView

```
    android:id="@+id/Lalamat"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="20dp"
    android:text="Alamat"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/Fjkl" />
```

<EditText

```
    android:id="@+id/Falamat"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="text"
    android:hint="Alamat"
    app:layout_constraintEnd_toEndOf="parent"
```

```
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/Lalamat" />
```

```
<Button
```

```
    android:id="@+id/btnKembali"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Kembali"
    android:layout_marginTop="16dp"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/Falamat" />
```

```
<Button
```

```
    android:id="@+id/btnSimpan"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Simpan"
    android:layout_marginTop="16dp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/Falamat" />
```

```
</androidx.constraintlayout.widget.ConstraintLayout>
```

## 2. activity\_lihat\_biodata

```
<?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=".LihatBiodata"
    android:layout_marginTop="16dp"
    android:layout_marginBottom="16dp"
    android:layout_marginStart="16dp"
    android:layout_marginEnd="16dp">
```

```
<TextView
    android:id="@+id/Lnomor"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="30dp"
    android:layout_marginTop="76dp"
    android:text="Nomor"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
```

```
<TextView
    android:id="@+id/Lnama"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="30dp"
    android:layout_marginStart="30dp"
    android:text="Nama"
```



```
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="@id/Lnomor" />
```

<TextView

```
android:id="@+id/Ltgl"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginTop="30dp"
android:layout_marginStart="30dp"
android:text="Tanggal Lahir"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="@id/Lnama" />
```

<TextView

```
android:id="@+id/Ljkl"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginTop="30dp"
android:layout_marginStart="30dp"
android:text="Jenis Kelamin"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="@id/Ltgl" />
```

<TextView

```
android:id="@+id/Lalamat"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginTop="30dp"
android:layout_marginStart="30dp"
android:text="Alamat"
app:layout_constraintStart_toStartOf="parent"
```

```
app:layout_constraintTop_toTopOf="@id/Ljkl" />
```

```
<TextView
```

```
    android:id="@+id/Cnomor"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:layout_marginTop="76dp"  
    android:layout_marginEnd="48dp"  
    android:text="Nomor"  
    app:layout_constraintEnd_toEndOf="parent"  
    app:layout_constraintTop_toTopOf="parent" />
```

```
<TextView
```

```
    android:id="@+id/Cnama"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:layout_marginTop="30dp"  
    android:layout_marginEnd="48dp"  
    android:text="Nama"  
    app:layout_constraintEnd_toEndOf="parent"  
    app:layout_constraintTop_toTopOf="@id/Cnomor" />
```

```
<TextView
```

```
    android:id="@+id/Ctgl"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:layout_marginTop="30dp"  
    android:layout_marginEnd="48dp"  
    android:text="TGL"  
    app:layout_constraintEnd_toEndOf="parent"  
    app:layout_constraintTop_toTopOf="@id/Cnama" />
```

```

<TextView
    android:id="@+id/Cjkl"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="30dp"
    android:layout_marginEnd="48dp"
    android:text="JKL"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toTopOf="@id/Ctgl" />

```

```

<TextView
    android:id="@+id/Calamat"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="30dp"
    android:layout_marginEnd="48dp"
    android:text="alamat"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toTopOf="@id/Cjkl" />

```

```

<Button
    android:id="@+id/btnKembali"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="4dp"
    android:layout_marginTop="48dp"
    android:text="Kembali"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/Lalamat" />

```

```

</androidx.constraintlayout.widget.ConstraintLayout>

```

### 3. activity\_login

```
<?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"
    android:layout_marginTop="16dp"
    android:layout_marginBottom="16dp"
    android:layout_marginStart="16dp"
    android:layout_marginEnd="16dp">

    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="208dp"
        android:text="Login"
        android:textSize="30dp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.498"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <EditText
        android:id="@+id/Fusername"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
```

```

        android:layout_marginTop="36dp"
        android:ems="10"
        android:inputType="text"
        android:hint="username"
        android:gravity="center"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.497"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView" />

```

<EditText

```

        android:id="@+id/Fpassword"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="20dp"
        android:ems="10"
        android:gravity="center"
        android:inputType="textPassword"
        android:hint="password"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.497"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/Fusername" />

```

<Button

```

        android:id="@+id/btnLogin"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="28dp"
        android:text="Login"
        app:layout_constraintEnd_toEndOf="parent"

```

```
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/Fpassword" />
```

```
<Button
```

```
    android:id="@+id/btnRegister"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="16dp"
    android:text="Register"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.501"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/btnLogin" />
```

```
</androidx.constraintlayout.widget.ConstraintLayout>
```

#### 4. activity\_main

```
<?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"
    android:layout_marginTop="16dp"
    android:layout_marginBottom="16dp"
    android:layout_marginStart="16dp"
    android:layout_marginEnd="16dp">

    <Button
        android:id="@+id/btnBuat"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentBottom="true"
        android:text="Buat biodata baru"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent" />

    <ListView
        android:layout_width="match_parent"
        android:layout_height="0dp"
        android:id="@+id/listView"
        app:layout_constraintBottom_toTopOf="@+id/btnBuat"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
```

```
app:layout_constraintTop_toTopOf="parent" />
```

```
<Button
```

```
    android:id="@+id/btnLogout"
```

```
    android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"
```

```
    android:text="Logout"
```

```
    app:layout_constraintBottom_toBottomOf="parent"
```

```
    app:layout_constraintStart_toStartOf="parent" />
```

```
</androidx.constraintlayout.widget.ConstraintLayout>
```



## 5. activity\_register

```
<?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=".RegisterActivity"
    android:layout_marginTop="16dp"
    android:layout_marginBottom="16dp"
    android:layout_marginStart="16dp"
    android:layout_marginEnd="16dp">
```

```
<TextView
    android:id="@+id/textView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="156dp"
    android:text="Register"
    android:textSize="30dp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.494"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
```

```
<EditText
    android:id="@+id/editTextUsername"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="36dp"
```

```

android:ems="10"
android:inputType="text"
android:hint="username"
android:gravity="center"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.497"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/textView" />

```

<EditText

```

android:id="@+id/editTextPassword"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginTop="20dp"
android:ems="10"
android:gravity="center"
android:inputType="textPassword"
android:hint="Password"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.497"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/editTextUsername" />

```

<EditText

```

android:id="@+id/editTextPasswordConfirm"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginTop="20dp"
android:ems="10"
android:gravity="center"
android:inputType="textPassword"

```

```
android:hint="confrim password"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.497"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/editTextPassword" />
```

```
<Button
```

```
    android:id="@+id/btnRegister"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="28dp"
    android:text="Register"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
```

```
app:layout_constraintTop_toBottomOf="@+id/editTextPasswordConfirm" />
```

```
<Button
```

```
    android:id="@+id/btnLogin"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="16dp"
    android:text="Login"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.498"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/btnRegister" />
```

```
</androidx.constraintlayout.widget.ConstraintLayout>
```

## 6. activity\_update\_biodata

```
<?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=".UpdateBiodata"
    android:layout_marginTop="16dp"
    android:layout_marginBottom="16dp"
    android:layout_marginStart="16dp"
    android:layout_marginEnd="16dp">
```

```
<TextView
    android:id="@+id/Lnomor"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Nomor"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
```

```
<EditText
    android:id="@+id/Fnomor"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:ems="10"
    android:enabled="false"
    android:inputType="textPersonName"
    android:hint="Nomor"
    app:layout_constraintEnd_toEndOf="parent"
```

```
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/Lnomor" />
```

<TextView

```
android:id="@+id/Lnama"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginTop="20dp"
android:text="Nama"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/Fnomor" />
```

<EditText

```
android:id="@+id/Fnama"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:ems="10"
android:inputType="textPersonName"
android:hint="Nama"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/Lnama" />
```

<TextView

```
android:id="@+id/Ltgl"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginTop="20dp"
android:text="Tanggal Lahir"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/Fnama" />
```

<EditText

```
    android:id="@+id/Ftgl"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="date"
    android:hint="2001-01-01"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/Ltgl" />
```

<TextView

```
    android:id="@+id/Ljkl"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="20dp"
    android:text="Jenis Kelamin"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/Ftgl" />
```

<EditText

```
    android:id="@+id/Fjkl"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="text"
    android:hint="L atau P"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/Ljkl" />
```

<TextView

```
    android:id="@+id/Lalamat"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="20dp"
    android:text="Alamat"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/Fjkl" />
```

<EditText

```
    android:id="@+id/Falamat"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="text"
    android:hint="Alamat"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/Lalamat" />
```

<Button

```
    android:id="@+id/btnKembali"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Kembali"
    android:layout_marginTop="16dp"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/Falamat" />
```

<Button

```
android:id="@+id/btnSimpan"  
android:layout_width="wrap_content"  
android:layout_height="wrap_content"  
android:text="Simpan"  
android:layout_marginTop="16dp"  
app:layout_constraintEnd_toEndOf="parent"  
app:layout_constraintTop_toBottomOf="@+id/Falamat" />
```

```
</androidx.constraintlayout.widget.ConstraintLayout>
```



## B. Class

### 1. DataHelper

```
package com.example.sqlitesharedpreference;

import android.content.Context;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;
import android.util.Log;

import androidx.annotation.Nullable;

public class DataHelper extends SQLiteOpenHelper {

    private static final String DATABASE_NAME = "biodatadiri.db";
    private static final int DATABASE_VERSION = 1;

    public DataHelper(@Nullable Context context) {
        super(context, DATABASE_NAME, null, DATABASE_VERSION);
    }

    @Override
    public void onCreate(SQLiteDatabase db) {
        String sql = "create table biodata " +
            "("no` integer primary key AUTOINCREMENT, " +
            "nama text null, " +
            "tgl text null, " +
            "jk text null, " +
            "alamat text null);";
        Log.d("Data", "onCreate: " +sql);
        db.execSQL(sql);
        sql = "INSERT INTO biodata (nama, tgl, jk, alamat) " +
```

```
        "VALUES ('Alif', '1978-01-01', 'Laki-laki', 'gang')";
    db.execSQL(sql);
}

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

    }
}
```

## 2. Preferences

```
package com.example.sqlitesharedpreference;

import android.content.Context;
import android.content.SharedPreferences;
import android.preference.PreferenceManager;

public class Preferences {

    /** Pendeklarasian key-data berupa String, untuk sebagai wadah
    penyimpanan data.
    * Jadi setiap data mempunyai key yang berbeda satu sama lain */
    static final String KEY_USER_TEREGISTER ="user",
    KEY_PASS_TEREGISTER ="pass";
    static final String KEY_USERNAME_SEDANG_LOGIN =
    "Username_logged_in";
    static final String KEY_STATUS_SEDANG_LOGIN = "Status_logged_in";

    /** Pendeklarasian Shared Preferences yang berdasarkan paramater context
    */
    private static SharedPreferences getSharedPreference(Context context){
        return PreferenceManager.getDefaultSharedPreferences(context);
    }

    /** Deklarasi Edit Preferences dan mengubah data
    * yang memiliki key isi KEY_USER_TEREGISTER dengan parameter
    username */
    public static void setRegisteredUser(Context context, String username){
        SharedPreferences.Editor editor = getSharedPreference(context).edit();
        editor.putString(KEY_USER_TEREGISTER, username);
        editor.apply();
    }
}
```

```

    }

    /** Mengembalikan nilai dari key KEY_USER_TEREGISTER berupa
String */
    public static String getRegisteredUser(Context context){
        return
getSharedPreferences(context).getString(KEY_USER_TEREGISTER,"");
    }

    /** Deklarasi Edit Preferences dan mengubah data
    *   yang memiliki key KEY_PASS_TEREGISTER dengan parameter
password */
    public static void setRegisteredPass(Context context, String password){
        SharedPreferences.Editor editor = getSharedPreferences(context).edit();
        editor.putString(KEY_PASS_TEREGISTER, password);
        editor.apply();
    }

    /** Mengembalikan nilai dari key KEY_PASS_TEREGISTER berupa
String */
    public static String getRegisteredPass(Context context){
        return
getSharedPreferences(context).getString(KEY_PASS_TEREGISTER,"");
    }

    /** Deklarasi Edit Preferences dan mengubah data
    *   yang memiliki key KEY_USERNAME_SEDANG_LOGIN dengan
parameter username */
    public static void setLoggedInUser(Context context, String username){
        SharedPreferences.Editor editor = getSharedPreferences(context).edit();
        editor.putString(KEY_USERNAME_SEDANG_LOGIN, username);
        editor.apply();
    }
}

```

```

    /** Mengembalikan nilai dari key KEY_USERNAME_SEDANG_LOGIN
berupa String */
    public static String getLoggedInUser(Context context){
        return
getSharedPreferences(context).getString(KEY_USERNAME_SEDANG_LOGIN,
    "");
    }

```

```

    /** Deklarasi Edit Preferences dan mengubah data
    * yang memiliki key KEY_STATUS_SEDANG_LOGIN dengan
parameter status */
    public static void setLoggedInStatus(Context context, boolean status){
        SharedPreferences.Editor editor = getSharedPreferences(context).edit();
        editor.putBoolean(KEY_STATUS_SEDANG_LOGIN,status);
        editor.apply();
    }

```

```

    /** Mengembalikan nilai dari key KEY_STATUS_SEDANG_LOGIN
berupa boolean */
    public static boolean getLoggedInStatus(Context context){
        return
getSharedPreferences(context).getBoolean(KEY_STATUS_SEDANG_LOGIN,fal
se);
    }

```

```

    /** Deklarasi Edit Preferences dan menghapus data, sehingga
menjadikannya bernilai default
    * khusus data yang memiliki key
KEY_USERNAME_SEDANG_LOGIN dan KEY_STATUS_SEDANG_LOGIN
    */

```

```

    public static void clearLoggedInUser (Context context){
        SharedPreferences.Editor editor = getSharedPreferences(context).edit();

```

```

        editor.remove(KEY_USERNAME_SEDANG_LOGIN);
        editor.remove(KEY_STATUS_SEDANG_LOGIN);
        editor.apply();
    }
}

```

### 3. BuatBiodata

```

package com.example.sqlitesharedpreference;

import androidx.appcompat.app.AppCompatActivity;

import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class BuatBiodata extends AppCompatActivity {
    protected Cursor cursor;
    DataHelper dataHelper;
    Button btnSimpan, btnKembali;
    EditText Fnama, Fnomor, Ftgl, Fjkl, Falamat;

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

        dataHelper = new DataHelper(this);
    }
}

```

```

Fnama = (EditText) findViewById(R.id.Fnama);
Fnomor = (EditText) findViewById(R.id.Fnomor);
Fjkl = (EditText) findViewById(R.id.Fjkl);
Ftgl = (EditText) findViewById(R.id.Ftgl);
Falamat= (EditText) findViewById(R.id.Falamat);

btnKembali = (Button) findViewById(R.id.btnKembali);
btnSimpan = (Button) findViewById(R.id.btnSimpan);

btnSimpan.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        SQLiteDatabase database =
dataHelper.getWritableDatabase();
        database.execSQL("INSERT INTO biodata (nama, tgl, jk,
alamat) values('"+
            Fnama.getText().toString() + "','" +
            Ftgl.getText().toString() + "','" +
            Fjkl.getText().toString() + "','" +
            Falamat.getText().toString() + "')");
        Toast.makeText(getApplicationContext(), "Berhasil",
Toast.LENGTH_LONG).show();
        MainActivity.mainActivity.RefreshList();
        finish();
    }
});

btnKembali.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        finish();
    }
});

```

```

        }
    });
}
}

```

#### 4. LihatBIodata

```

package com.example.sqlitesharedpreference;

import androidx.appcompat.app.AppCompatActivity;

import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;

public class LihatBiodata extends AppCompatActivity {

    protected Cursor cursor;
    DataHelper dataHelper;
    Button btnKembali;
    TextView Cnomor, Cnama, Ctgl, Cjkl, Calamat;

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

        dataHelper = new DataHelper(this);
    }
}

```



```

Cnomor = (TextView) findViewById(R.id.Cnomor);
Cnama = (TextView) findViewById(R.id.Cnama);
Ctgl = (TextView) findViewById(R.id.Ctgl);
Cjkl = (TextView) findViewById(R.id.Cjkl);
Calamat = (TextView) findViewById(R.id.Calamat);

SQLiteDatabase database = dataHelper.getReadableDatabase();
cursor = database.rawQuery("SELECT * FROM biodata WHERE
nama = '"+

                        getIntent().getStringExtra("nama") + "'", null);
cursor.moveToFirst();
if (cursor.getCount()>0){
    cursor.moveToPosition(0);
    Cnomor.setText(cursor.getString(0).toString());
    Cnama.setText(cursor.getString(1).toString());
    Ctgl.setText(cursor.getString(2).toString());
    Cjkl.setText(cursor.getString(3).toString());
    Calamat.setText(cursor.getString(4).toString());
}

btnKembali = (Button) findViewById(R.id.btnKembali);
btnKembali.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        finish();
    }
});
}
}

```

## 5. LoginActivity

```
package com.example.sqlitesharedreference;

import androidx.appcompat.app.AppCompatActivity;

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

public class LoginActivity extends AppCompatActivity {

    EditText Fusername, Fpassword;
    Button btnLogin, btnRegister;

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

        //deklarasi variable button
        btnRegister = (Button) findViewById(R.id.btnRegister);
        btnLogin = (Button) findViewById(R.id.btnLogin);

        //deklarasi variable input
        Fusername = (EditText) findViewById(R.id.Fusername);
        Fpassword = (EditText) findViewById(R.id.Fpassword);

        //kalau btnRegister dipencet, pergi kehalaman register
```

```

        btnRegister.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent intent = new Intent(LoginActivity.this,
RegisterActivity.class);
                startActivity(intent);
            }
        });

        btnLogin.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                validateInput();
            }
        });

    }

    @Override
    protected void onStart() {
        super.onStart();
        if (Preferences.getLoggedInStatus(getBaseContext())){
            startActivity(new Intent(getBaseContext(),MainActivity.class));
            finish();
        }
    }

    private void validateInput(){
        Fusername.setError(null);
        Fpassword.setError(null);
        View view = null;

```

```

boolean cancel = false;

String username = Fusername.getText().toString();
String password = Fpassword.getText().toString();

//beri error jika field kosong
if (TextUtils.isEmpty(username)){
    Fusername.setError("This field is required");
    view = Fusername;
    cancel = true;
}

if (TextUtils.isEmpty(password)){
    Fpassword.setError("This field is required");
    view = Fpassword;
    cancel = true;
}

//beri error jika data yang diberikan tidak sama dengan yang ada di
shared preference
if (!validateUsername(username) || !validatePassword(password)){
    Fusername.setError("Username atau password salah");
    view = Fusername;
    cancel = true;
}

if (cancel){
    view.requestFocus();
} else{
    login();
}

```

```

    }

    public void login(){

Preferences.setLoggedInUser(getBaseContext(),Preferences.getRegisteredUser(g
etBaseContext()));
        Preferences.setLoggedInStatus(getBaseContext(),true);
        startActivity(new
Intent(getBaseContext(),MainActivity.class));finish();
    }


    private boolean validatePassword(String password){
        return
password.equals(Preferences.getRegisteredPass(getBaseContext()));
    }


    private boolean validateUsername(String username){
        return
username.equals(Preferences.getRegisteredUser(getBaseContext()));
    }
}

```

## 6. MainActivity

```
package com.example.sqlitesharedreference;

import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;

import android.content.DialogInterface;
import android.content.Intent;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.os.Bundle;
import android.view.Menu;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.ListView;

public class MainActivity extends AppCompatActivity {

    String[] daftar;
    ListView listView;
    Menu menu;
    protected Cursor cursor;
    DataHelper dataHelper;
    public static MainActivity mainActivity;

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

```

Button btnBuat = (Button) findViewById(R.id.btnBuat);
Button btnLogout = (Button) findViewById(R.id.btnLogout);

btnLogout.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        Preferences.clearLoggedInUser(getBaseContext());
        startActivity(new
Intent(getBaseContext(), LoginActivity.class));
        finish();
    }
});

btnBuat.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        Intent intent = new Intent(MainActivity.this,
BuatBiodata.class);
        startActivity(intent);
    }
});

mainActivity = this;
dataHelper = new DataHelper(this);
RefreshList();
}

public void RefreshList(){
    SQLiteDatabase database = dataHelper.getReadableDatabase();
    cursor = database.rawQuery("SELECT * FROM biodata", null);

```

```

daftar = new String[cursor.getCount()];
cursor.moveToFirst();

for (int cc=0; cc<cursor.getCount(); cc++){
    cursor.moveToPosition(cc);
    daftar[cc] = cursor.getString(1).toString();
}

listView = (ListView) findViewById(R.id.listView);

listView.setAdapter(new ArrayAdapter(this,
    android.R.layout.simple_list_item_1, daftar));

listView.setSelected(true);

listView.setOnItemClickListener(new
AdapterView.OnItemClickListener() {
    @Override
    public void onItemClick(AdapterView<?> parent, View view, int
position, long id) {
        final String selection = daftar[position];
        final CharSequence[] dialogItem = {
            "Lihat Biodata",
            "Update Biodata",
            "Hapus Biodata"
        };

        AlertDialog.Builder builder = new
AlertDialog.Builder(MainActivity.this);
        builder.setTitle("Pilihan");

```



```

        builder.setItems(dialogItem, new
DialogInterface.OnClickListener() {
    @Override
    public void onClick(DialogInterface dialog, int which) {
        switch (which){
            case 0 :
                Intent i = new
Intent(getApplicationContext(), LihatBiodata.class);
                i.putExtra("nama", selection);
                startActivity(i);
                break;
            case 1 :
                Intent in = new
Intent(getApplicationContext(), UpdateBiodata.class);
                in.putExtra("nama", selection);
                startActivity(in);
                break;
            case 2 :
                SQLiteDatabase db =
dataHelper.getWritableDatabase();
                db.execSQL("delete from biodata where
nama = '"+selection+"'");
                RefreshList();
                break;
        }
    }
});

        builder.create().show();
    }
});

```

```

        ((ArrayAdapter) listView.getAdapter()).notifyDataSetChanged();
    }
}

```

## 7. RegisterActivity

```

package com.example.sqlitesharedpreference;

import androidx.appcompat.app.AppCompatActivity;

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

public class RegisterActivity extends AppCompatActivity {
    EditText editTextUsername, editTextPassword, editTextPasswordConfirm;
    Button btnLogin, btnRegister;

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

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

```

```

        btnLogin = (Button) findViewById(R.id.btnLogin);
        btnRegister = (Button) findViewById(R.id.btnRegister);

        btnLogin.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent intent = new Intent(RegisterActivity.this,
LoginActivity.class);
                startActivity(intent);
            }
        });

        btnRegister.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                validateInput();
            }
        });

    }

    private void validateInput(){
        editTextUsername.setError(null);
        editTextPassword.setError(null);
        editTextPasswordConfirm.setError(null);
        View view = null;
        boolean cancel = false;

        String username = editTextUsername.getText().toString();

```

```

String password = editTextPassword.getText().toString();
String password_confirm =
editTextPasswordConfirm.getText().toString();

//beri error jika field kosong
if (TextUtils.isEmpty(username)){
    editTextUsername.setError("This field is required");
    view = editTextUsername;
    cancel = true;
}

if (TextUtils.isEmpty(password)){
    editTextPassword.setError("This field is required");
    view = editTextPassword;
    cancel = true;
}

if (TextUtils.isEmpty(password_confirm)){
    editTextPasswordConfirm.setError("This field is required");
    view = editTextPasswordConfirm;
    cancel = true;
}

//beri error jika username sudah dipakai
if (validateUsername(username)){
    editTextUsername.setError("Username has been occupied");
    view = editTextUsername;
    cancel = true;
}

//konfirmasi password

```

```

        if (!confirmPassword(password, password_confirm)){
            editTextPasswordConfirm.setError("Password konfirmasi salah");
            view = editTextPasswordConfirm;
            cancel = true;
        }

        if (cancel){
            view.requestFocus();
        }else{
            Preferences.setRegisteredUser(getBaseContext(),username);
            Preferences.setRegisteredPass(getBaseContext(),password);
            finish();
        }
    }

    private boolean confirmPassword(String password, String repassword){
        return password.equals(repassword);
    }

    private boolean validateUsername(String username){
        return
        username.equals(Preferences.getRegisteredUser(getBaseContext()));
    }
}

```

## 8. UpdateBiodata

```
package com.example.sqlitesharedreference;

import androidx.appcompat.app.AppCompatActivity;

import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class UpdateBiodata extends AppCompatActivity {
    protected Cursor cursor;
    DataHelper dataHelper;
    Button btnSimpan, btnKembali;
    EditText Fnama, Fnomor, Ftgl, Fjkl, Falamat;

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

        dataHelper = new DataHelper(this);
        Fnama = (EditText) findViewById(R.id.Fnama);
        Fnomor = (EditText) findViewById(R.id.Fnomor);
        Fjkl = (EditText) findViewById(R.id.Fjkl);
        Ftgl = (EditText) findViewById(R.id.Ftgl);
        Falamat = (EditText) findViewById(R.id.Falamat);
    }
}
```

```

        SQLiteDatabase database = dataHelper.getReadableDatabase();
        cursor = database.rawQuery("SELECT * FROM biodata WHERE
nama = '"+
                                getIntent().getStringExtra("nama") + "'", null);
        cursor.moveToFirst();
        if (cursor.getCount()>0){
            cursor.moveToPosition(0);
            Fnomor.setText(cursor.getString(0).toString());
            Fnama.setText(cursor.getString(1).toString());
            Ftgl.setText(cursor.getString(2).toString());
            Fjkl.setText(cursor.getString(3).toString());
            Falamat.setText(cursor.getString(4).toString());
        }

        btnKembali = (Button) findViewById(R.id.btnKembali);
        btnSimpan = (Button) findViewById(R.id.btnSimpan);

        btnSimpan.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                SQLiteDatabase database =
dataHelper.getWritableDatabase();
                database.execSQL("UPDATE biodata SET nama = '"+
                                Fnama.getText().toString()+"', tgl='"+
                                Ftgl.getText().toString()+"', jk='"+
                                Fjkl.getText().toString()+"', alamat='"+
                                Falamat.getText().toString()+"' where no='"+
                                Fnomor.getText().toString()+"'");
                Toast.makeText(getApplicationContext(), "Berhasil",
Toast.LENGTH_LONG).show();
                MainActivity.mainActivity.RefreshList();
            }
        });

```

```
        finish();
    }
});

btnKembali.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        finish();
    }
});
}
```



### C. Menghubungkan shared preference dengan SQLite

Untuk menggabung 2 fitur ada pada 2 kunci yaitu DataHelper dan Preferences.

DataHelper yang akan membantu melakukan fitur CRUD dengan SQLite.

Preferences yang akan membantu melakukan fitur Login dengan shared preference.

Langkah pertama adalah membuat fungsi CRUD sesuai dengan contoh yang ada. Juga karena membuat CRUD terlebih dahulu lebih memudahkan untuk melakukan proses testing. Tolong jangan hanya copy paste, tetapi minimal baca code program yang ada dan mengerti maksud dan tujuan dari baris code tersebut.

Langkah kedua adalah menuju ke AdroidManifest dan mengubah default activity atau activity yang dijalankan pertama kali dari MainActivity ke LoginActivity.

Langkah ketiga adalah melanjutkan membuat fungsi login sesuai dengan contoh yang ada.