

**LAPORAN
WORKSHOP APLIKASI MOBILE
FILE MANAJEMEN & SQLITE**



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DESKRIPSI APLIKASI

Pembuatan aplikasi dilakukan sebagai sarana latihan menggunakan file manajemen dan SQLite pada android studio. Ada dua aplikasi dalam laporan ini, aplikasi yang menyimpan data dari pengguna sebagai file dan aplikasi yang menyimpan data dari pengguna dalam database.

Pada aplikasi yang menyimpan data dari pengguna sebagai file, data yang dimasukkan oleh pengguna akan disimpan dalam file .txt pada media penyimpanan smartphone. Pada saat pengguna masuk ke dalam aplikasi, pengguna akan ditampilkan satu input form, dan 3 tombol. Input masukkan adalah tempat untuk mengetik teks apa yang ingin disimpan. Pengguna bisa menyimpan teks yang ada ada input form dengan 2 cara yaitu (1) Menyimpan teks pada directory private dengan menekan tombol “SAVE AS PRIVATE”; (2) Menyimpan teks pada directory public dengan menekan tombol “SAVE AS PUBLIC;. Setelah data disimpan pengguna menekan tombol “CLICK TO VIEW” untuk masuk ke halaman lain. Pada halaman ini pengguna bisa menampilkan teks yang ia masukkan sebelumnya dari penyimpanan public atau private dengan menekan tombol “GET PRIVATE DATA” untuk menampilkan teks dari directory private dan menekan tombol “GET PUBLIC DATA” untuk menampilkan teks dari directory public.

Pada aplikasi yang menyimpan data dari pengguna dalam database, data yang dimasukkan oleh pengguna akan disimpan dalam database SQLite. Pada saat pengguna masuk ke dalam aplikasi, pengguna akan ditampilkan list kumpulan data yang telah disimpan dan satu tombol. Setiap item dari list yang ditampilkan bisa pengguna klik untuk menampilkan pop up menu (1) Lihat biodata untuk menampilkan data yang lebih lengkap; (2) Update biodata untuk masuk ke form edit data; (3) Hapus biodata untuk menghapus data. Klik tombol “BUAT BIODATA BARU” untuk memasukkan biodata baru.

SOURCE CODE

A. File Manajemen

1. activity_main.xml

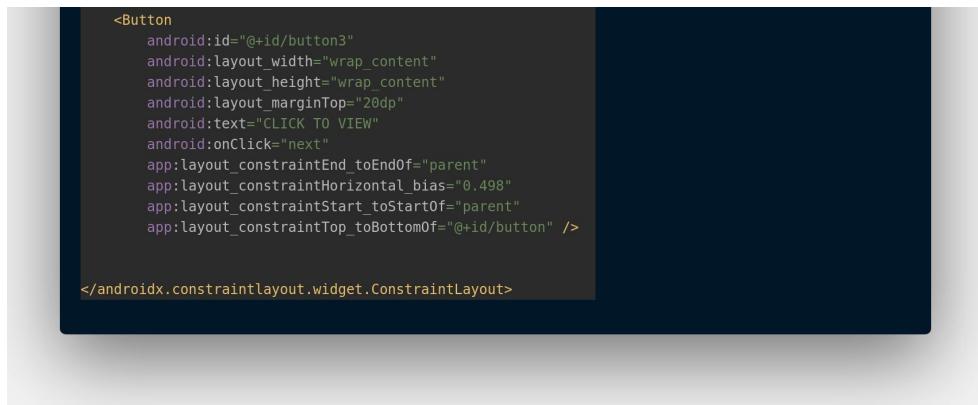
```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/textView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="88dp"
        android:text="Hello World!"
        app:layout_constraintHorizontal_bias="0.498"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <EditText
        android:id="@+id/editTextText"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        android:hint="Name"
        android:gravity="center"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.497"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView2"
        app:layout_constraintVertical_bias="0.056" />

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="36dp"
        android:layout_marginBottom="116dp"
        android:text="SAVE AS PRIVATE"
        android:onClick="savePrivate"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintStart_toStartOf="parent" />

    <Button
        android:id="@+id/button2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginBottom="116dp"
        android:text="SAVE AS PUBLIC"
        android:onClick="savePublic"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.27"
        app:layout_constraintStart_toEndOf="@+id/button" />
```

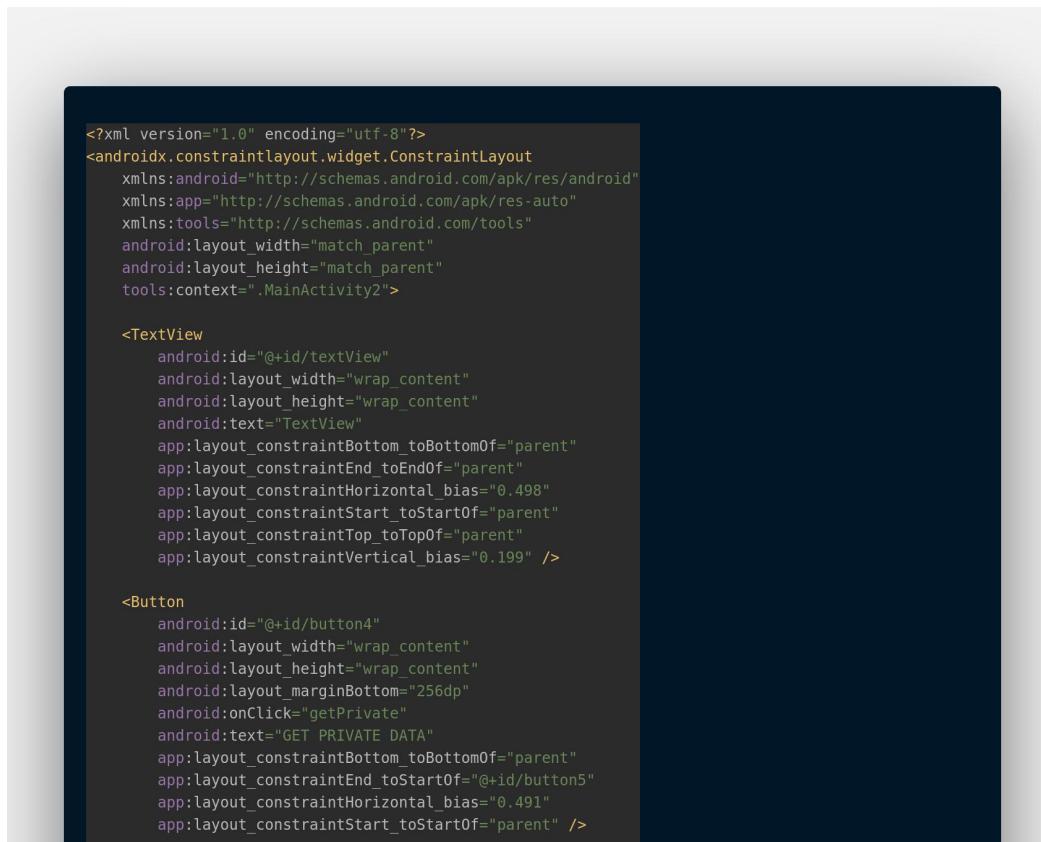


```
<Button  
    android:id="@+id/button3"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:layout_marginTop="20dp"  
    android:text="CLICK TO VIEW"  
    android:onClick="next"  
    app:layout_constraintEnd_toEndOf="parent"  
    app:layout_constraintHorizontal_bias="0.498"  
    app:layout_constraintStart_toStartOf="parent"  
    app:layout_constraintTop_toBottomOf="@+id/button" />  
  
</androidx.constraintlayout.widget.ConstraintLayout>
```

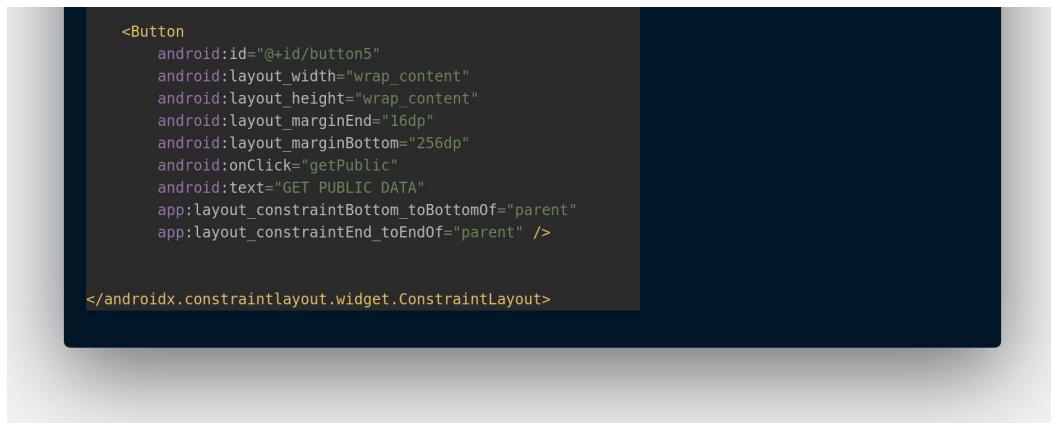
Gambar 1 - File Manajemen - activity_main.xml

Disini terdapat satu form input untuk memasukkan teks, 1 tombol untuk berpindah halaman, dan 2 tombol untuk menyimpan data.

2. activity_main2.xml



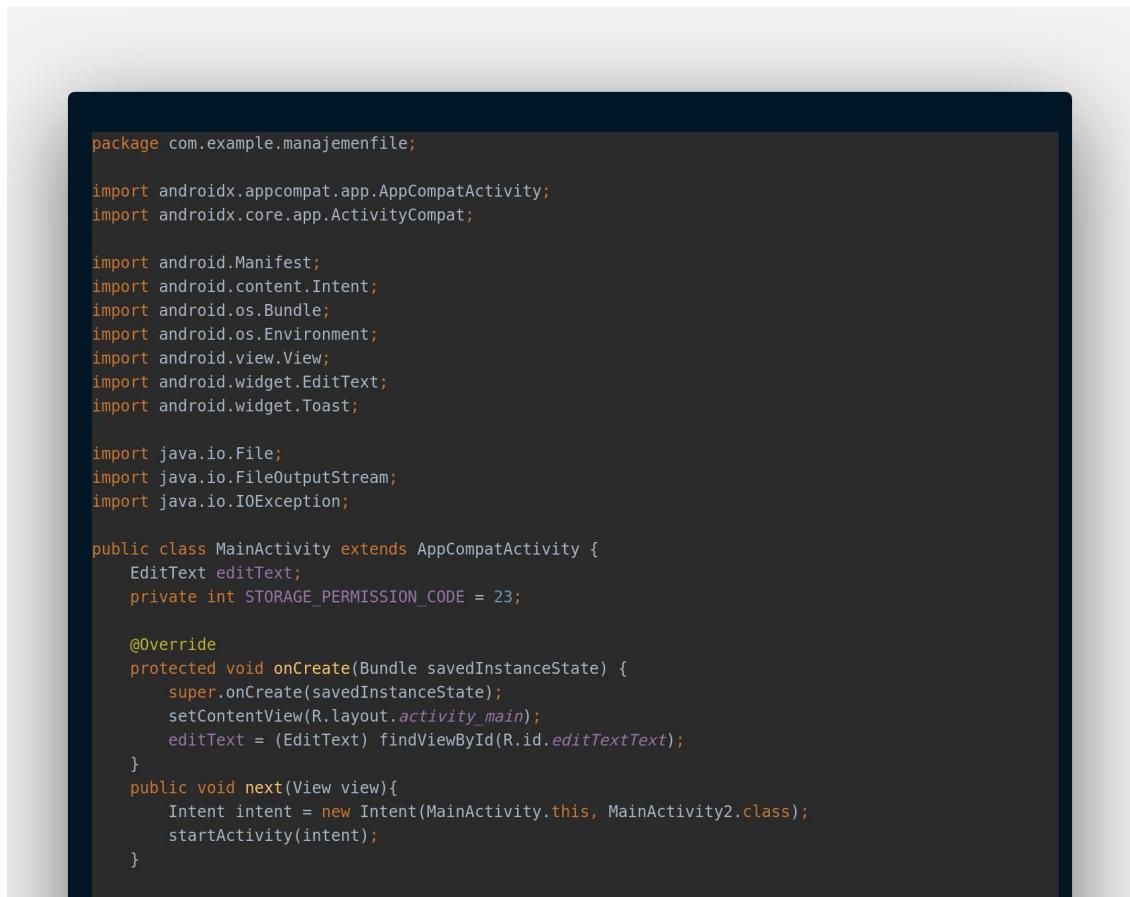
```
<?xml version="1.0" encoding="utf-8"?>  
<androidx.constraintlayout.widget.ConstraintLayout  
    xmlns:android="http://schemas.android.com/apk/res/android"  
    xmlns:app="http://schemas.android.com/apk/res-auto"  
    xmlns:tools="http://schemas.android.com/tools"  
    android:layout_width="match_parent"  
    android:layout_height="match_parent"  
    tools:context=".MainActivity2">  
  
<TextView  
    android:id="@+id/textView"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="TextView"  
    app:layout_constraintBottom_toBottomOf="parent"  
    app:layout_constraintEnd_toEndOf="parent"  
    app:layout_constraintHorizontal_bias="0.498"  
    app:layout_constraintStart_toStartOf="parent"  
    app:layout_constraintTop_toTopOf="parent"  
    app:layout_constraintVertical_bias="0.199" />  
  
<Button  
    android:id="@+id/button4"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:layout_marginBottom="256dp"  
    android:onClick="getPrivate"  
    android:text="GET PRIVATE DATA"  
    app:layout_constraintBottom_toBottomOf="parent"  
    app:layout_constraintEnd_toStartOf="@+id/button5"  
    app:layout_constraintHorizontal_bias="0.491"  
    app:layout_constraintStart_toStartOf="parent" />
```



Gambar 2 - File Manajemen - activity_main2.xml

Disini terdapat satu text view untuk menampilkan data dan dua tombol untuk menampilkan data dari directory berbeda.

3. MainActivity.java



```
public void savePrivate(View view){
    String info = editText.getText().toString();
    File folder = getExternalFilesDir("privateFile");
    File myFile = new File(folder, "myPrivateData.txt");
    writeData(myFile, info);
    editText.setText("");
}

public void writeData(File myfile, String data){
    FileOutputStream fileOutputStream = null;

    try {
        fileOutputStream = new FileOutputStream(myfile);
        fileOutputStream.write(data.getBytes());
        Toast.makeText(this, "Done" + myfile.getAbsolutePath(),
            Toast.LENGTH_SHORT).show();

    }catch (Exception e){
        e.printStackTrace();
        Toast.makeText(this, "There is some thing wrong catch 1",
            Toast.LENGTH_SHORT).show();
    }finally {
        if (fileOutputStream != null){
            try {
                fileOutputStream.close();
            }catch (IOException e){
                e.printStackTrace();
                Toast.makeText(this, "There is some thing wrong catch 2",
                    Toast.LENGTH_SHORT).show();
            }
        }
    }
}
```

Gambar 3 - File Manajemen - MainActivity.java

Disini membuat fungsi-fungsi yang berfungsi untuk menyimpan data ke directory public, menyimpan data ke directory private, membuat data, dan pindah ke halaman lainnya.

4. MainActivity2.java

```
package com.example.manajemenfile;

import androidx.appcompat.app.AppCompatActivity;
import androidx.core.app.ActivityCompat;

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

import java.io.File;
import java.io.FileInputStream;
import java.io.FileOutputStream;
import java.io.IOException;
import java.lang.reflect.Field;

public class MainActivity2 extends AppCompatActivity {
    private int STORAGE_PERMISSION_CODE = 23;
    TextView showText;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main2);
        showText = (TextView) findViewById(R.id.textView);
    }

    public void back(){
        Intent intent = new Intent(MainActivity2.this, MainActivity.class);
        startActivity(intent);
    }

    public void getPublic(View view){
        ActivityCompat.requestPermissions(this,
            new String[]{Manifest.permission.READ_EXTERNAL_STORAGE},
            STORAGE_PERMISSION_CODE);
        File folder = Environment.getExternalStoragePublicDirectory(Environment.DIRECTORY_DOCUMENTS);
        File myFile = new File(folder, "myPublicData.txt");
        String text = getData(myFile);
        if (text != null){
            showText.setText(text);
        } else{
            showText.setText("No Data");
        }
    }

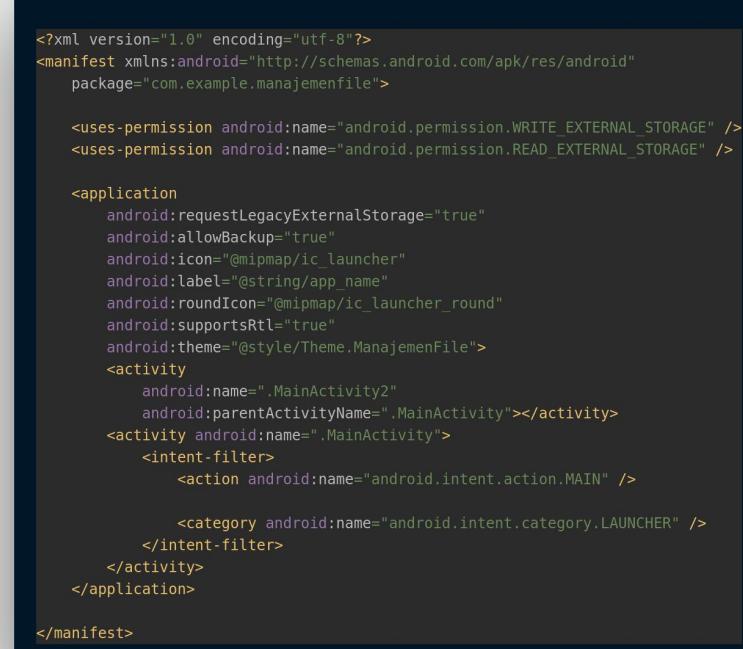
    public void getPrivate(View view){
        File folder = getExternalFilesDir("privateFile");
        File myFile = new File(folder, "myPrivateData.txt");
        String text = getData(myFile);
        if (text != null){
            showText.setText(text);
        } else{
            showText.setText("No Data");
        }
    }
}
```

```
public String getData(File myFile){  
    FileInputStream fileInputStream = null;  
    try {  
        fileInputStream = new FileInputStream(myFile);  
        int i = -1;  
        StringBuffer buffer = new StringBuffer();  
        while ((i = fileInputStream.read()) != -1 ){  
            buffer.append((char) i);  
        }  
        return buffer.toString();  
    }catch (Exception e){  
        e.printStackTrace();  
    }finally {  
        if (fileInputStream != null){  
            try {  
                fileInputStream.close();  
            } catch (IOException e){  
                e.printStackTrace();  
            }  
        }  
        return null;  
    }  
}
```

Gambar 4- File Manajemen - MainActivity2.java

Disini membuat fungsi untuk mengambil data dari file, mengambil data dari directory public, mengambil data dari directory private, dan fungsi untuk kembali ke halaman utama.

5. AndroidManifest.xml



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

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

    <application
        android:requestLegacyExternalStorage="true"
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.ManajemenFile">
        <activity
            android:name=".MainActivity2"
            android:parentActivityName=".MainActivity"></activity>
        <activity android:name=".MainActivity">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>

</manifest>
```

Gambar 5 - File Manajemen - AndroidManifest.xml

Pada android manifest menambahkan baris code untuk meminta izin mengakses perangkat penyimpanan pada smartphone.

B. SQLite

1. activity_buat_biodata.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".BuatBiodata"
    android:layout_marginTop="16dp"
    android:layout_marginBottom="16dp"
    android:layout_marginStart="16dp"
    android:layout_marginEnd="16dp">

    <EditText
        android:id="@+id/editText1"
        android:layout_alignLeft="@+id/textView1"
        android:layout_below="@+id/textView1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:inputType="number"
        android:maxLength="10"
        <requestFocus/>

    </EditText>

    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:hint="Nomor"/>

    <TextView
        android:id="@+id/textView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/editText1"
        android:layout_below="@+id/editText1"
        android:layout_marginTop="10dp"
        android:hint="Nama"/>

    <EditText
        android:id="@+id/editText2"
        android:layout_alignLeft="@+id/textView2"
        android:layout_below="@+id/textView2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:inputType="text"
        android:maxLength="100"/>

    <TextView
        android:id="@+id/textView3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/editText2"
        android:layout_below="@+id/editText2"
        android:layout_marginTop="10dp"
        android:hint="Tanggal Lahir"/>

    <EditText
        android:id="@+id/editText3"
        android:layout_alignLeft="@+id/textView3"
        android:layout_below="@+id/textView3"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:inputType="date" />
```

```
<EditText  
    android:id="@+id/editText4"  
    android:layout_alignLeft="@+id/textView4"  
    android:layout_below="@+id/textView4"  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:inputType="text"  
    android:maxLength="1"  
    android:hint="L atau P"/>  
  
<TextView  
    android:id="@+id/textView5"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:layout_alignLeft="@+id/editText4"  
    android:layout_below="@+id/editText4"  
    android:layout_marginTop="10dp"  
    android:hint="Alamat"/>  
  
<EditText  
    android:id="@+id/editText5"  
    android:layout_alignLeft="@+id/textView5"  
    android:layout_below="@+id/textView5"  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:inputType="text"  
    android:maxLength="100"/>  
  
<Button  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:id="@+id/button2"  
    android:text="Kembali"  
    android:layout_alignParentBottom="true"  
    android:layout_alignRight="@+id/editText5"  
    android:layout_alignEnd="@+id/editText5"/>  
  
<Button  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:id="@+id/button1"  
    android:text="Simpan"  
    android:layout_alignParentBottom="true"  
    android:layout_alignLeft="@+id/editText5" />  
  
</RelativeLayout>
```

Gambar 6 - SQLite - activity_buat_biodata.xml

Disini membuat input form diantaranya nomor, nama, tanggal lahir, jenis kelamin, dan alamat. Juga satu tombol untuk menyimpan data.

2. activity_lihat_biodata.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".LihatBiodata"
    android:layout_marginTop="16dp"
    android:layout_marginBottom="16dp"
    android:layout_marginStart="16dp"
    android:layout_marginEnd="16dp">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/TextView01"
        android:layout_alignBaseline="@+id/textView2"
        android:layout_alignBottom="@+id/textView2"
        android:layout_alignLeft="@+id/TextView01"
        android:text="Nama"/>

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/TextView02"
        android:layout_above="@+id/textView2"
        android:layout_alignParentLeft="true"
        android:text="Nomor"/>

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/TextView03"
        android:layout_alignBaseline="@+id/textView3"
        android:layout_alignBottom="@+id/textView3"
        android:layout_alignLeft="@+id/TextView01"
        android:text="Tanggal Lahir"/>

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/TextView04"
        android:layout_alignBaseline="@+id/textView4"
        android:layout_alignBottom="@+id/textView4"
        android:layout_alignLeft="@+id/TextView01"
        android:text="Jenis Kelamin"/>

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/TextView05"
        android:layout_alignBaseline="@+id/textView5"
        android:layout_alignBottom="@+id/textView5"
        android:layout_alignLeft="@+id/TextView01"
        android:text="Alamat"/>

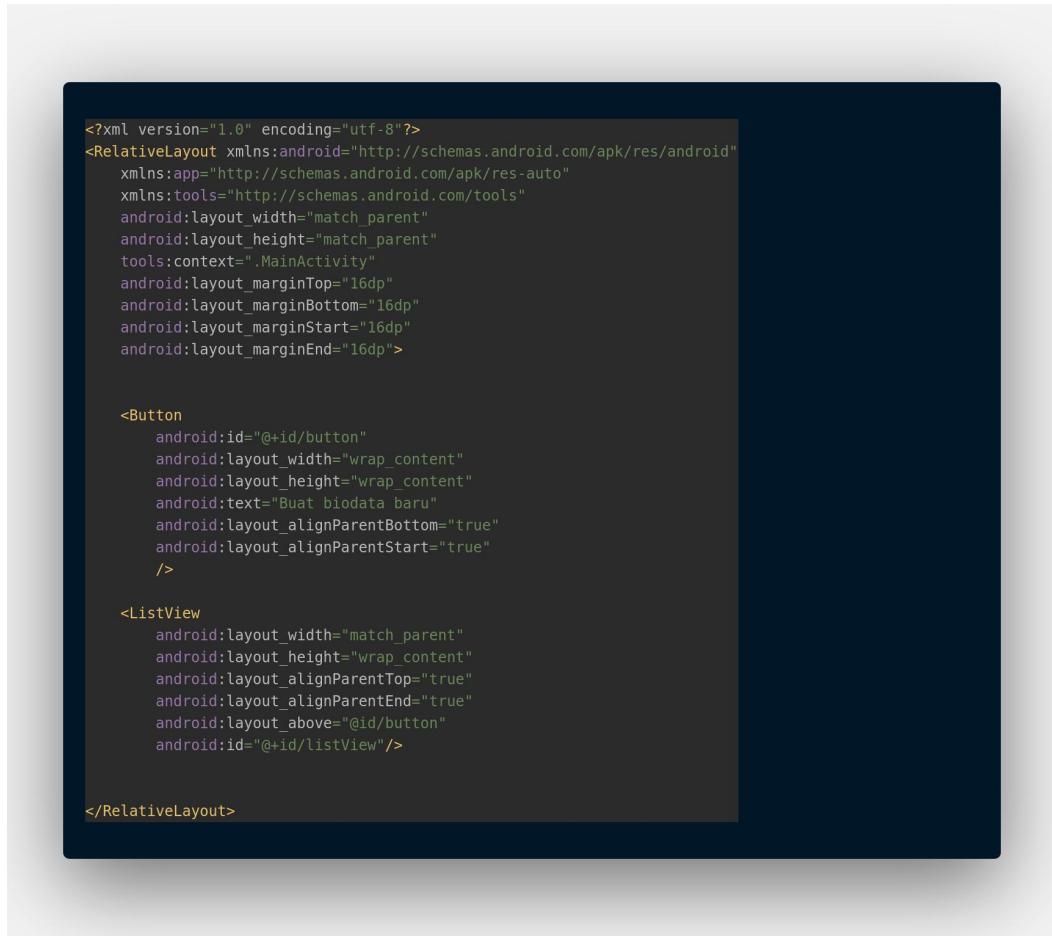
    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentRight="true"
        android:layout_alignParentTop="true"
        android:layout_marginRight="104dp"
        android:layout_marginTop="20dp"
        android:text="TextView" />
```

```
<TextView  
    android:id="@+id/textView1"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:layout_alignParentRight="true"  
    android:layout_alignParentTop="true"  
    android:layout_marginRight="104dp"  
    android:layout_marginTop="20dp"  
    android:text="TextView" />  
  
<TextView  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:id="@+id/textView2"  
    android:layout_alignRight="@+id/textView1"  
    android:layout_below="@+id/textView1"  
    android:layout_marginTop="20dp"  
    android:text="TextView"/>  
  
<TextView  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:id="@+id/textView3"  
    android:layout_alignRight="@+id/textView2"  
    android:layout_below="@+id/textView2"  
    android:layout_marginTop="20dp"  
    android:text="TextView"/>  
  
<TextView  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:id="@+id/textView4"  
    android:layout_alignRight="@+id/textView3"  
    android:layout_below="@+id/textView3"  
    android:layout_marginTop="20dp"  
    android:text="TextView"/>  
  
<TextView  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:id="@+id/textView5"  
    android:layout_alignRight="@+id/textView4"  
    android:layout_below="@+id/textView4"  
    android:layout_marginTop="20dp"  
    android:text="TextView"/>  
  
<Button  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:id="@+id/button1"  
    android:layout_alignLeft="@+id/TextView05"  
    android:layout_below="@+id/TextView05"  
    android:layout_marginTop="34dp"  
    android:text="Kembali"/>  
  
</RelativeLayout>
```

Gambar 7 - SQLite - activity_lihat_biodata.xml

Disini terdapat sekumpulan text view untuk menampilkan data lengkap dari list view pada main activity.

3. activity_main.xml



```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity"
    android:layout_marginTop="16dp"
    android:layout_marginBottom="16dp"
    android:layout_marginStart="16dp"
    android:layout_marginEnd="16dp">

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Buat biodata baru"
        android:layout_alignParentBottom="true"
        android:layout_alignParentStart="true"
        />

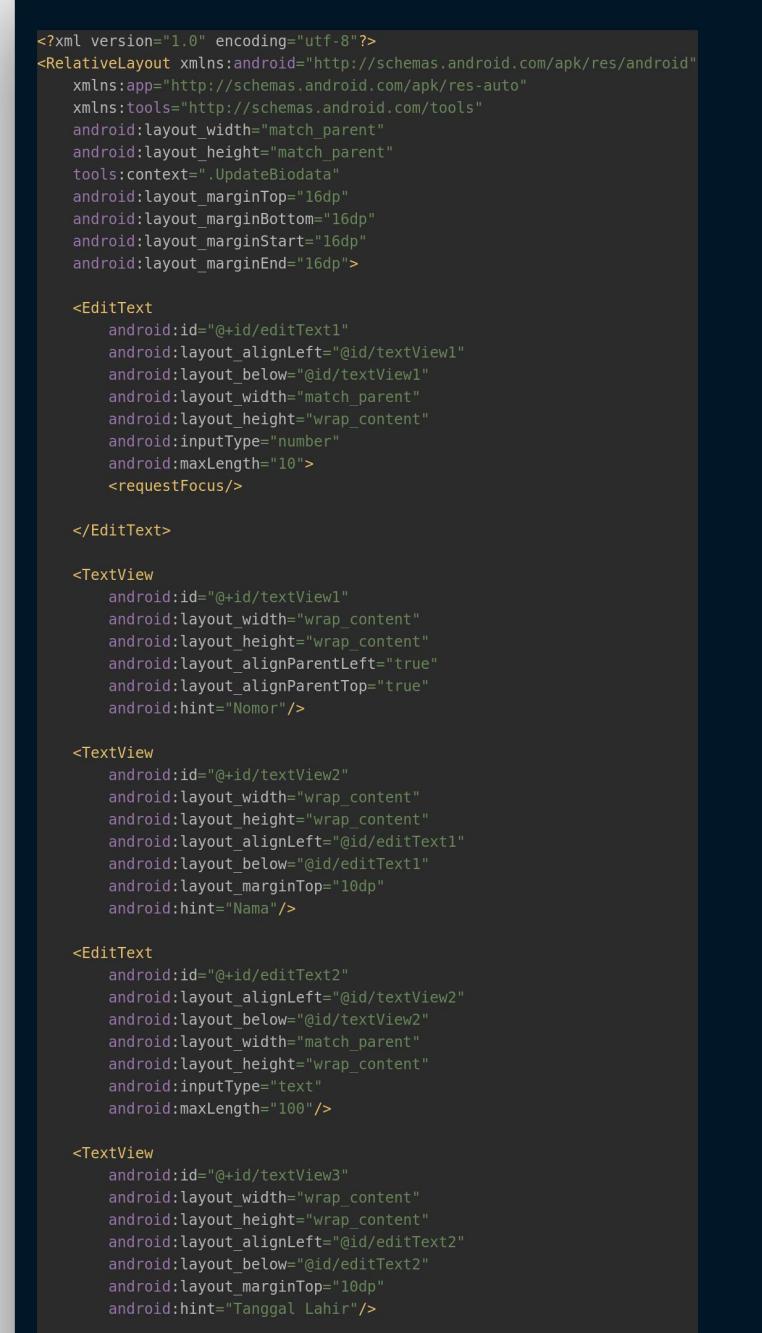
    <ListView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_alignParentEnd="true"
        android:layout_above="@+id/button"
        android:id="@+id/listView" />

</RelativeLayout>
```

Gambar 8 - SQLite - activity_main.xml

Disini terdapat satu tombol untuk berpindah halaman ke halaman buat biodata dan list view untuk menampilkan data yang ada di database.

4. activity_update_biodata.xml



```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".UpdateBiodata"
    android:layout_marginTop="16dp"
    android:layout_marginBottom="16dp"
    android:layout_marginStart="16dp"
    android:layout_marginEnd="16dp">

    <EditText
        android:id="@+id/editText1"
        android:layout_alignLeft="@+id/textView1"
        android:layout_below="@+id/textView1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:inputType="number"
        android:maxLength="10"
        <requestFocus/>

    </EditText>

    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:hint="Nomor"/>

    <TextView
        android:id="@+id/textView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/editText1"
        android:layout_below="@+id/editText1"
        android:layout_marginTop="10dp"
        android:hint="Nama"/>

    <EditText
        android:id="@+id/editText2"
        android:layout_alignLeft="@+id/textView2"
        android:layout_below="@+id/textView2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:inputType="text"
        android:maxLength="100"/>

    <TextView
        android:id="@+id/textView3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/editText2"
        android:layout_below="@+id/editText2"
        android:layout_marginTop="10dp"
        android:hint="Tanggal Lahir"/>


```

```
<EditText
    android:id="@+id/editText3"
    android:layout_alignLeft="@+id/textView3"
    android:layout_below="@+id/textView3"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:inputType="date" />

<TextView
    android:id="@+id/textView4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignLeft="@+id/editText3"
    android:layout_below="@+id/editText3"
    android:layout_marginTop="10dp"
    android:hint="Jenis Kelamin"/>

<EditText
    android:id="@+id/editText4"
    android:layout_alignLeft="@+id/textView4"
    android:layout_below="@+id/textView4"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:inputType="text"
    android:maxLength="1"
    android:hint="L atau P"/>

<TextView
    android:id="@+id/textView5"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignLeft="@+id/editText4"
    android:layout_below="@+id/editText4"
    android:layout_marginTop="10dp"
    android:hint="Alamat"/>

<EditText
    android:id="@+id/editText5"
    android:layout_alignLeft="@+id/textView5"
    android:layout_below="@+id/textView5"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:inputType="text"
    android:maxLength="100" />

<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/button2"
    android:text="Kembali"
    android:layout_alignParentBottom="true"
    android:layout_alignRight="@+id/editText5"
    android:layout_alignEnd="@+id/editText5" />

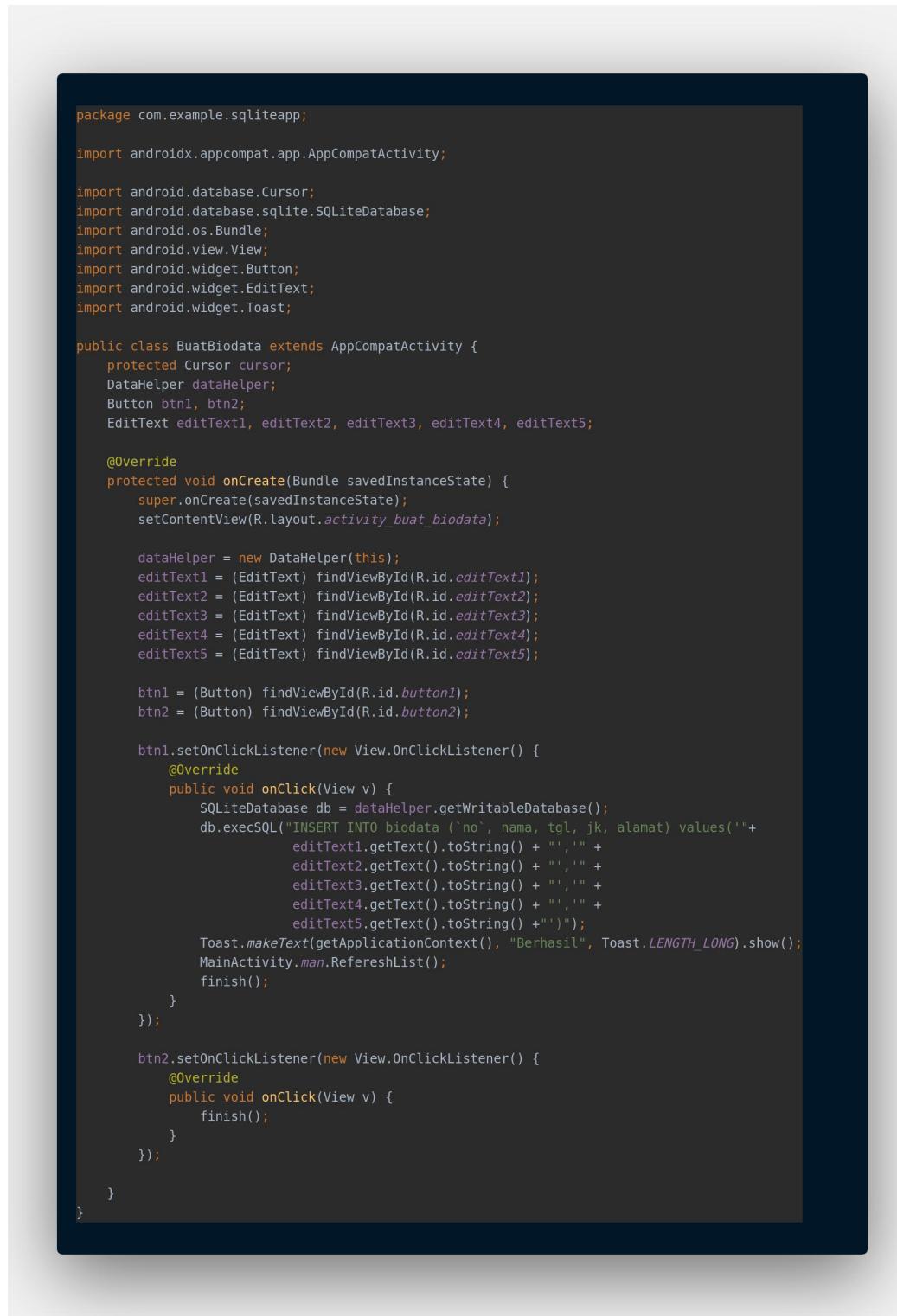
<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/button1"
    android:text="Update"
    android:layout_alignParentBottom="true"
    android:layout_alignLeft="@+id/editText5" />

</RelativeLayout>
```

Gambar 9 - SQLite - activity_update_biodata.xml

Disini terdapat form seperti pada buat biodata untuk memperbarui data yang dipilih melalui main activity.

5. BuatBiodata.java



The screenshot shows the Java code for the `BuatBiodata` activity. The code imports various Android components and defines the `BuatBiodata` class extending `AppCompatActivity`. It initializes a cursor, a `DataHelper` object, and five `EditText` and two `Button` objects. The `onCreate` method sets the content view and initializes the views. It then sets up click listeners for both buttons. The first button's listener inserts data into a SQLite database using `execSQL` and displays a success toast. The second button's listener simply finishes the activity. The code uses string concatenation to build the SQL insert statement.

```
package com.example.sqliteapp;

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 btn1, btn2;
    EditText editText1, editText2, editText3, editText4, editText5;

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

        dataHelper = new DataHelper(this);
        editText1 = (EditText) findViewById(R.id.editText1);
        editText2 = (EditText) findViewById(R.id.editText2);
        editText3 = (EditText) findViewById(R.id.editText3);
        editText4 = (EditText) findViewById(R.id.editText4);
        editText5 = (EditText) findViewById(R.id.editText5);

        btn1 = (Button) findViewById(R.id.button1);
        btn2 = (Button) findViewById(R.id.button2);

        btn1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                SQLiteDatabase db = dataHelper.getWritableDatabase();
                db.execSQL("INSERT INTO biodata ('no', nama, tgl, jk, alamat) values('"+editText1.getText().toString() + "','" + editText2.getText().toString() + "','" + editText3.getText().toString() + "','" + editText4.getText().toString() + "','" + editText5.getText().toString() + "')");
                Toast.makeText(getApplicationContext(), "Berhasil", Toast.LENGTH_LONG).show();
                MainActivity.man.RefreshList();
                finish();
            }
        });
        btn2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                finish();
            }
        });
    }
}
```

Gambar 10 - SQLite - BuatBiodata.java

Disini membuat fungsi untuk tombol pada halaman buat biodata untuk menyimpan data pada database ketika tombol ditekan.

6. DataHelper.java

```
package com.example.sqliteapp;
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);
    }

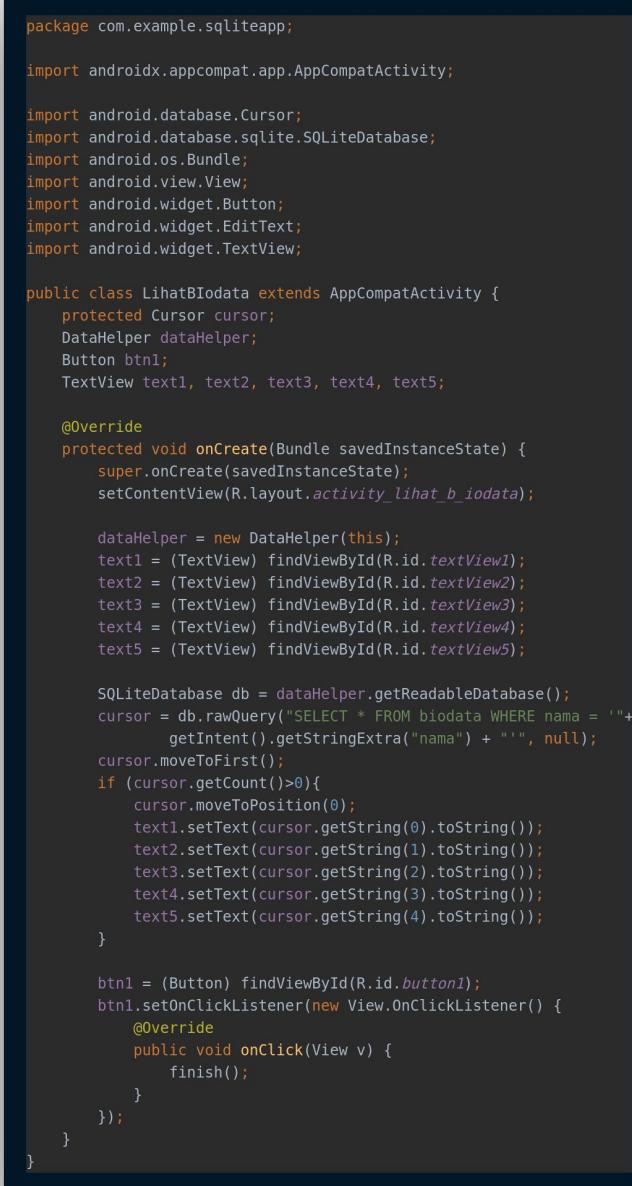
    @Override
    public void onCreate(SQLiteDatabase db) {
        String sql = "create table biodata " +
                    "(no integer primary key, " +
                    "nama text null, " +
                    "tgl text null, " +
                    "jk text null, " +
                    "alamat text null);";
        Log.d("Data", "onCreate: " +sql);
        db.execSQL(sql);
        sql = "INSERT INTO biodata (`no`, nama, tgl, jk, alamat) " +
              "VALUES ('1', 'Alif', '1978-01-01', 'Laki-laki', 'gang')";
        db.execSQL(sql);
    }

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

Gambar 11 - SQLite - DataHelper.java

Disini merupakan class yang membantu untuk membuat mengatur database yang ada pada aplikasi.

7. LihatBiodata.java



```
package com.example.sqliteapp;

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.TextView;

public class LihatBiodata extends AppCompatActivity {
    protected Cursor cursor;
    DataHelper dataHelper;
    Button btn1;
    TextView text1, text2, text3, text4, text5;

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

        dataHelper = new DataHelper(this);
        text1 = (TextView) findViewById(R.id.textView1);
        text2 = (TextView) findViewById(R.id.textView2);
        text3 = (TextView) findViewById(R.id.textView3);
        text4 = (TextView) findViewById(R.id.textView4);
        text5 = (TextView) findViewById(R.id.textView5);

        SQLiteDatabase db = dataHelper.getReadableDatabase();
        cursor = db.rawQuery("SELECT * FROM biodata WHERE nama = '"+getIntent().getStringExtra("nama")+"'", null);
        cursor.moveToFirst();
        if (cursor.getCount()>0){
            cursor.moveToPosition(0);
            text1.setText(cursor.getString(0).toString());
            text2.setText(cursor.getString(1).toString());
            text3.setText(cursor.getString(2).toString());
            text4.setText(cursor.getString(3).toString());
            text5.setText(cursor.getString(4).toString());
        }

        btn1 = (Button) findViewById(R.id.button1);
        btn1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                finish();
            }
        });
    }
}
```

Gambar 12 - SQLite - LihatBiodata.java

Disini terdapat fungsi untuk menampilkan data yang sesuai dengan nama yang dikirim oleh intent dari main activity.

8. MainActivity.java

```
package com.example.sqliteapp;

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.ArrayAdapter;
import android.widget.Button;
import android.widget.ListView;

public class MainActivity extends AppCompatActivity {
    String[] daftar;
    ListView listView;
    Menu menu;
    protected Cursor cursor;
    DataHelper dbcenter;
    public static MainActivity man;

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

        Button btn = (Button) findViewById(R.id.button);
        btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent intent = new Intent(MainActivity.this, BuatBiodata.class);
                startActivity(intent);
            }
        });
        man = this;
        dbcenter = new DataHelper(this);
        RefreshList();
    }
}
```

```
public void RefreshList(){
    SQLiteDatabase db = dbcenter.getReadableDatabase();
    cursor = db.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 = dbcenter.getWritableDatabase();
                            db.execSQL("delete from biodata where nama = '"+selection+"'");
                            RefreshList();
                            break;
                    }
                }
            });
            builder.create().show();
        }
    });
    ((ArrayAdapter) listView.getAdapter()).notifyDataSetChanged();
}

}
```

Gambar 13 - SQLite - MainActivity.java

Disini terdapat fungsi untuk menampilkan data, membuat pop up menu, dan mengambil data kembali ketika terjadi perubahan pada data yang ada pada database.

9. UpdateBiodata.java

```
package com.example.sqliteapp;

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 btn1, btn2;
    EditText editText1, editText2, editText3, editText4, editText5;

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

        dataHelper = new DataHelper(this);
        editText1 = (EditText) findViewById(R.id.editText1);
        editText2 = (EditText) findViewById(R.id.editText2);
        editText3 = (EditText) findViewById(R.id.editText3);
        editText4 = (EditText) findViewById(R.id.editText4);
        editText5 = (EditText) findViewById(R.id.editText5);

        SQLiteDatabase db = dataHelper.getReadableDatabase();
        cursor = db.rawQuery("SELECT * FROM biodata WHERE nama = '" +
            getIntent().getStringExtra("nama") + "'", null);
        cursor.moveToFirst();
        if (cursor.getCount() > 0){
            cursor.moveToPosition(0);
            editText1.setText(cursor.getString(0).toString());
            editText2.setText(cursor.getString(1).toString());
            editText3.setText(cursor.getString(2).toString());
            editText4.setText(cursor.getString(3).toString());
            editText5.setText(cursor.getString(4).toString());
        }

        btn1 = (Button) findViewById(R.id.button1);
        btn2 = (Button) findViewById(R.id.button2);

        btn1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                SQLiteDatabase db = dataHelper.getWritableDatabase();
                db.execSQL("UPDATE biodata SET nama = '" +
                    editText2.getText().toString() + ", tgl=" +
                    editText3.getText().toString() + ", jk=" +
                    editText4.getText().toString() + ", alamat=" +
                    editText5.getText().toString() + " where no=" +
                    editText1.getText().toString() + "'");

                Toast.makeText(getApplicationContext(), "Berhasil", Toast.LENGTH_LONG).show();
                MainActivity.man.RefreshList();
                finish();
            }
        });
    }
}
```



Gambar 14 - SQLite - UpdateBiodata.java

Disini terdapat fungsi untuk memperbarui data dan kembali ke halaman utama.

10. AndroidManifest.xml

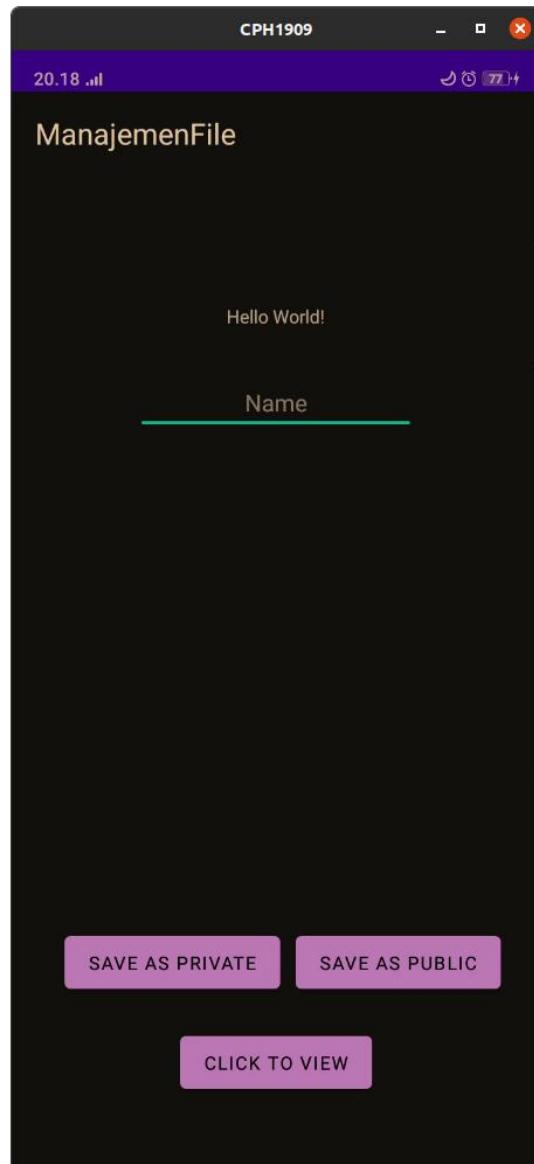


Gambar 15 - SQLite - AndroidManifest.xml

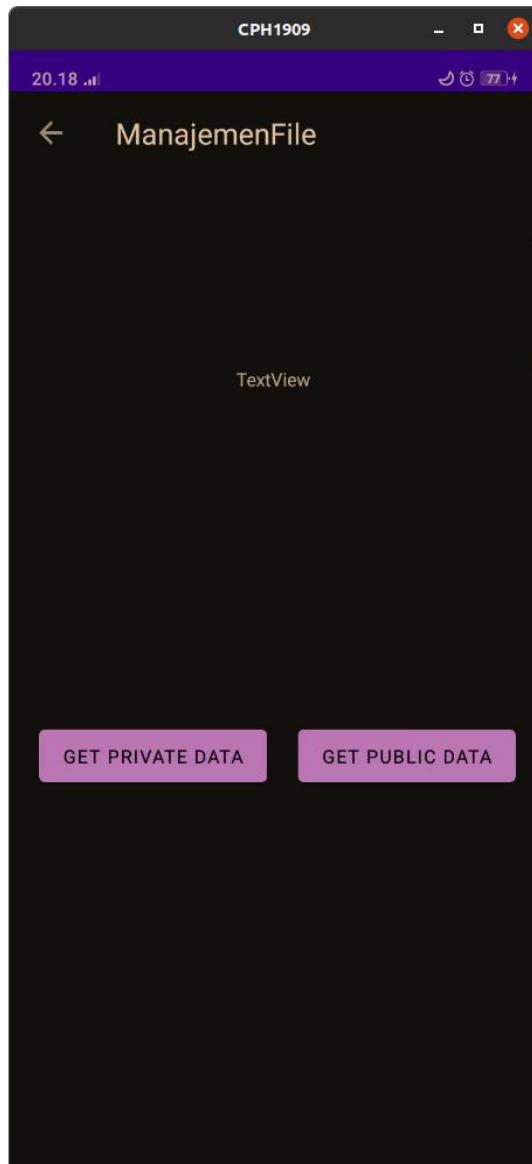
Disini tidak menambahkan apa-apa.

SCREENCAPTURE APLIKASI

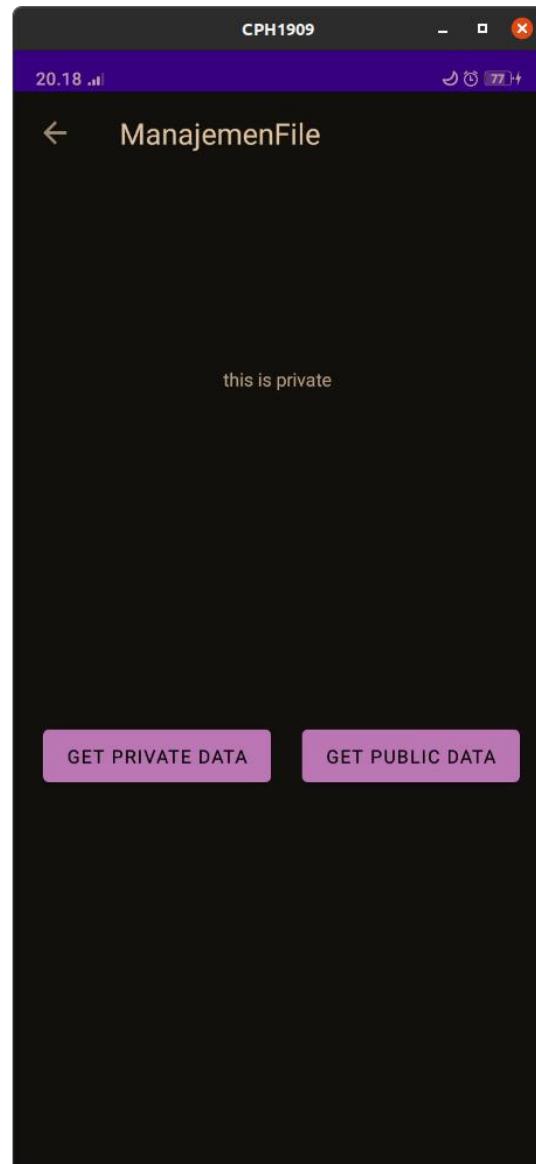
A. File Manajemen



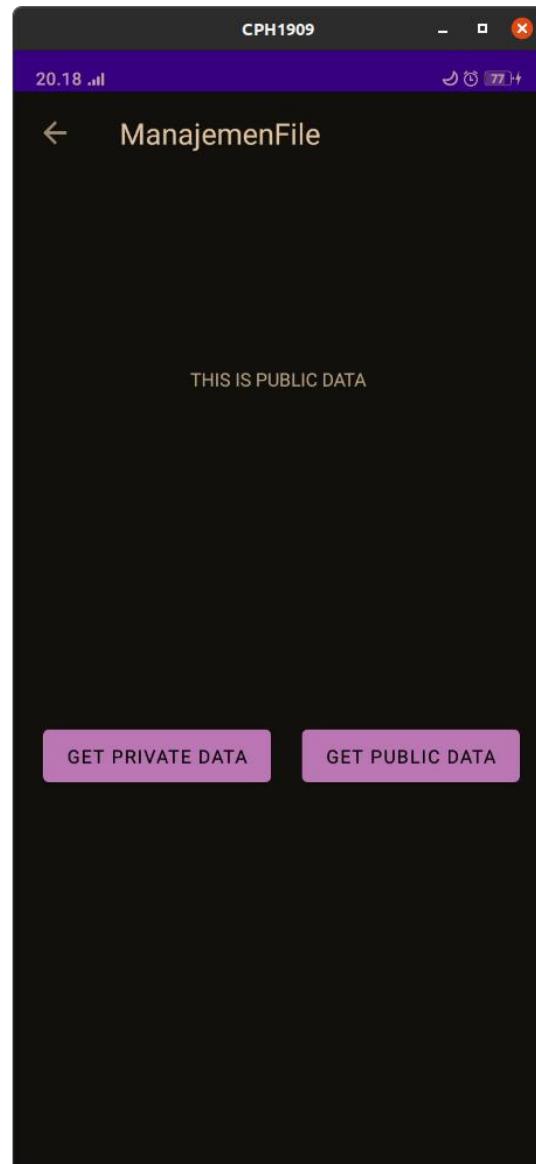
Gambar 16 - File Manajemen - Main



Gambar 17 - File Manajemen - View data

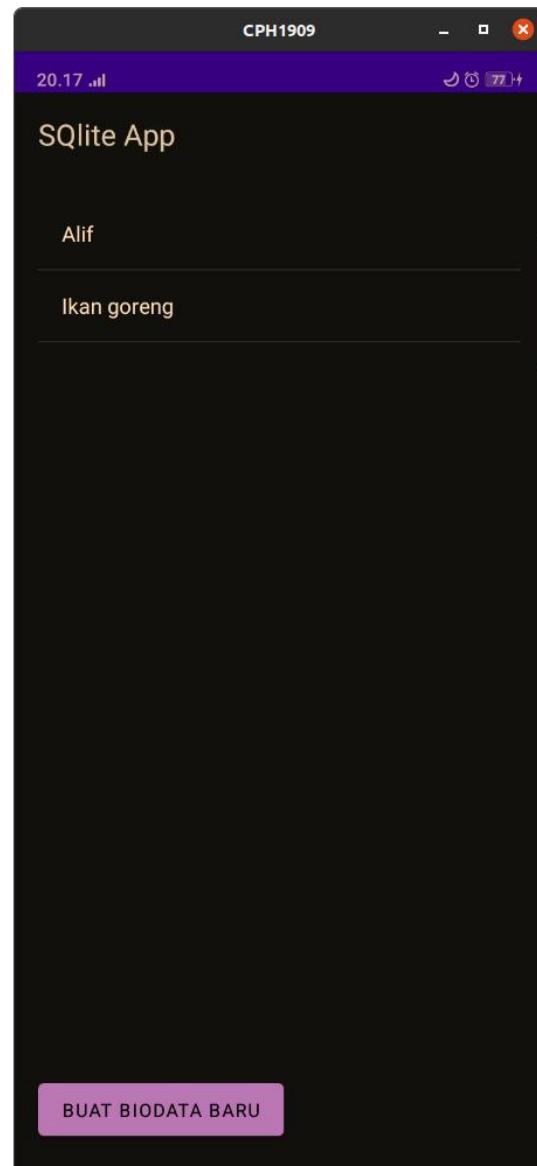


Gambar 18 - File Manajemen - View data private

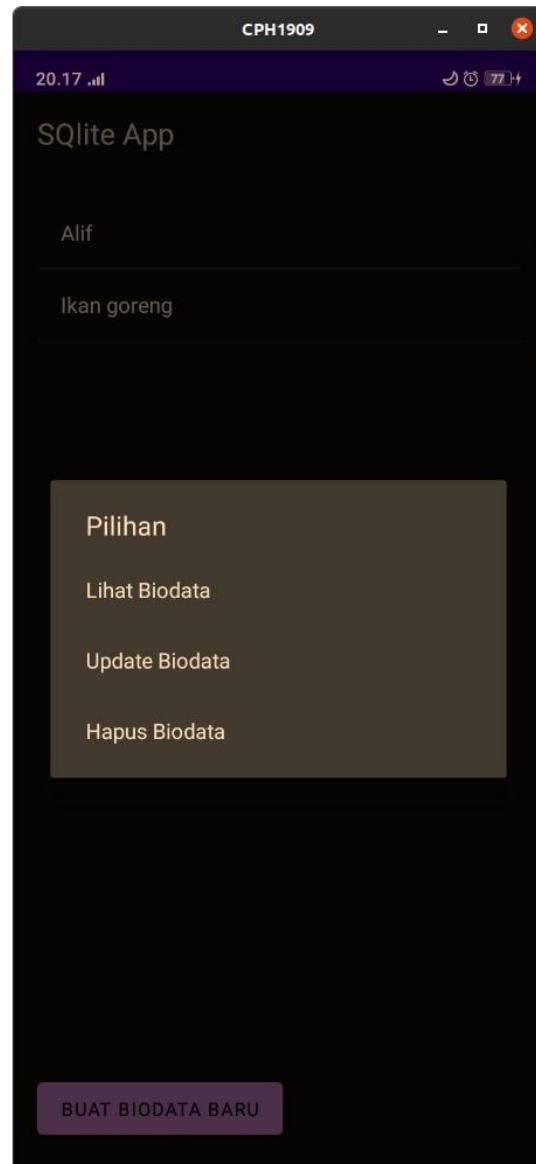


Gambar 19 - File Manajemen - View data public

B. SQLite



Gambar 20 - SQLite - Main



Gambar 21 - SQLite - Pop out menu



Gambar 22 - SQLite - Lihat biodata



Gambar 23 - SQLite - Update biodata



Gambar 24 - SQLite - Form biodata baru