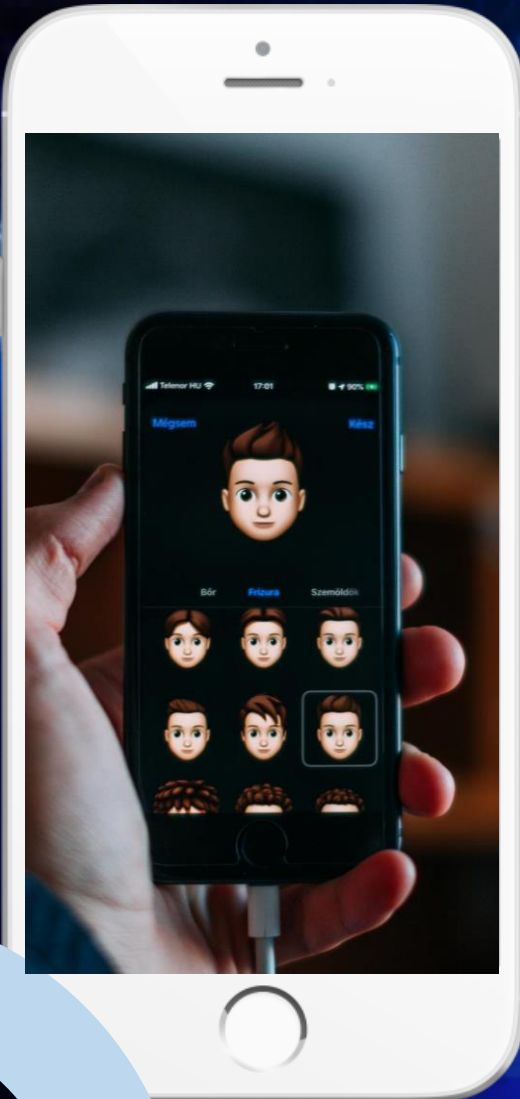




UNIVERSITAS  
BUDI LUHUR

# Aplikasi Database CRUD (Create, Read, Update, & Delete) menggunakan SQLite sebagai Database Lanjutan

Presented By Putri Hayati, S.ST, M.Kom



Read more

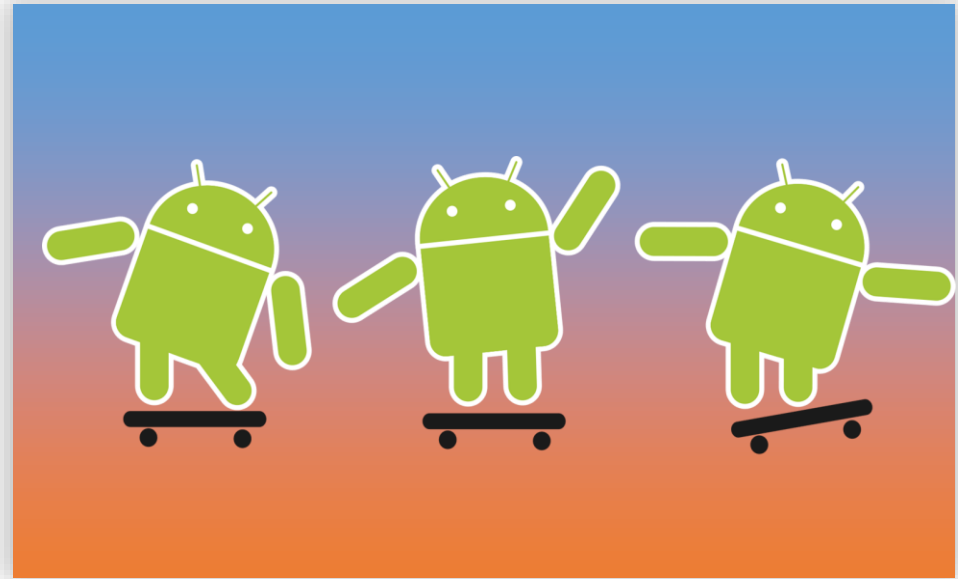


# Kategori

9.0 SQLite Database

9.1 Operasi Database (CRUD)

9.2 Praktikum





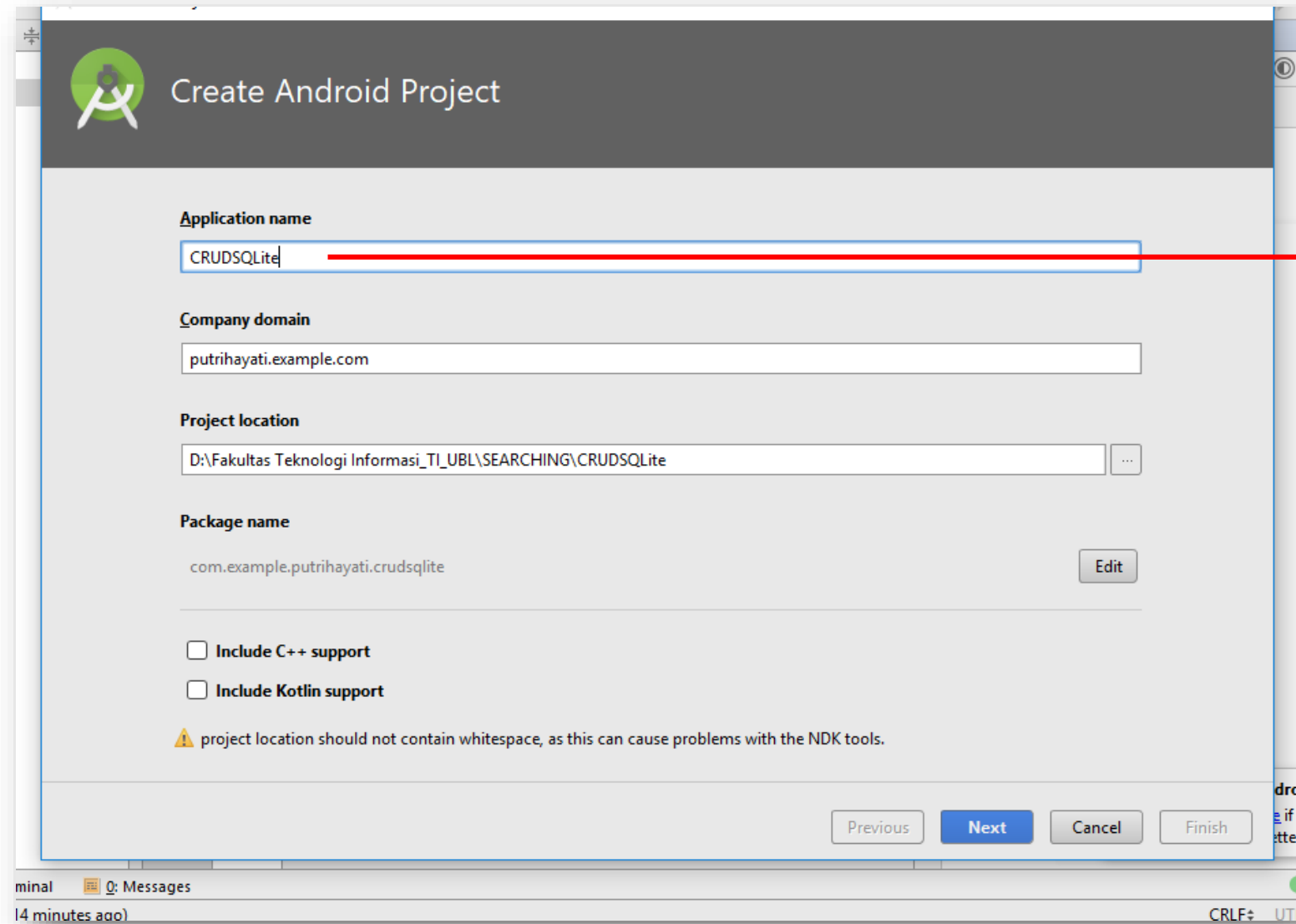
# Praktikum

## Create, Read, Update, Delete (CRUD)



### Aplikasi Database CRUD (Create, Read, Update, & Delete) menggunakan SQLite sebagai Database

1. Pertama - tama silahkan kalian buat sebuah project baru di **Android Studio** atau IDE
2. Project name : **Nim\_Namadepan\_Crud\_Kelompok**
3. Pilih **"Empty Activity"**
4. Ikuti langkah pada slide berikutnya
5. Jika sudah berhasil lalu di screenrecord dikirim ke Group Telegram, dengan subject :  
**Nim\_Nama\_Aplikasi Crud\_Kelompok**
6. Hasil untuk praktikum di kirim ke group telegram paling lambat tanggal  
**15 Desember 2022 - Pukul 23.00 WIB**



**Create Android Project**

**Application name**  
CRUDSQLite

**Company domain**  
putrihayati.example.com

**Project location**  
D:\Fakultas Teknologi Informasi\_TI\_UBL\SEARCHING\CRUDSQLite

**Package name**  
com.example.putrihayati.crudsqlite

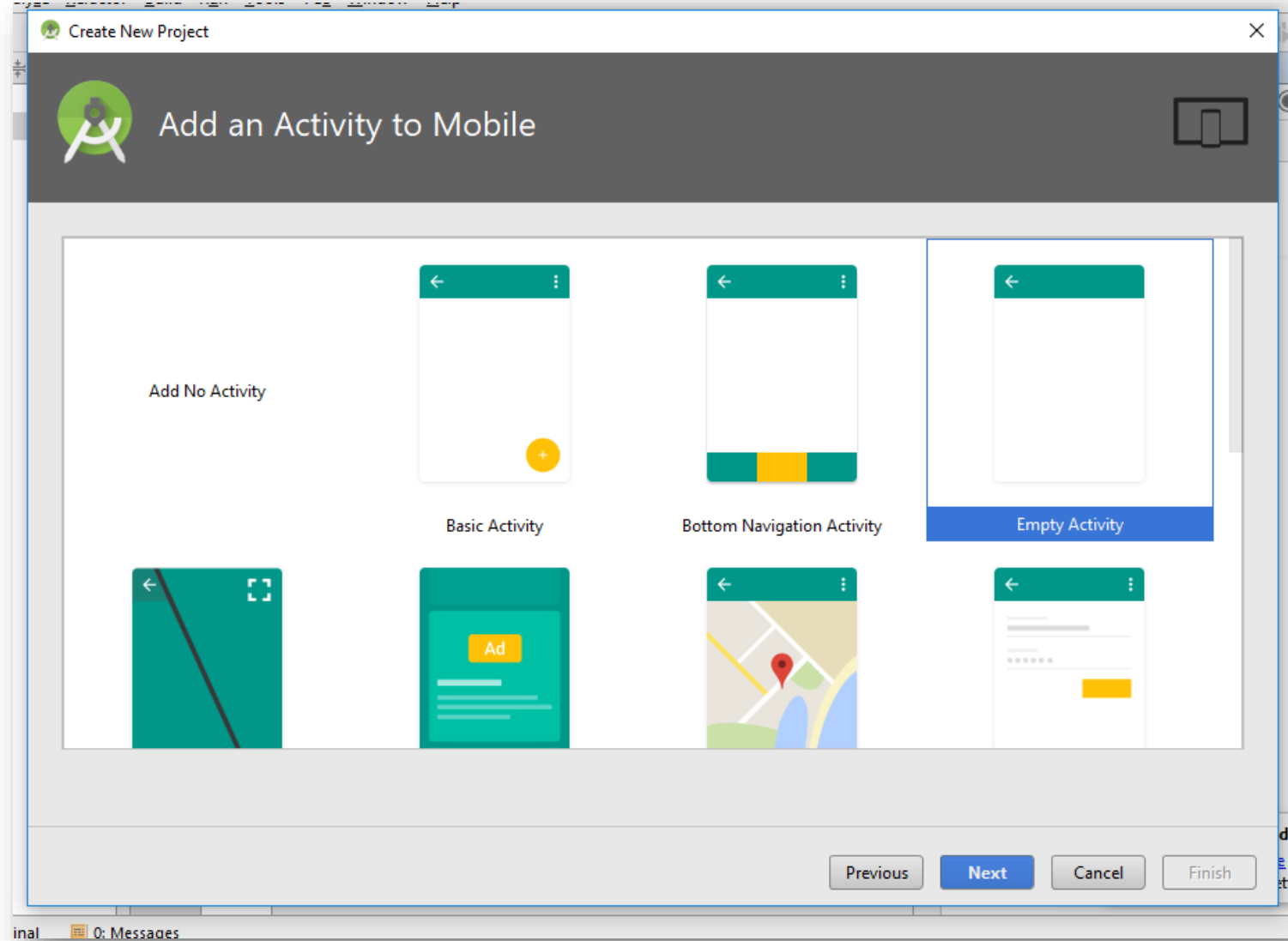
☐ Include C++ support

☐ Include Kotlin support

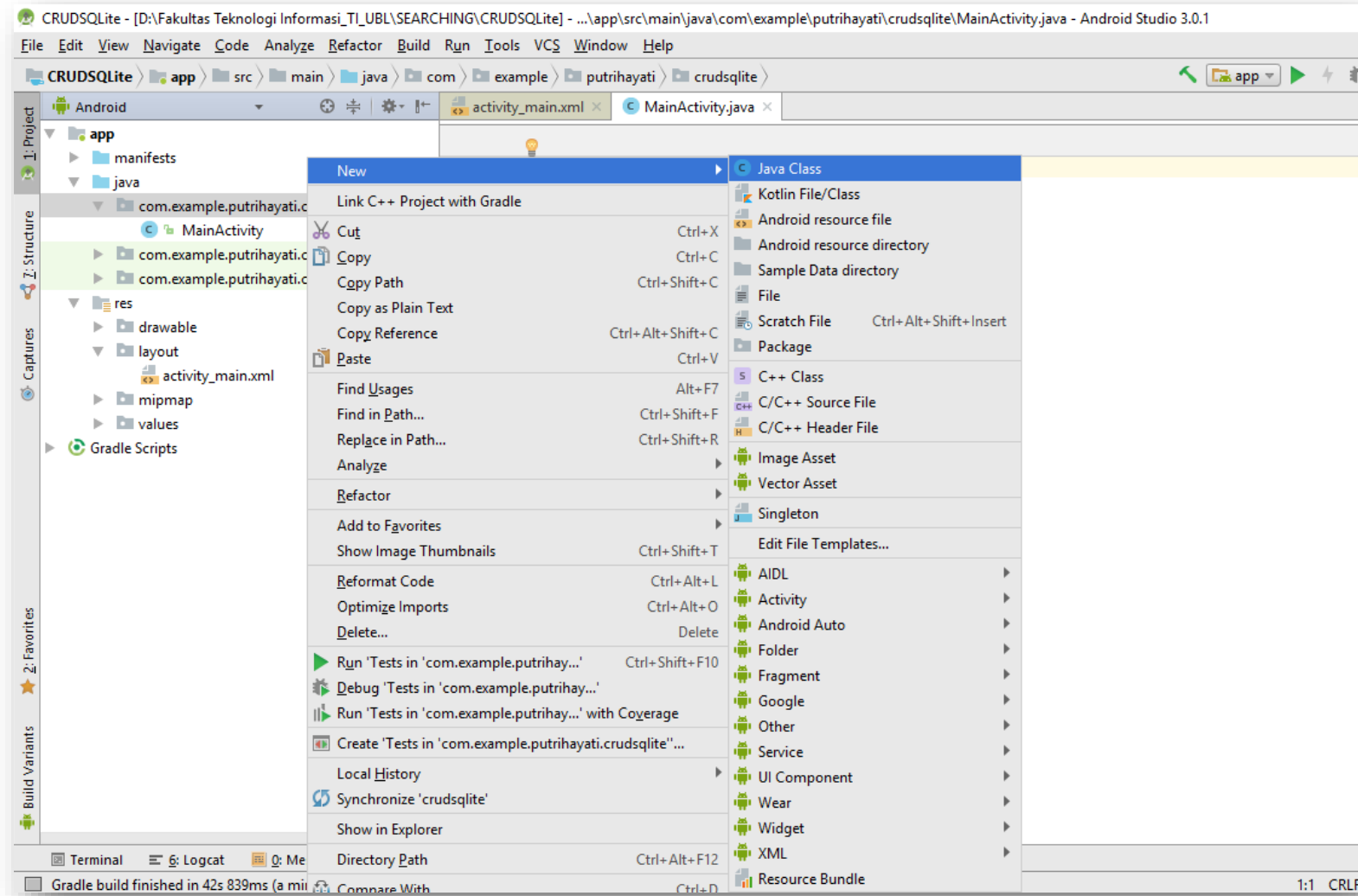
⚠ project location should not contain whitespace, as this can cause problems with the NDK tools.

Previous Next Cancel Finish

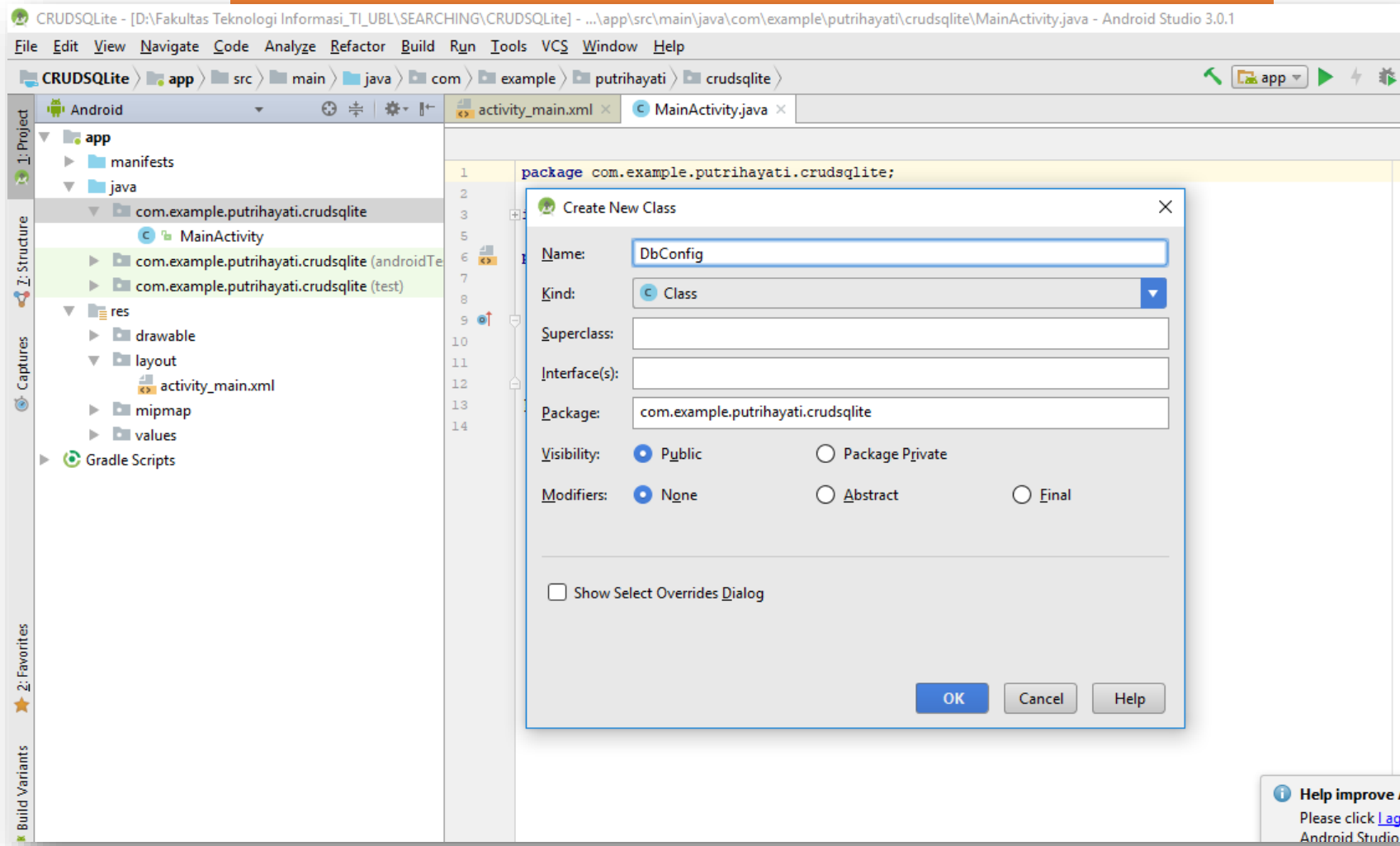
**WARNING !!**  
Nim\_Namadepan\_Crud  
\_Kelompok



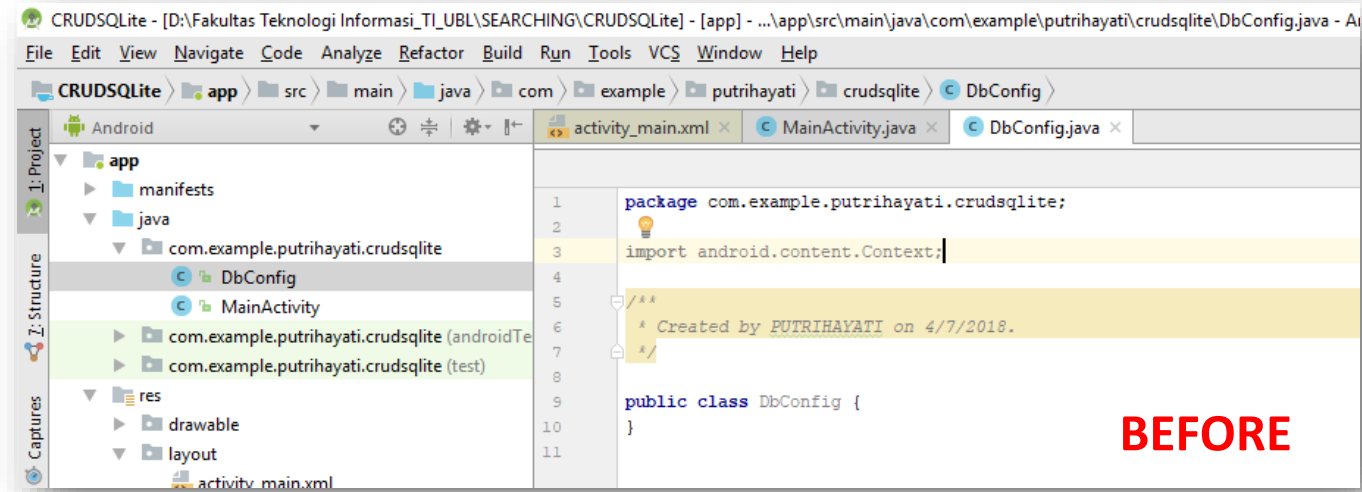
## Membuat Java Class, untuk konfigurasi Database SQLite



## Membuat Java Class, untuk konfigurasi Database SQLite



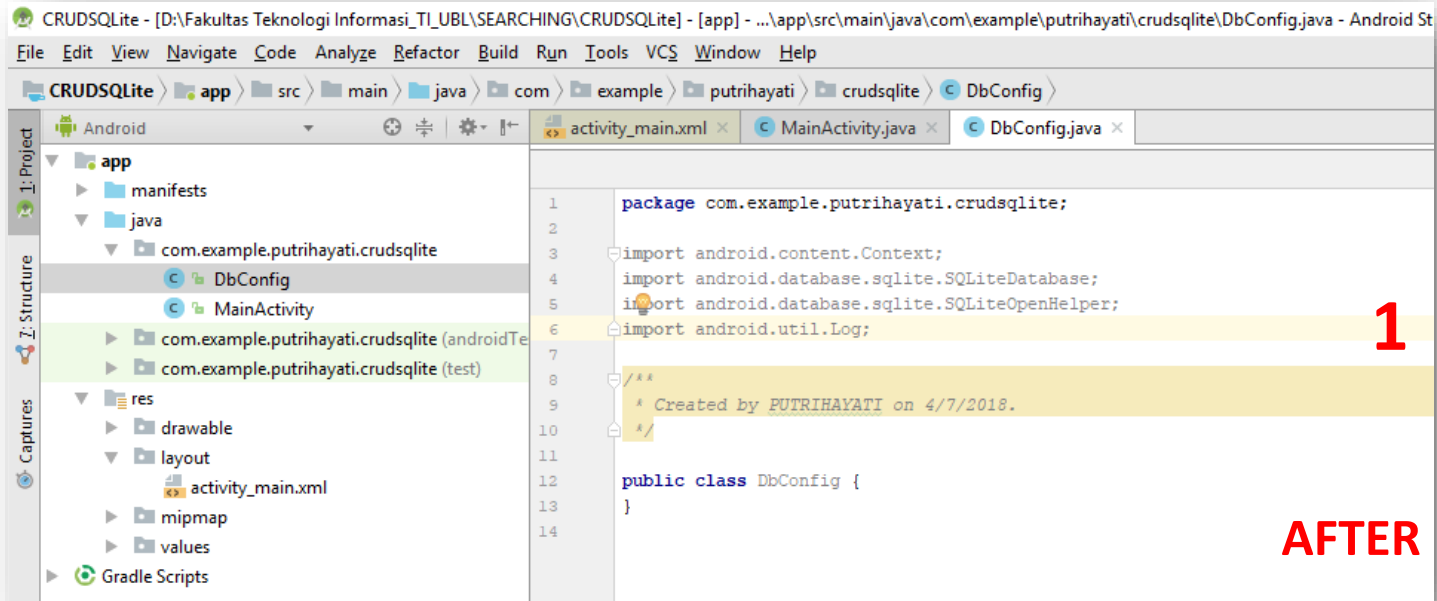




CRUDSQLite - [D:\Fakultas Teknologi Informasi\_TI\_UBL\SEARCHING\CRUDSQLite] - [app] - ...app\src\main\java\com\example\putrihayati\crudsqlite\DbConfig.java - Android Studio

```
1 package com.example.putrihayati.crudsqlite;
2
3 import android.content.Context;
4
5 /**
6  * Created by PUTRIHAYATI on 4/7/2018.
7  */
8
9 public class DbConfig {
10 }
11
```

**BEFORE**



CRUDSQLite - [D:\Fakultas Teknologi Informasi\_TI\_UBL\SEARCHING\CRUDSQLite] - [app] - ...app\src\main\java\com\example\putrihayati\crudsqlite\DbConfig.java - Android Studio

```
1 package com.example.putrihayati.crudsqlite;
2
3 import android.content.Context;
4 import android.database.sqlite.SQLiteDatabase;
5 import android.database.sqlite.SQLiteOpenHelper;
6 import android.util.Log;
7
8 /**
9  * Created by PUTRIHAYATI on 4/7/2018.
10 */
11
12 public class DbConfig {
13 }
14
```

**1**

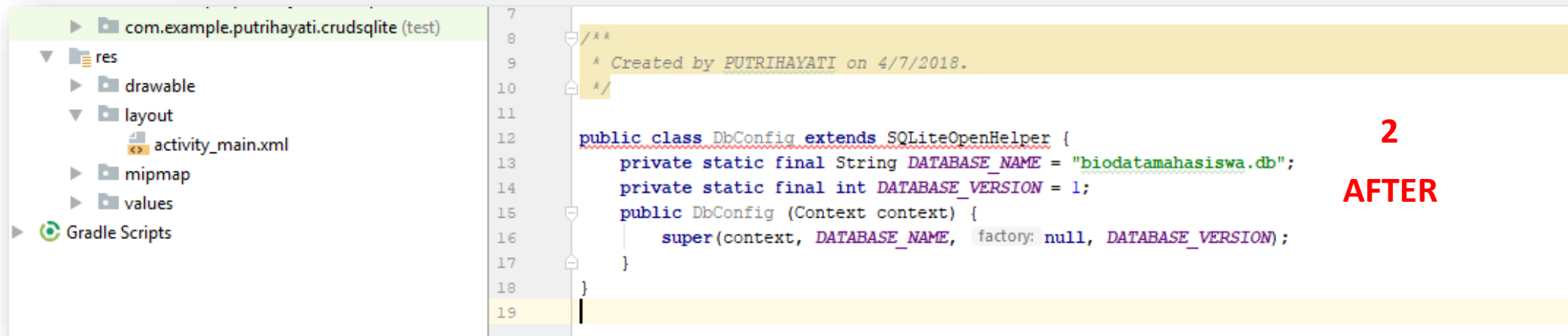
**AFTER**

## Script untuk membuat konfigurasi pada DATABASE :



```
4
5  /**
6   * Created by PUTRIHAYATI on 4/7/2018.
7   */
8
9  public class DbConfig {
10
11  }
```

**BEFORE**



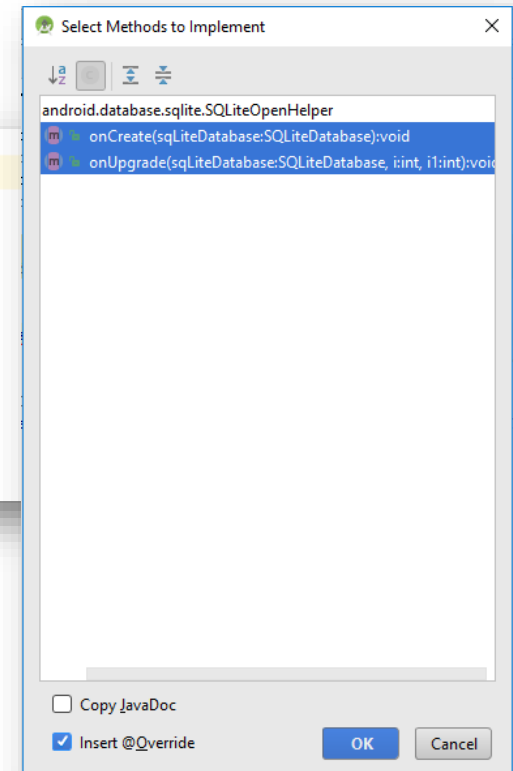
```
7
8  /**
9   * Created by PUTRIHAYATI on 4/7/2018.
10  */
11
12  public class DbConfig extends SQLiteOpenHelper {
13      private static final String DATABASE_NAME = "biodatamahasiswa.db";
14      private static final int DATABASE_VERSION = 1;
15      public DbConfig (Context context) {
16          super(context, DATABASE_NAME, factory: null, DATABASE_VERSION);
17      }
18  }
19
```

**2**  
**AFTER**

Letakan “kursor” ditengah SQLiteOpenHelper : alt+enter

```
1  
2 public class DbConfig extends SQLiteOpenHelper {  
3     private static final String DATABASE_NAME;  
4     private static final int DATABASE_VERSION;  
5     public DbConfig (Context context) {  
6         super(context, DATABASE_NAME, factory,  
7     }  
8 }  
9
```

- Implement methods
- Make 'DbConfig' abstract
- Create Test
- Create subclass
- Unimplement Class
- Annotate class 'SQLiteOpenHelper' as @Deprecated



## Script untuk membuat konfigurasi pada DATABASE :

**BEFORE**

```

18
19  @Override
20  public void onCreate(SQLiteDatabase sqLiteDatabase) {
21
22  }
23
24  @Override
25  public void onUpgrade(SQLiteDatabase sqLiteDatabase, int i, int il) {
26
27  }
28  }
29

```

## QUERY untuk membuat table BIODATA :

```

19  @Override
20  public void onCreate(SQLiteDatabase db) {
21      String sql = "create table biodata(no integer primary key, nama text null, tgl text null, jk text null, alamat text null)";
22      Log.d( tag: "Data", msg: "onCreate: " + sql);
23      db.execSQL(sql);
24      sql ="INSERT INTO biodata (no, nama, tgl, jk, alamat) VALUES ('1', 'Putri Hayati', '1991-08-02', 'Perempuan', 'Slipi', 'Jakarta')";
25      db.execSQL(sql);
26
27  }
28
29  @Override
30  public void onUpgrade(SQLiteDatabase arg0, int arg1, int arg2) {
31
32  }
33

```

**AFTER 3**

ages TODO

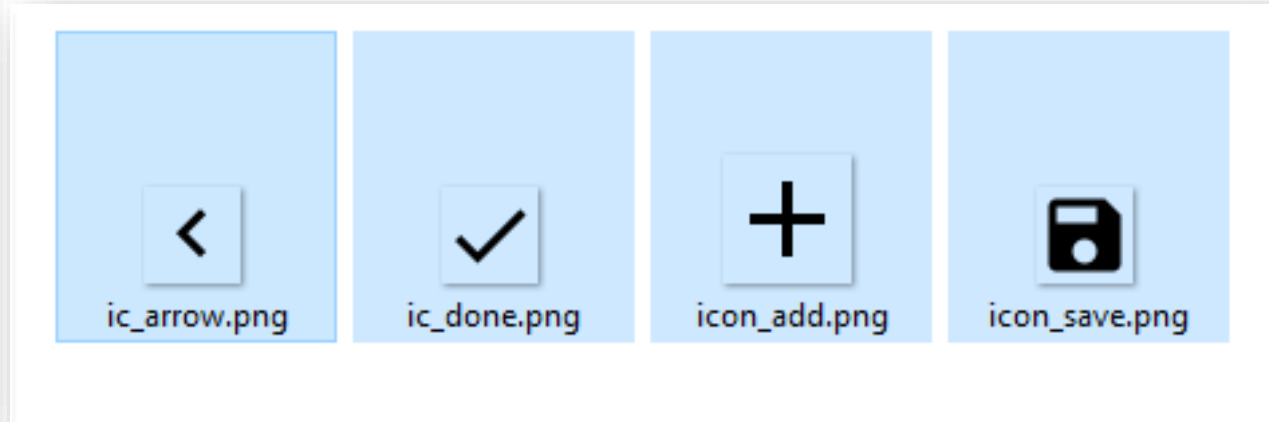
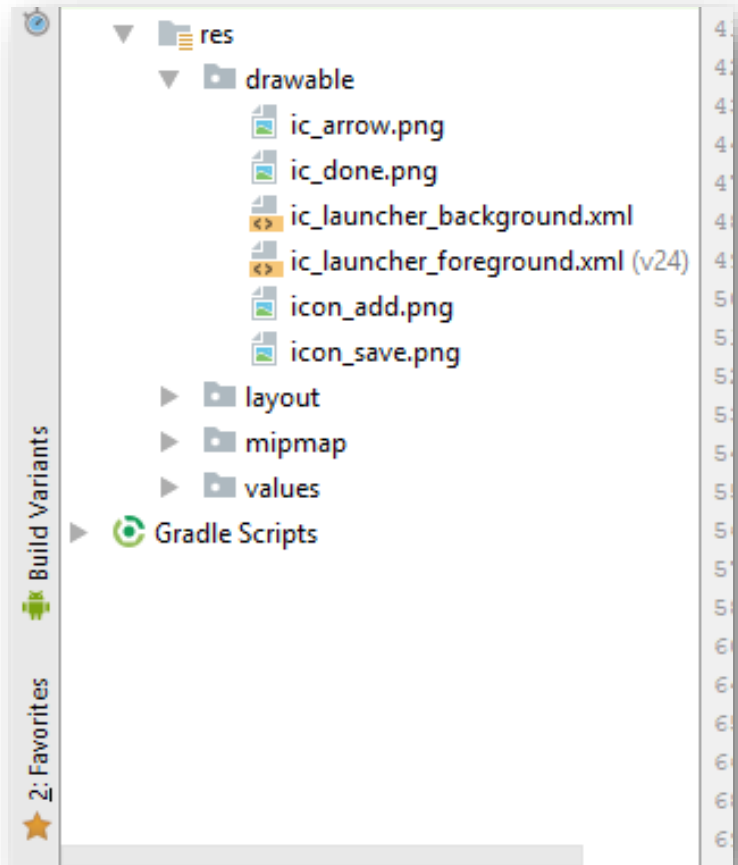
utes ago)

Event Log

Gradle Console

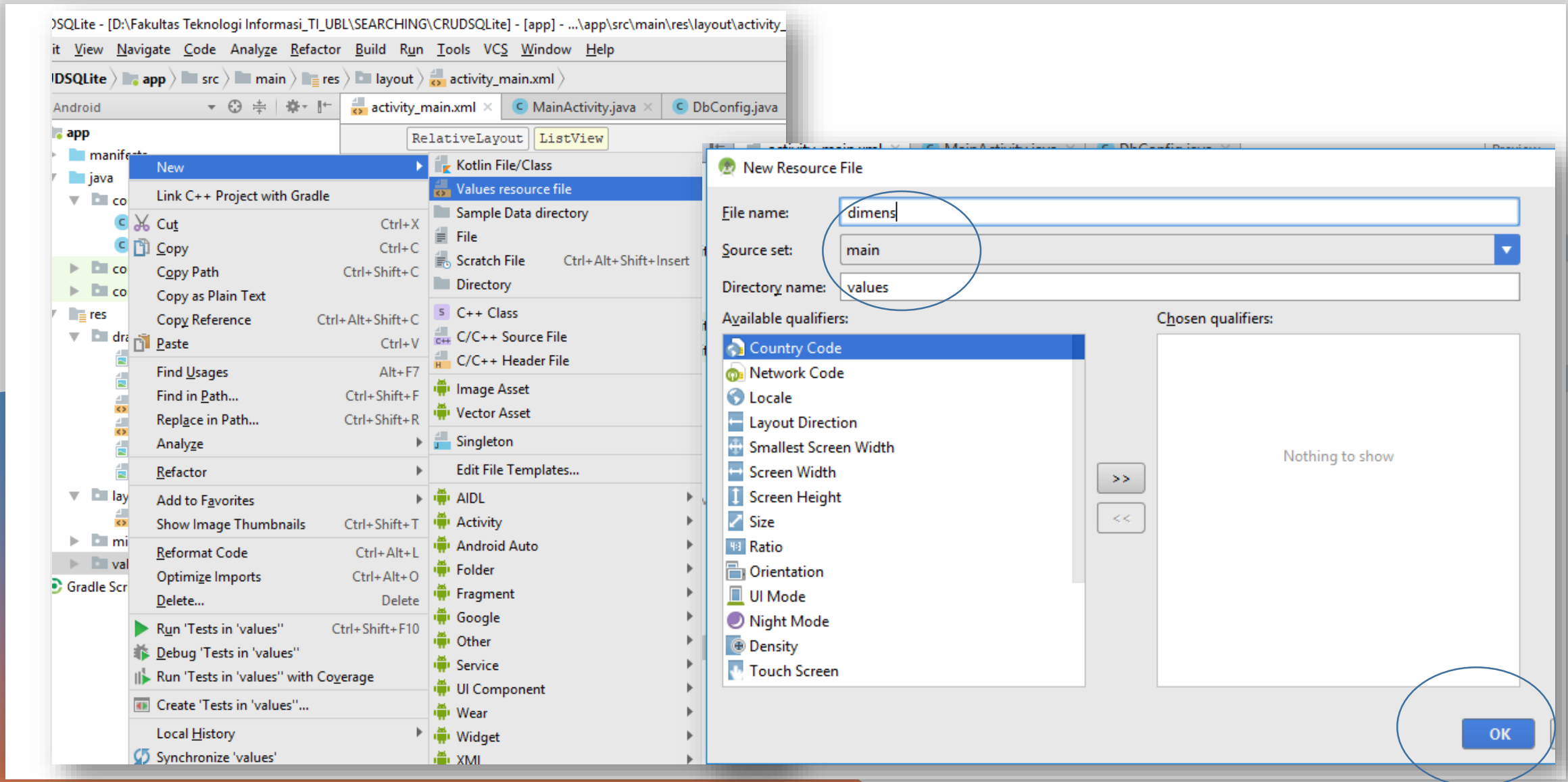
33:2 CRLF UTF-8 Context: <no context>

## Menyimpan resource - Copy Paste icon ke Drawable



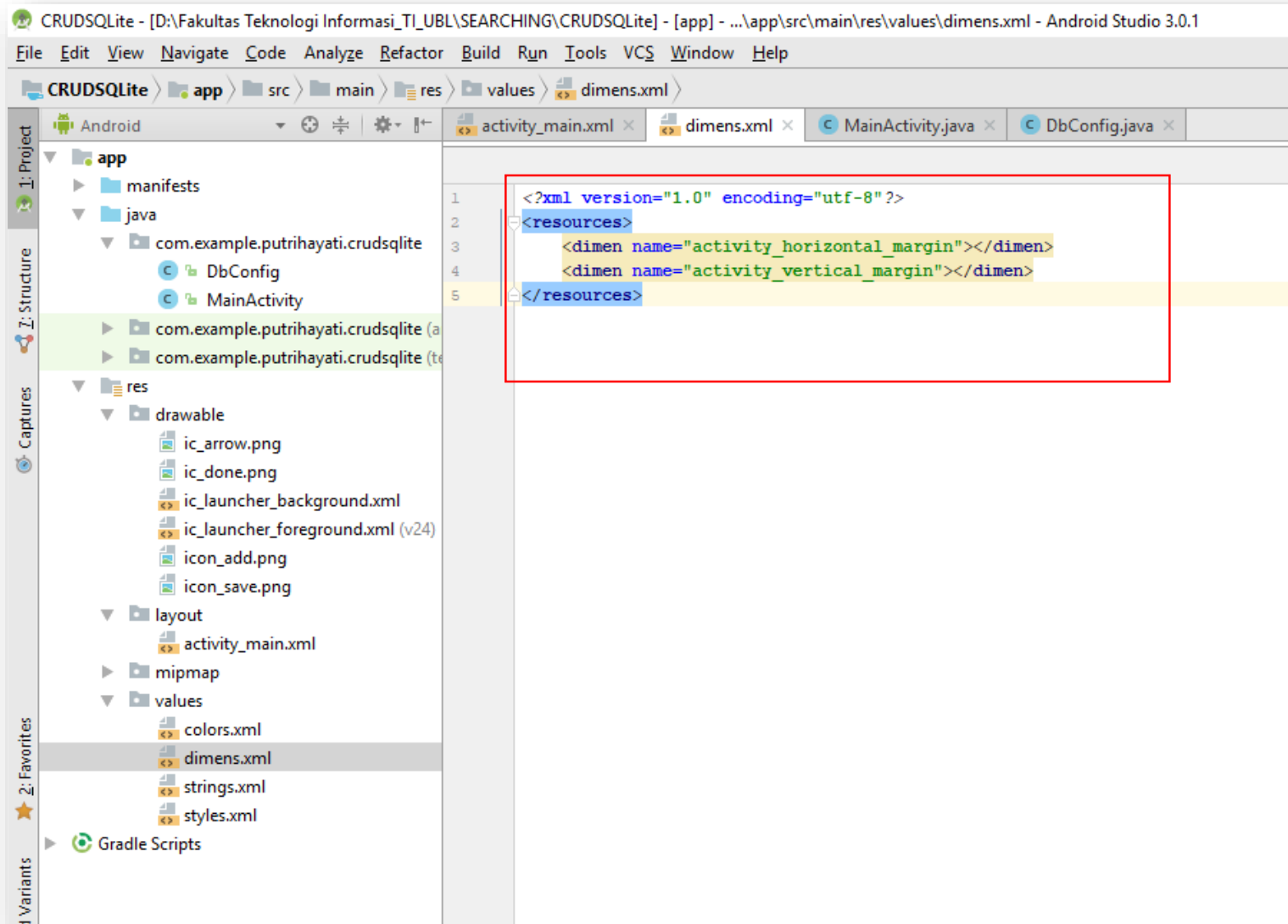
Click kanan di "VALUES" seperti pada gambar dibawah ini:

## 9.1 Praktikum

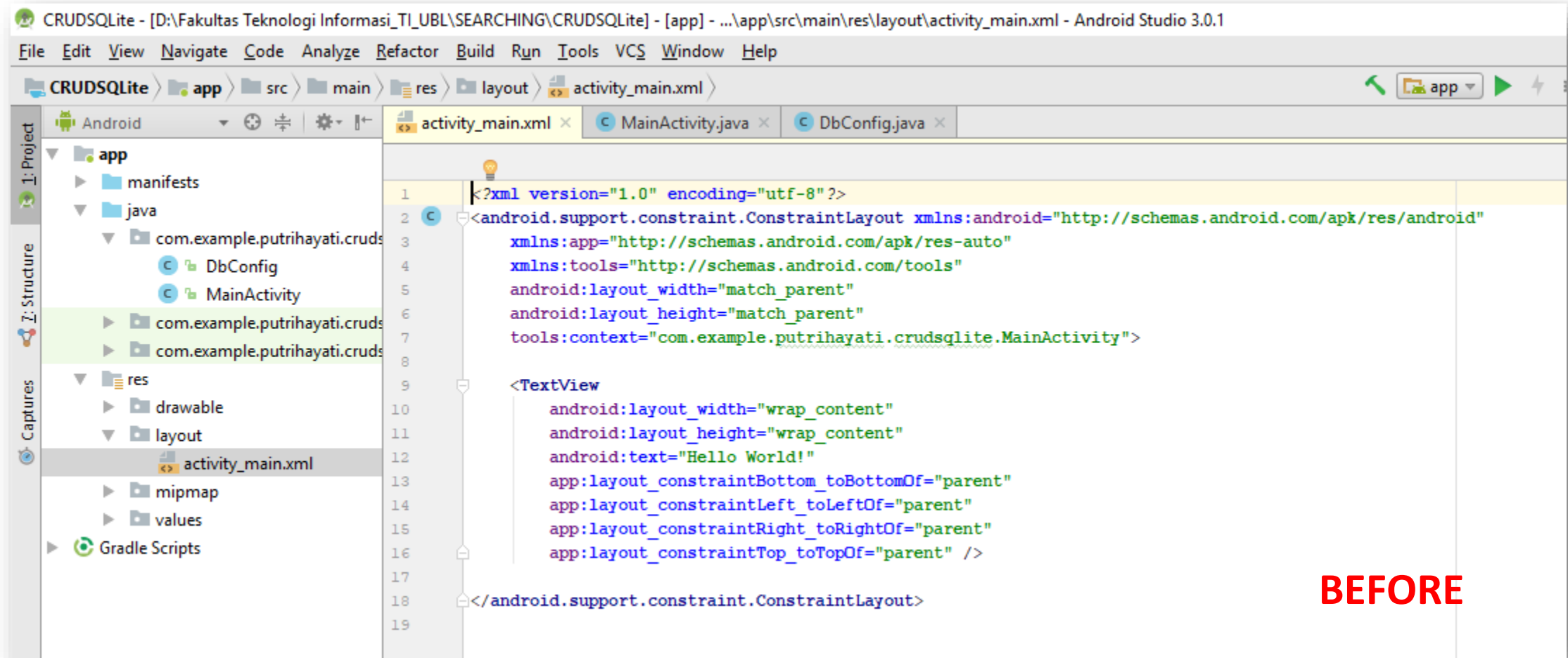


Ketik source code “dimens” seperti pada gambar dibawah ini:

## 9.1 Praktikum

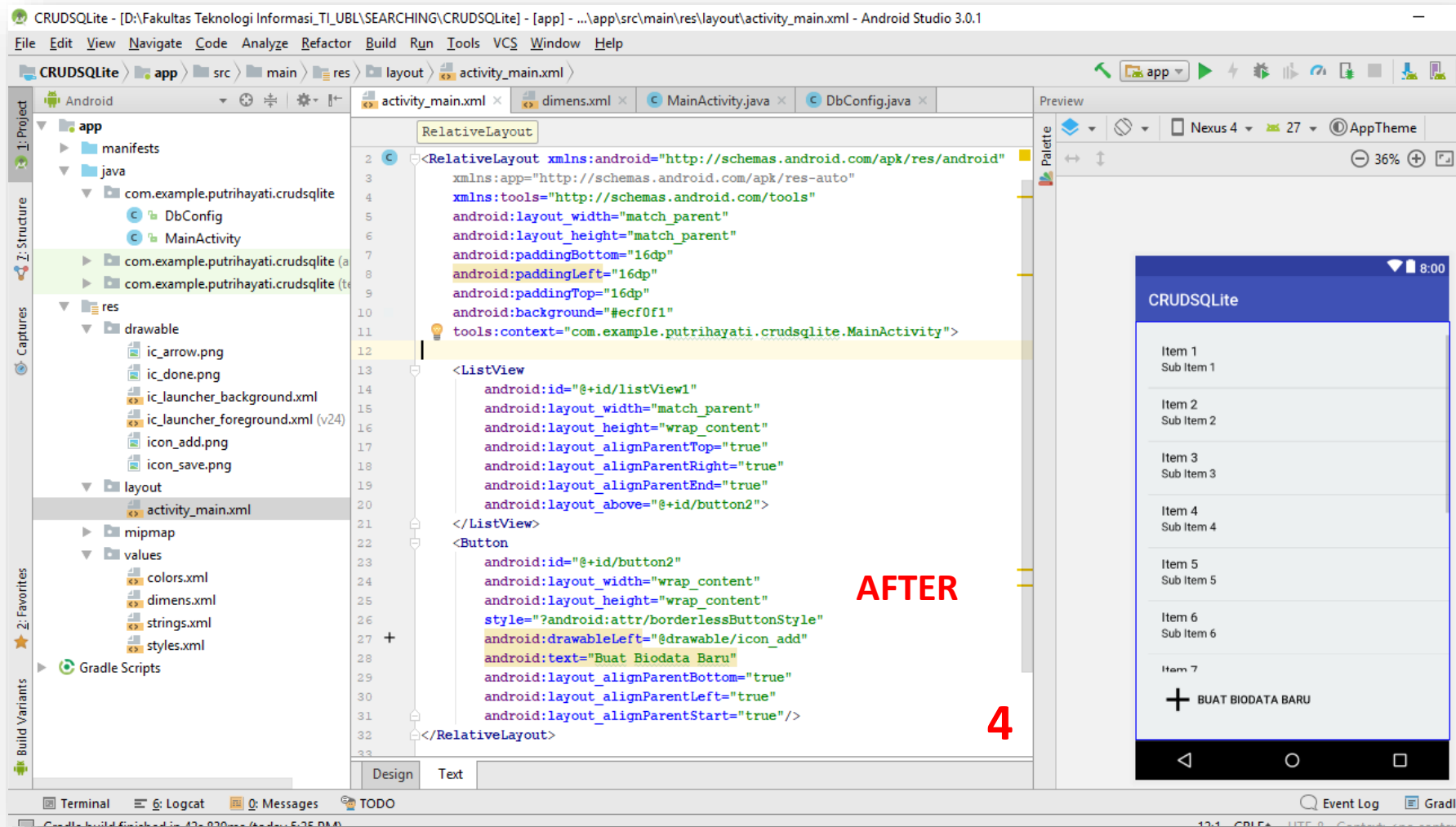


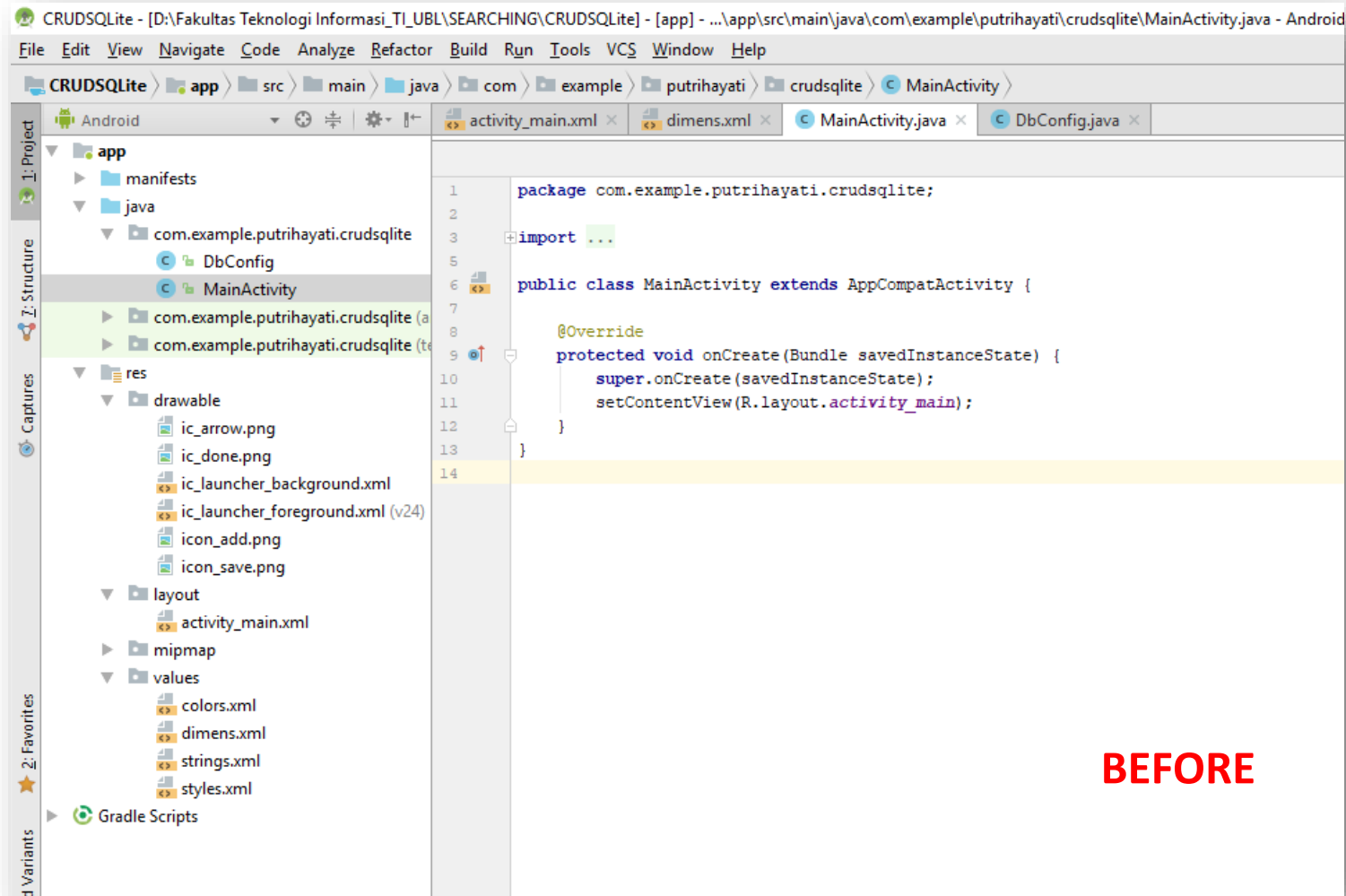
## Click - Activity\_Main.XML



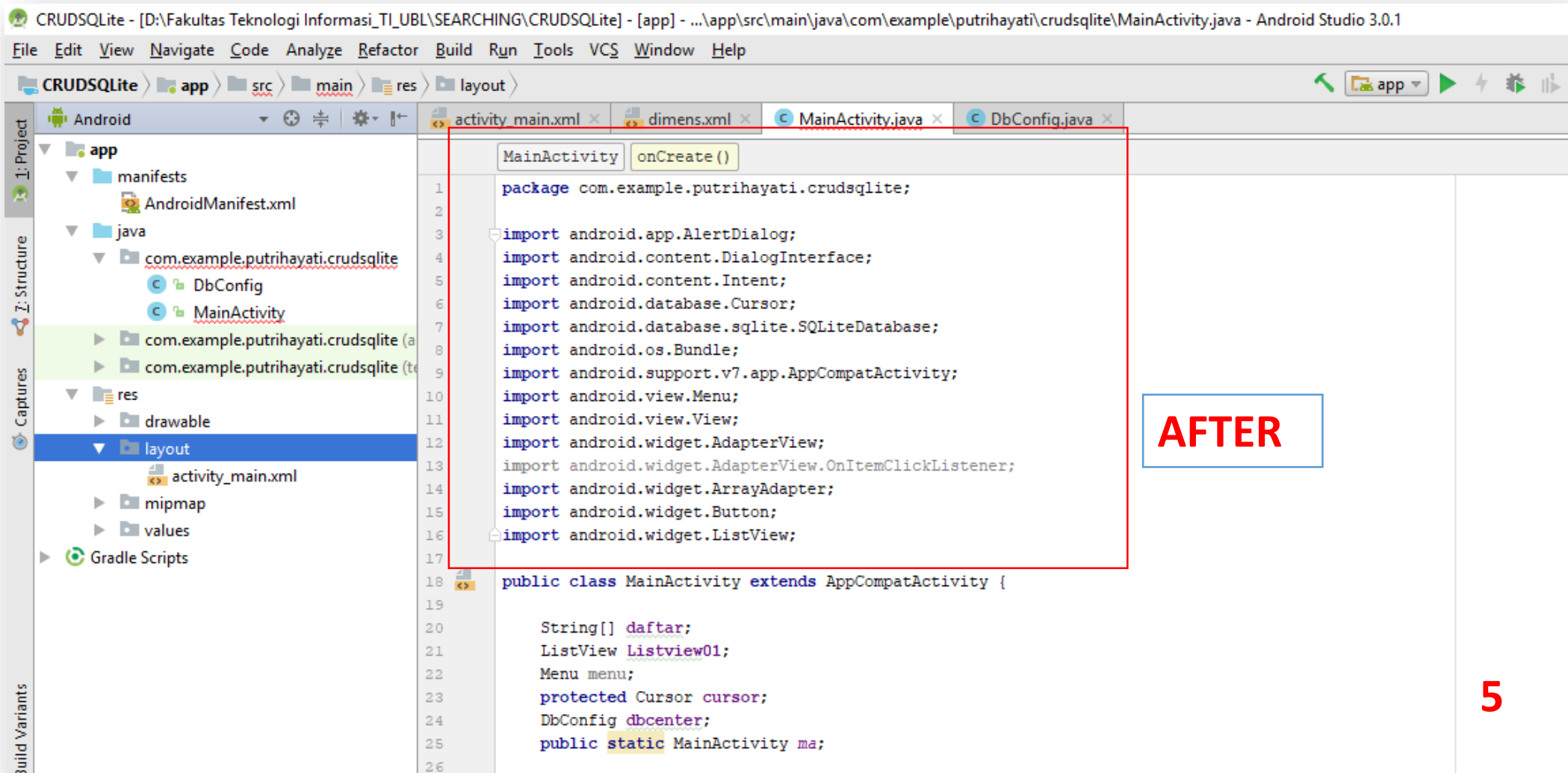


Click - Activity\_Main.XML dan ketik source code seperti gambar dibawah ini:



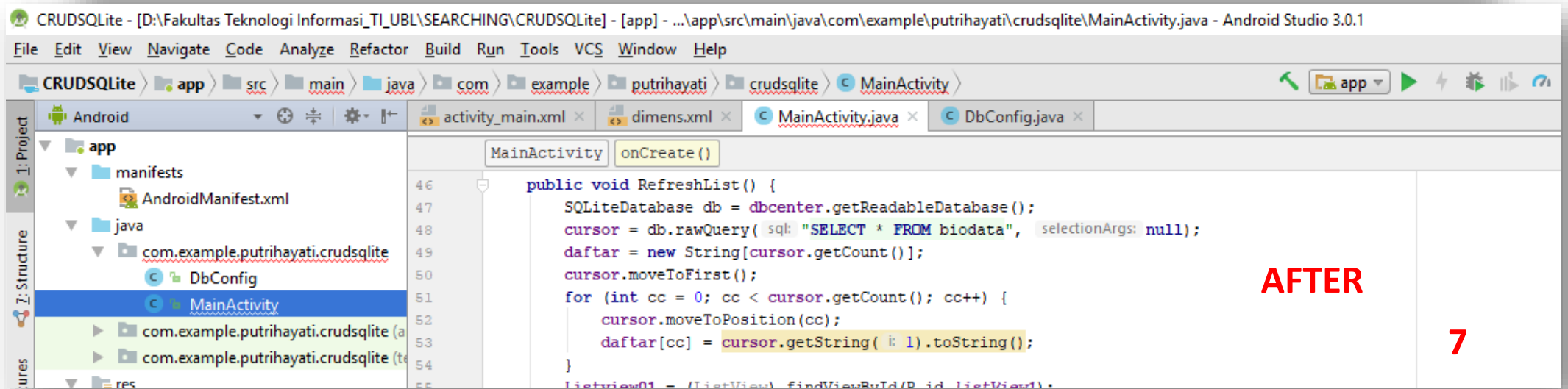
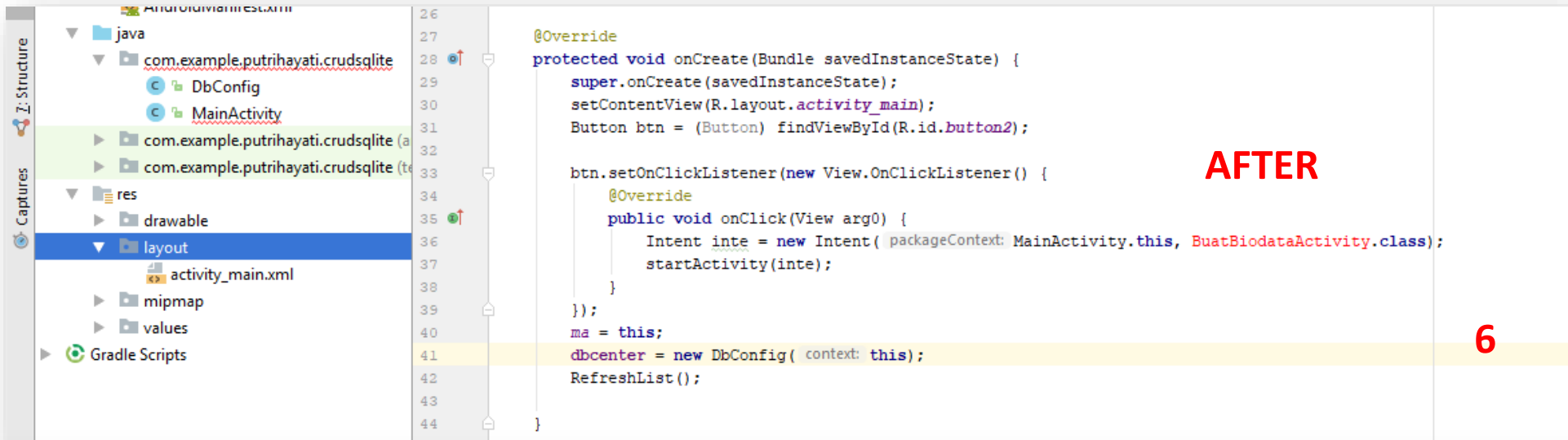
**Click - MainActivity****BEFORE**

MainActivity - Ketik source code seperti pada gambar dibawah ini :



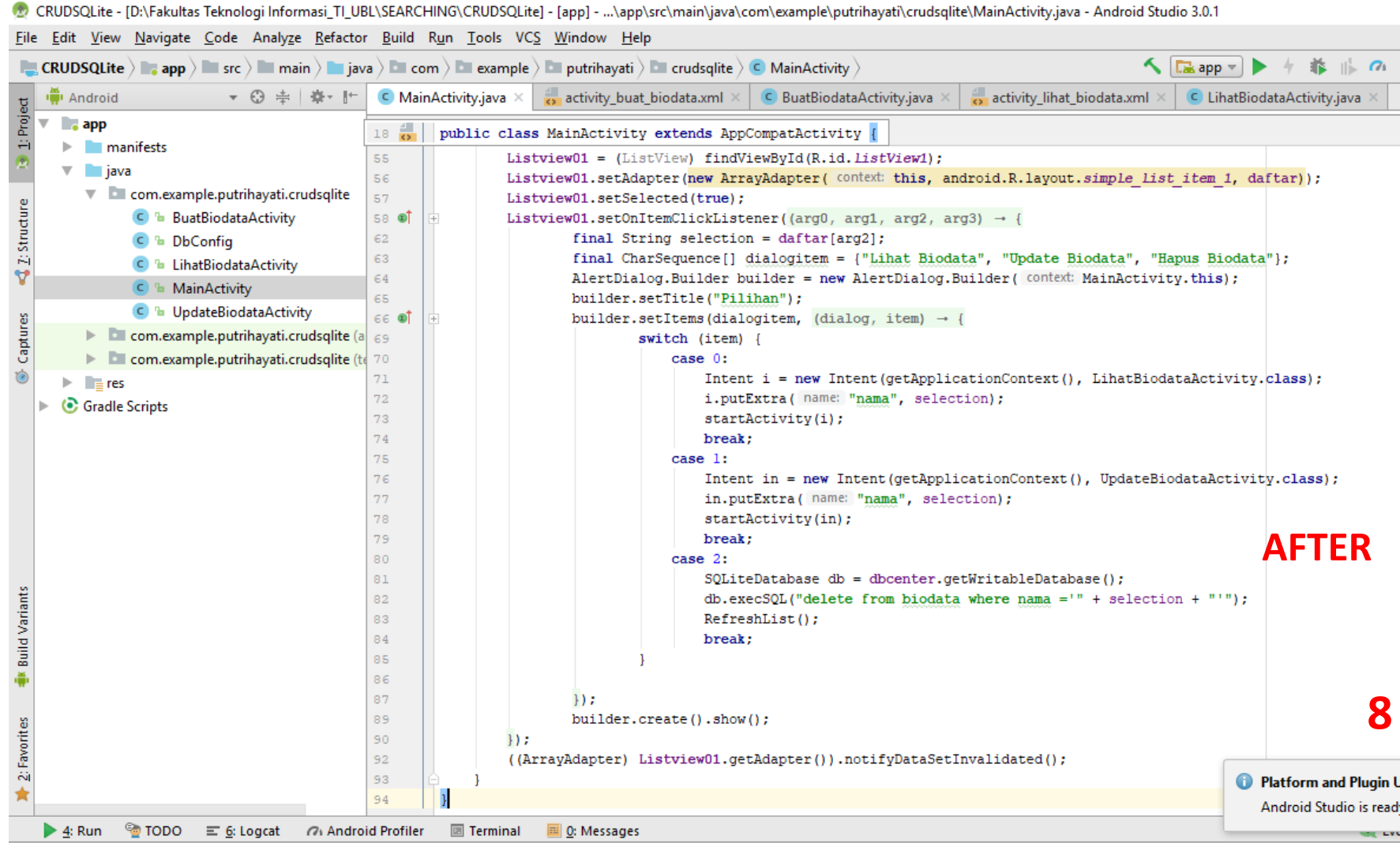
## MainActivity - Ketik source code seperti pada gambar dibawah ini :

## 9.1 Praktikum



## MainActivity - Ketik source code seperti pada gambar dibawah ini :

## 9.1 Praktikum



```
18 public class MainActivity extends AppCompatActivity {
55     ListView01 = (ListView) findViewById(R.id.ListView1);
56     ListView01.setAdapter(new ArrayAdapter< context: this, android.R.layout.simple_list_item_1, daftar>());
57     ListView01.setSelected(true);
58     ListView01.setOnItemClickListener((arg0, arg1, arg2, arg3) -> {
62         final String selection = daftar[arg2];
63         final CharSequence[] dialogitem = {"Lihat Biodata", "Update Biodata", "Hapus Biodata"};
64         AlertDialog.Builder builder = new AlertDialog.Builder( context: MainActivity.this);
65         builder.setTitle("Pilihan");
66         builder.setItems(dialogitem, (dialog, item) -> {
69             switch (item) {
70                 case 0:
71                     Intent i = new Intent(getApplicationContext(), LihatBiodataActivity.class);
72                     i.putExtra( name: "nama", selection);
73                     startActivity(i);
74                     break;
75                 case 1:
76                     Intent in = new Intent(getApplicationContext(), UpdateBiodataActivity.class);
77                     in.putExtra( name: "nama", selection);
78                     startActivity(in);
79                     break;
80                 case 2:
81                     SQLiteDatabase db = dbcenter.getWritableDatabase();
82                     db.execSQL("delete from biodata where nama =" + selection + "");
83                     RefreshList();
84                     break;
85             }
86         });
87     });
88     builder.create().show();
89 });
90 ((ArrayAdapter) ListView01.getAdapter()).notifyDataSetInvalidated();
91 }
92 }
93 }
94 }
```

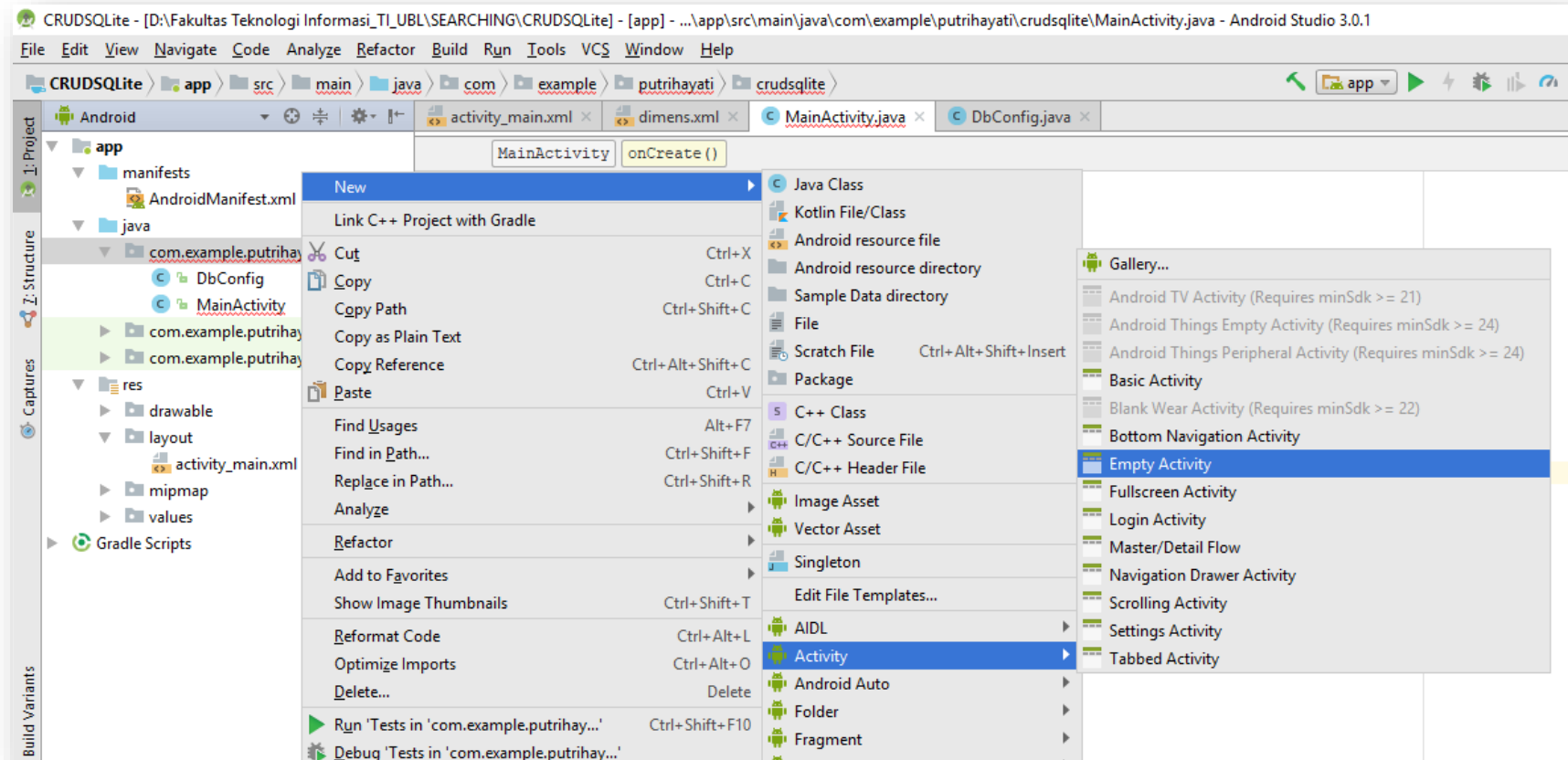
**AFTER**

**8**

Platform and Plugin U  
Android Studio is read

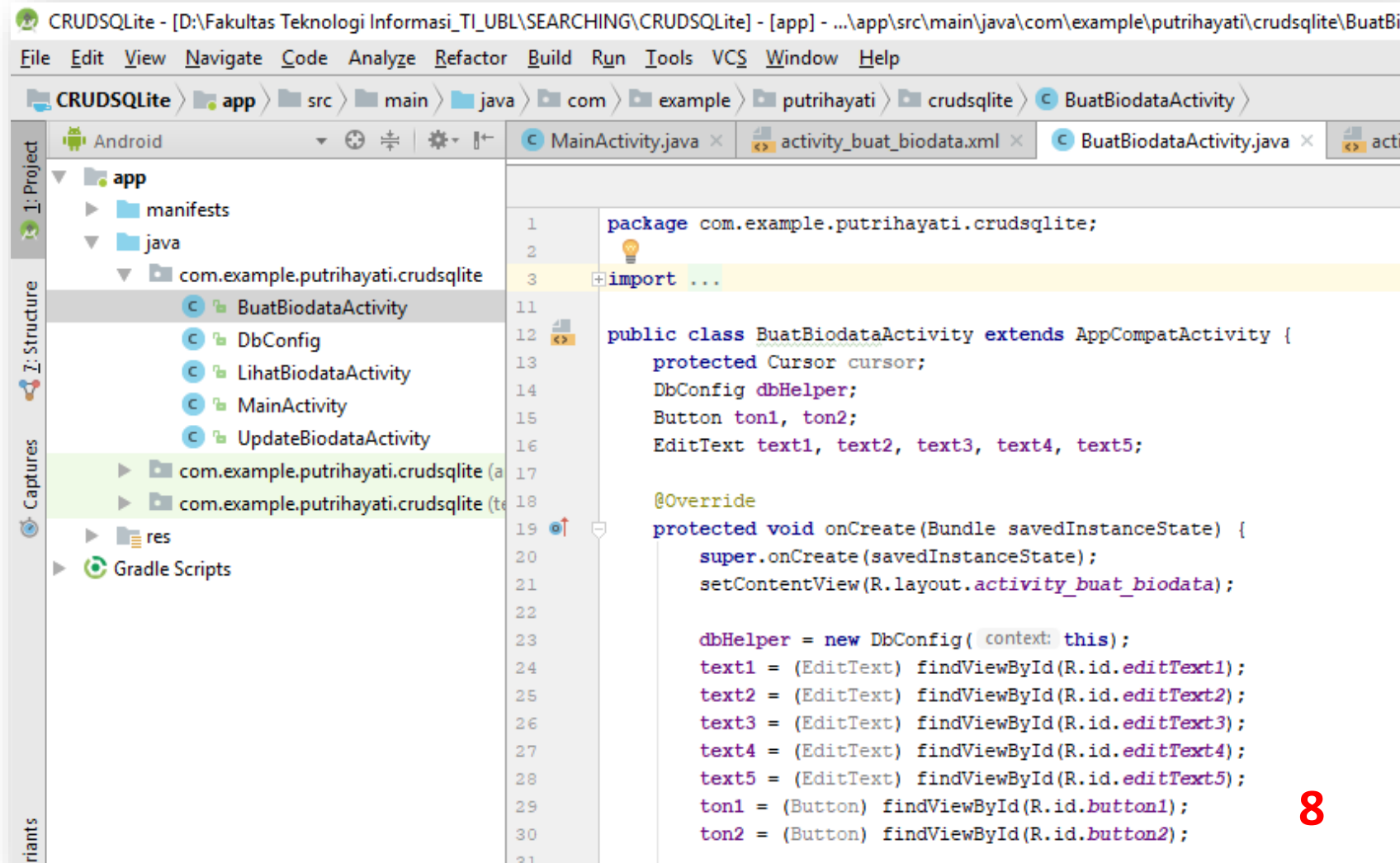
Buat 3 Activity seperti yang ada di MainActivity

- BuatBiodataActivity
- LihatBiodataActivity
- UpdateBiodataActivity



- BuatBiodataActivity - Ketik source code seperti pada gambar dibawah ini :

## 9.1 Praktikum



```
CRUDSQLite - [D:\Fakultas Teknologi Informasi_TI_UBL\SEARCHING\CRUDSQLite] - [app] - ...\app\src\main\java\com\example\putrihayati\crudsqlite\BuatBi
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
CRUDSQLite > app > src > main > java > com > example > putrihayati > crudsqlite > BuatBiodataActivity
Android
1: Project
app
  manifests
  java
    com.example.putrihayati.crudsqlite
      BuatBiodataActivity
      DbConfig
      LihatBiodataActivity
      MainActivity
      UpdateBiodataActivity
    com.example.putrihayati.crudsqlite (a
    com.example.putrihayati.crudsqlite (te
  res
  Gradle Scripts
Captures
riants
1 package com.example.putrihayati.crudsqlite;
2
3 import ...
11
12 public class BuatBiodataActivity extends AppCompatActivity {
13     protected Cursor cursor;
14     DbConfig dbHelper;
15     Button ton1, ton2;
16     EditText text1, text2, text3, text4, text5;
17
18     @Override
19     protected void onCreate(Bundle savedInstanceState) {
20         super.onCreate(savedInstanceState);
21         setContentView(R.layout.activity_buat_biodata);
22
23         dbHelper = new DbConfig(context, this);
24         text1 = (EditText) findViewById(R.id.editText1);
25         text2 = (EditText) findViewById(R.id.editText2);
26         text3 = (EditText) findViewById(R.id.editText3);
27         text4 = (EditText) findViewById(R.id.editText4);
28         text5 = (EditText) findViewById(R.id.editText5);
29         ton1 = (Button) findViewById(R.id.button1);
30         ton2 = (Button) findViewById(R.id.button2);
31
```



- BuatBiodataActivity - Ketik source code seperti pada gambar dibawah ini :

## 9.1 Praktikum

```
1
2
3
4
5
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27
28

ton1.setOnClickListener((arg0) -> {
    // TODO Auto-generated method stub
    SQLiteDatabase db = dbHelper.getWritableDatabase();
    db.execSQL("insert into biodata(no, nama, tgl, jk, alamat) values('" +
        text1.getText().toString() + "','" +
        text2.getText().toString() + "','" +
        text3.getText().toString() + "','" +
        text4.getText().toString() + "','" +
        text5.getText().toString() + "')");
    Toast.makeText(getApplicationContext(), text: "Berhasil", Toast.LENGTH_LONG).show();
    MainActivity.ma.RefreshList();
    finish();
});

ton2.setOnClickListener(new View.OnClickListener() {

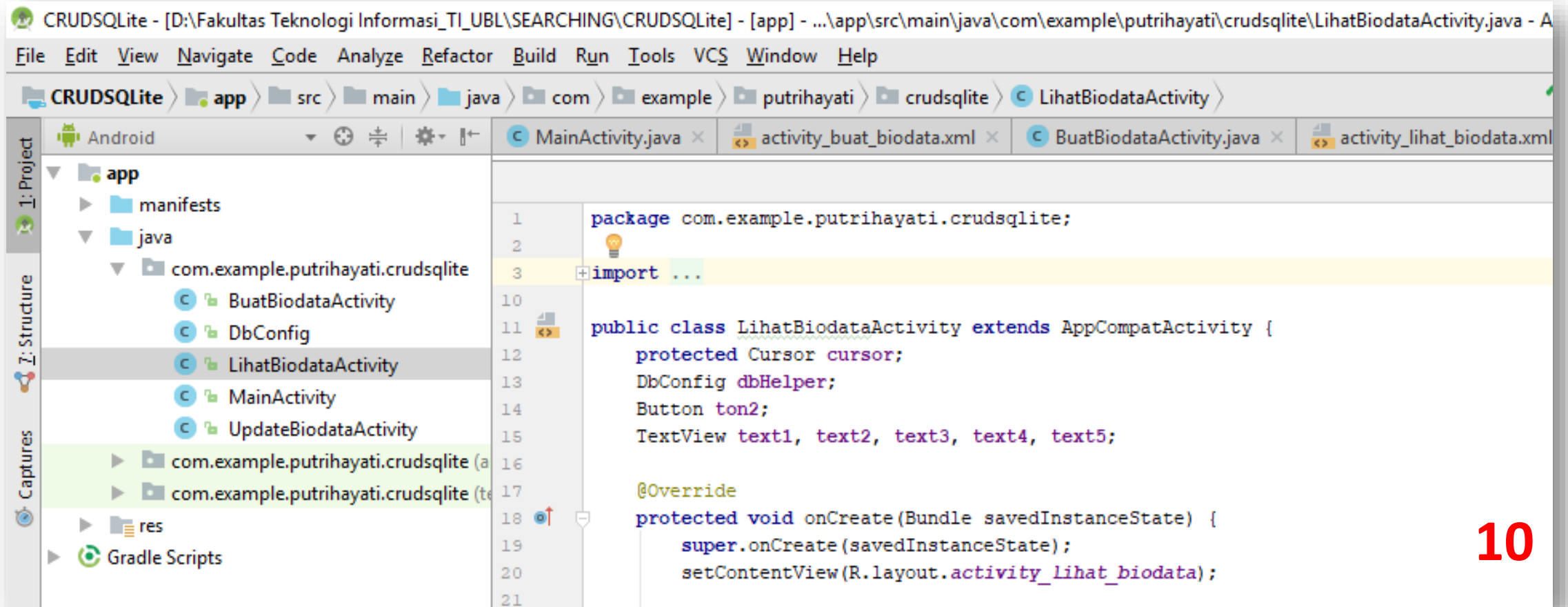
    @Override
    public void onClick(View arg0) {
        // TODO Auto-generated method stub
        finish();
    }

});
}
```



- LihatBiodataActivity - Ketik source code seperti pada gambar dibawah ini :

## 9.1 Praktikum



CRUDSQLite - [D:\Fakultas Teknologi Informasi\_TI\_UBL\SEARCHING\CRUDSQLite] - [app] - ...\app\src\main\java\com\example\putrihayati\crudsqlite\LihatBiodataActivity.java - A

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

CRUDSQLite > app > src > main > java > com > example > putrihayati > crudsqlite > LihatBiodataActivity

Android

1: Project

- app
  - manifests
  - java
    - com.example.putrihayati.crudsqlite
      - BuatBiodataActivity
      - DbConfig
      - LihatBiodataActivity
      - MainActivity
      - UpdateBiodataActivity
    - com.example.putrihayati.crudsqlite (a)
    - com.example.putrihayati.crudsqlite (te)
    - res
    - Gradle Scripts

2: Structure

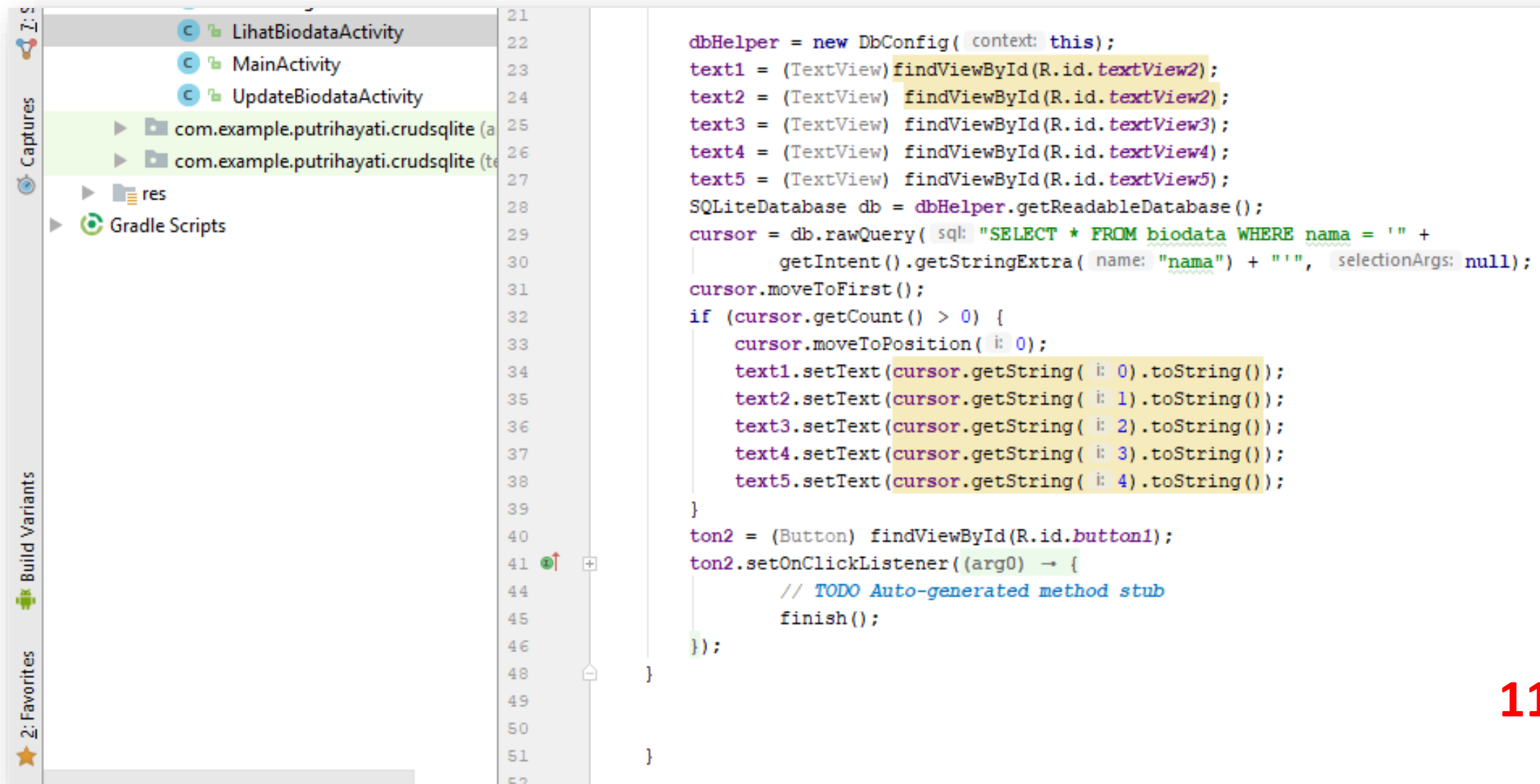
3: Captures

```
1 package com.example.putrihayati.crudsqlite;
2
3 import ...
10
11 public class LihatBiodataActivity extends AppCompatActivity {
12     protected Cursor cursor;
13     DbConfig dbHelper;
14     Button ton2;
15     TextView text1, text2, text3, text4, text5;
16
17     @Override
18     protected void onCreate(Bundle savedInstanceState) {
19         super.onCreate(savedInstanceState);
20         setContentView(R.layout.activity_lihat_biodata);
21     }
22 }
```

10

- LihatBiodataActivity - Ketik source code seperti pada gambar dibawah ini :

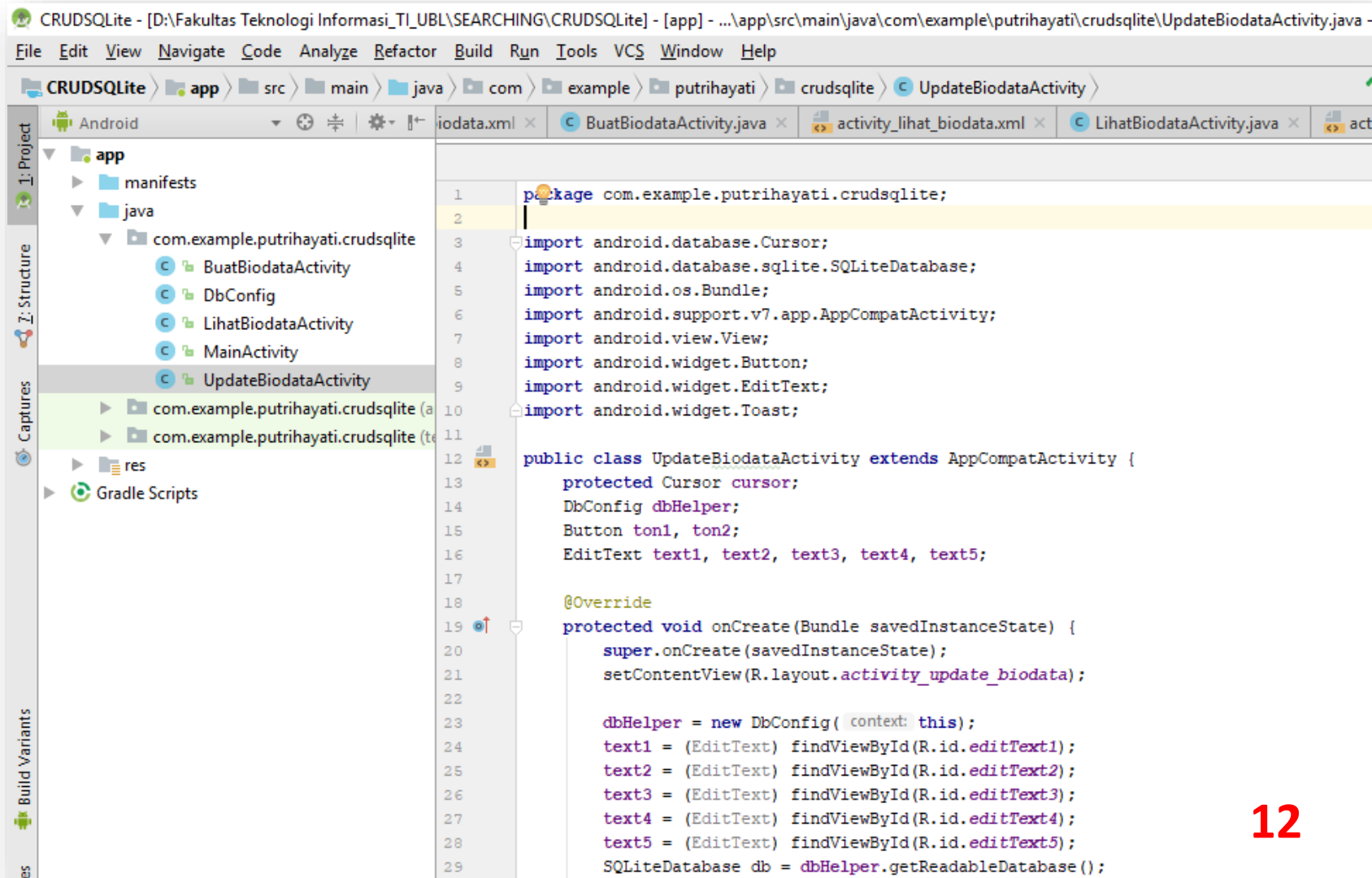
## 9.1 Praktikum



```
21
22 dbHelper = new DbConfig( context: this);
23 text1 = (TextView) findViewById(R.id.textView2);
24 text2 = (TextView) findViewById(R.id.textView2);
25 text3 = (TextView) findViewById(R.id.textView3);
26 text4 = (TextView) findViewById(R.id.textView4);
27 text5 = (TextView) findViewById(R.id.textView5);
28 SQLiteDatabase db = dbHelper.getReadableDatabase();
29 cursor = db.rawQuery( sql: "SELECT * FROM biodata WHERE nama = '" +
30 |         getIntent().getStringExtra( name: "nama") + "'", selectionArgs: null);
31 cursor.moveToFirst();
32 if (cursor.getCount() > 0) {
33     cursor.moveToPosition( i: 0);
34     text1.setText(cursor.getString( i: 0).toString());
35     text2.setText(cursor.getString( i: 1).toString());
36     text3.setText(cursor.getString( i: 2).toString());
37     text4.setText(cursor.getString( i: 3).toString());
38     text5.setText(cursor.getString( i: 4).toString());
39 }
40 ton2 = (Button) findViewById(R.id.button1);
41 ton2.setOnClickListener((arg0) -> {
44     // TODO Auto-generated method stub
45     finish();
46 });
48 }
49
50
51 }
52
```

- UpdateBiodataActivity - Ketik source code seperti pada gambar dibawah ini :

## 9.1 Praktikum

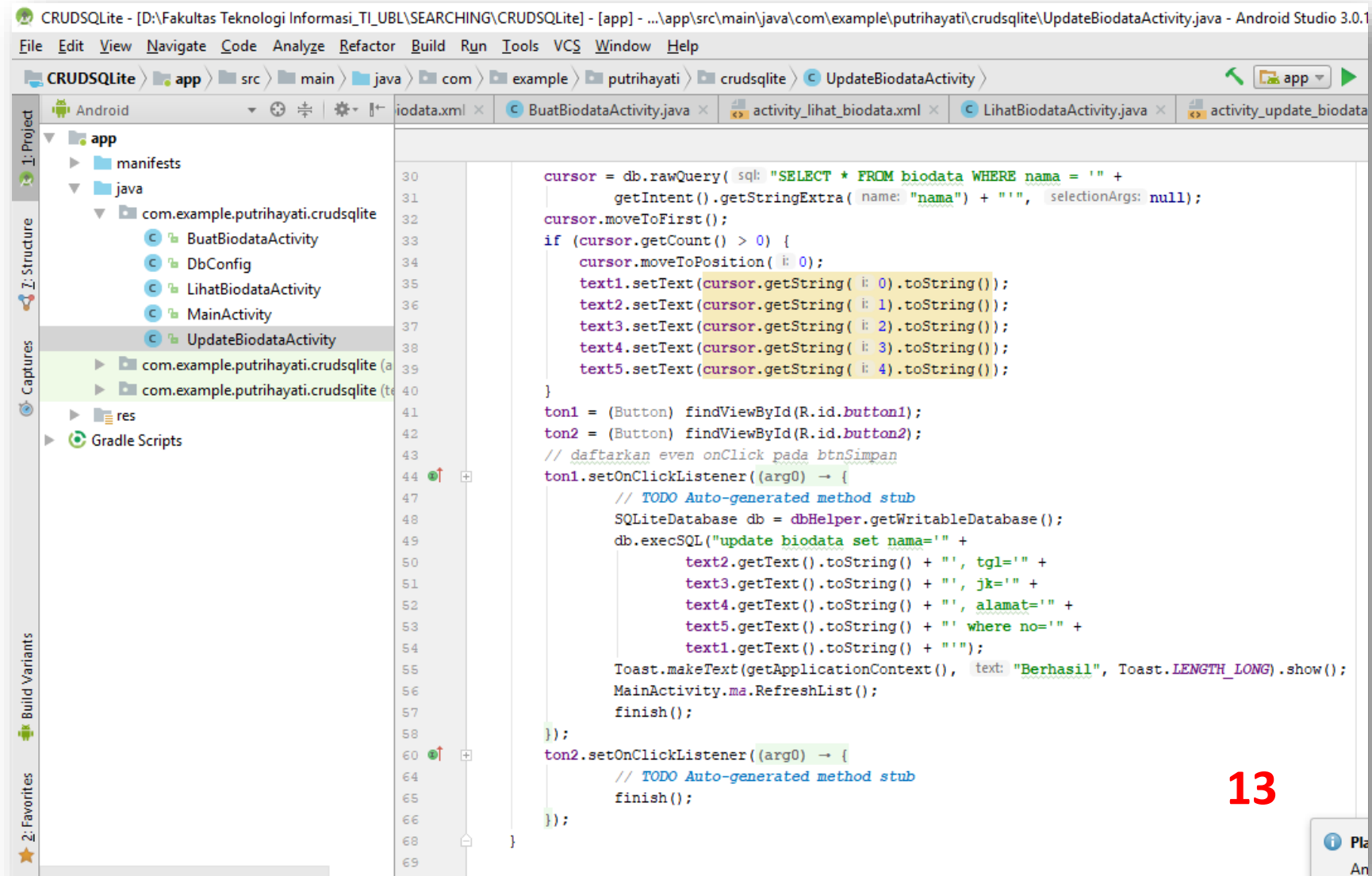


```
1 package com.example.putrihayati.crudsqlite;
2
3 import android.database.Cursor;
4 import android.database.sqlite.SQLiteDatabase;
5 import android.os.Bundle;
6 import android.support.v7.app.AppCompatActivity;
7 import android.view.View;
8 import android.widget.Button;
9 import android.widget.EditText;
10 import android.widget.Toast;
11
12 public class UpdateBiodataActivity extends AppCompatActivity {
13     protected Cursor cursor;
14     DbConfig dbHelper;
15     Button ton1, ton2;
16     EditText text1, text2, text3, text4, text5;
17
18     @Override
19     protected void onCreate(Bundle savedInstanceState) {
20         super.onCreate(savedInstanceState);
21         setContentView(R.layout.activity_update_biodata);
22
23         dbHelper = new DbConfig(context, this);
24         text1 = (EditText) findViewById(R.id.editText1);
25         text2 = (EditText) findViewById(R.id.editText2);
26         text3 = (EditText) findViewById(R.id.editText3);
27         text4 = (EditText) findViewById(R.id.editText4);
28         text5 = (EditText) findViewById(R.id.editText5);
29         SQLiteDatabase db = dbHelper.getReadableDatabase();
```

12

- UpdateBiodataActivity - Ketik source code seperti pada gambar dibawah ini :

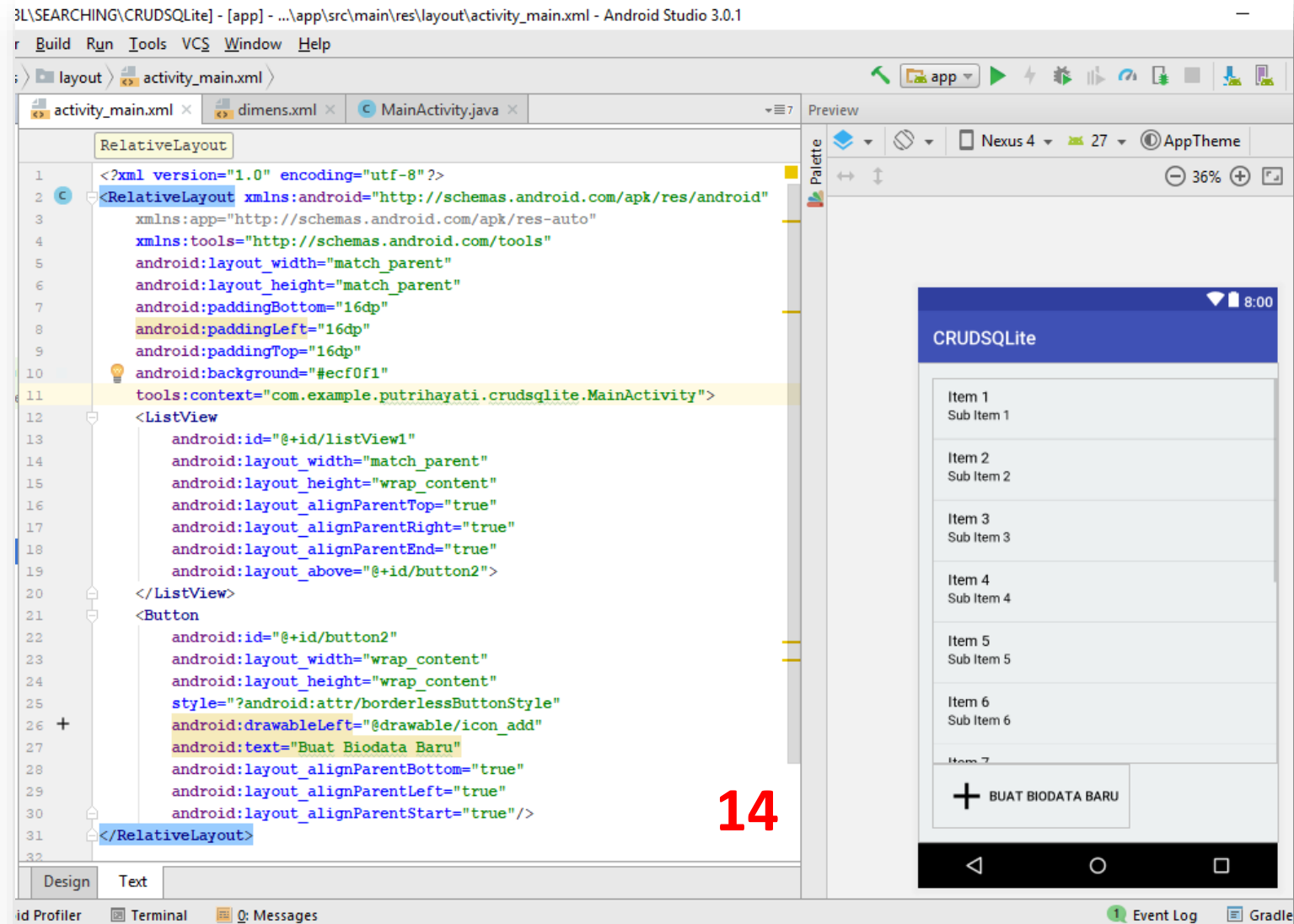
## 9.1 Praktikum

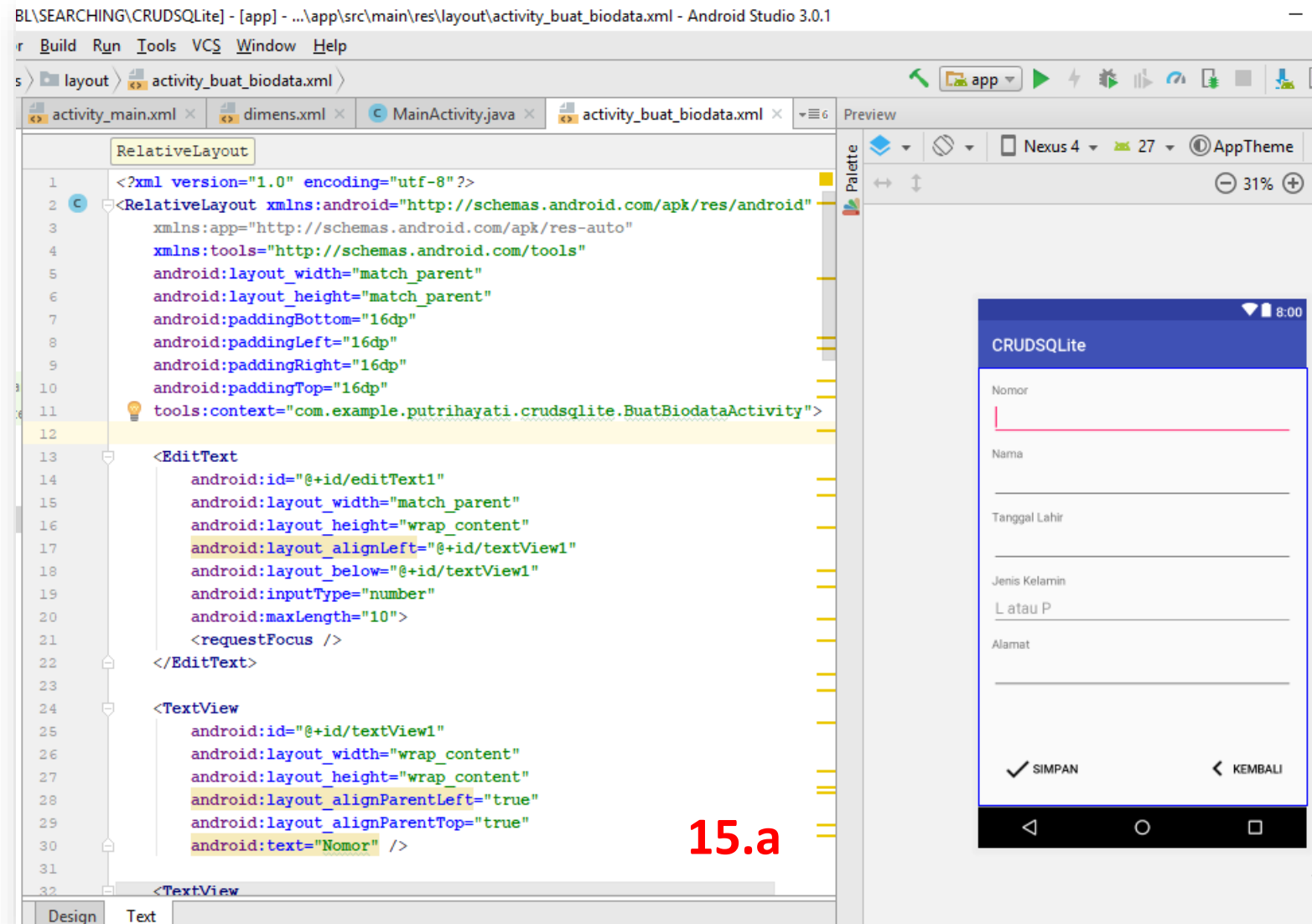


```
CRUDSQLite - [D:\Fakultas Teknologi Informasi_TI_UBL\SEARCHING\CRUDSQLite] - [app] - ...app\src\main\java\com\example\putrihayati\crudsqlite\UpdateBiodataActivity.java - Android Studio 3.0.1
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
CRUDSQLite > app > src > main > java > com > example > putrihayati > crudsqlite > UpdateBiodataActivity
Android
1: Project
  app
    manifests
    java
      com.example.putrihayati.crudsqlite
        BuatBiodataActivity
        DbConfig
        LihatBiodataActivity
        MainActivity
        UpdateBiodataActivity
      com.example.putrihayati.crudsqlite (a
      com.example.putrihayati.crudsqlite (t
    res
    Gradle Scripts
Captures
Build Variants
2: Favorites
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69
cursor = db.rawQuery( sql: "SELECT * FROM biodata WHERE nama = ' +
    getIntent().getStringExtra( name: "nama" ) + "'", selectionArgs: null);
cursor.moveToFirst();
if (cursor.getCount() > 0) {
    cursor.moveToPosition( i: 0);
    text1.setText(cursor.getString( i: 0).toString());
    text2.setText(cursor.getString( i: 1).toString());
    text3.setText(cursor.getString( i: 2).toString());
    text4.setText(cursor.getString( i: 3).toString());
    text5.setText(cursor.getString( i: 4).toString());
}
ton1 = (Button) findViewById(R.id.button1);
ton2 = (Button) findViewById(R.id.button2);
// daftarkan even onClick pada btnSimpan
ton1.setOnClickListener((arg0) -> {
    // TODO Auto-generated method stub
    SQLiteDatabase db = dbHelper.getWritableDatabase();
    db.execSQL("update biodata set nama=' +
        text2.getText().toString() + "', tgl=' +
        text3.getText().toString() + "', jk=' +
        text4.getText().toString() + "', alamat=' +
        text5.getText().toString() + "' where no=' +
        text1.getText().toString() + '");
    Toast.makeText(getApplicationContext(), text: "Berhasil", Toast.LENGTH_LONG).show();
    MainActivity.ma.RefreshList();
    finish();
});
ton2.setOnClickListener((arg0) -> {
    // TODO Auto-generated method stub
    finish();
});
}
```

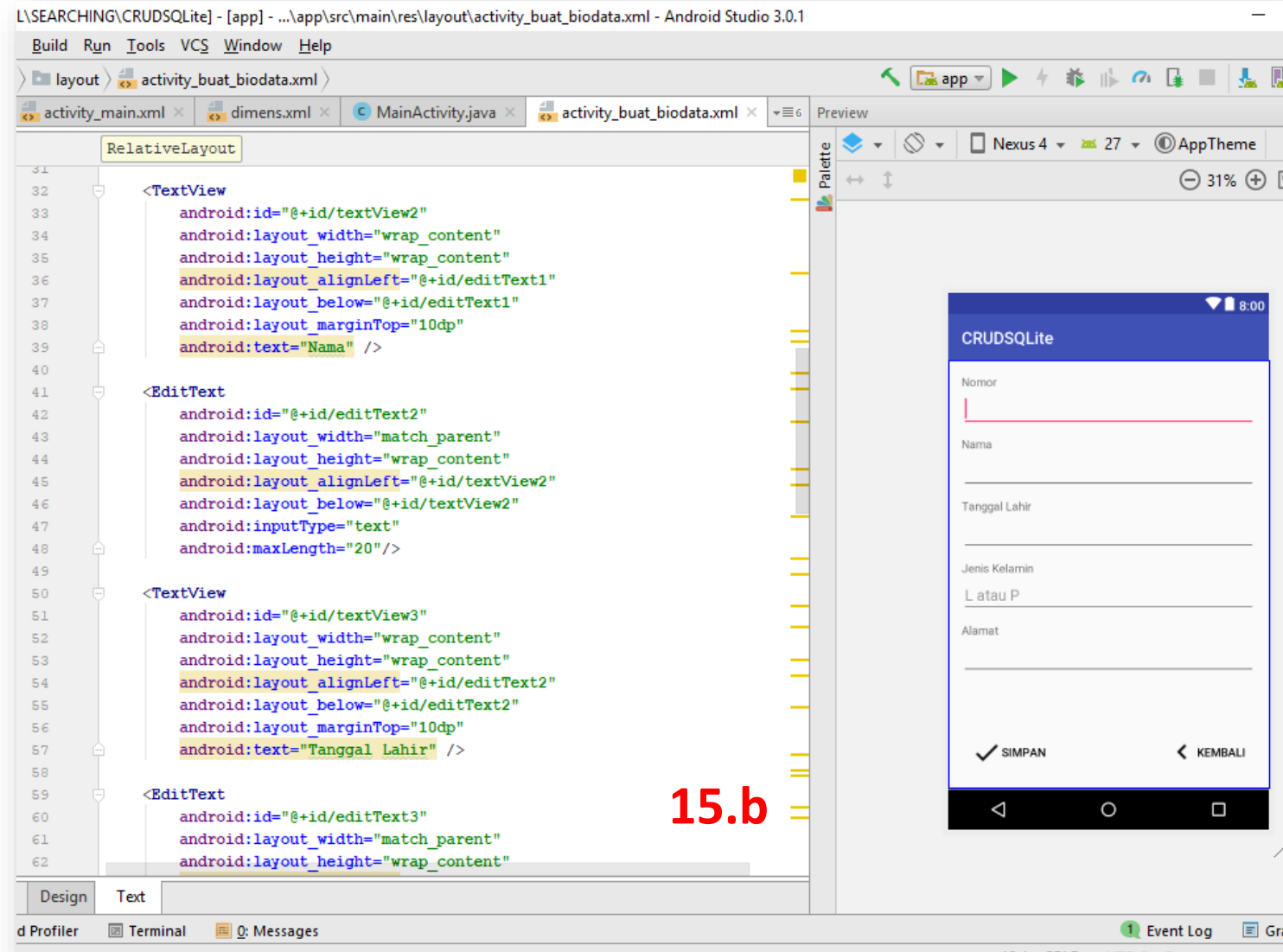
Click - Activity\_main.xml dan ketik source code seperti gambar dibawah ini

## 9.1 Praktikum





15.a

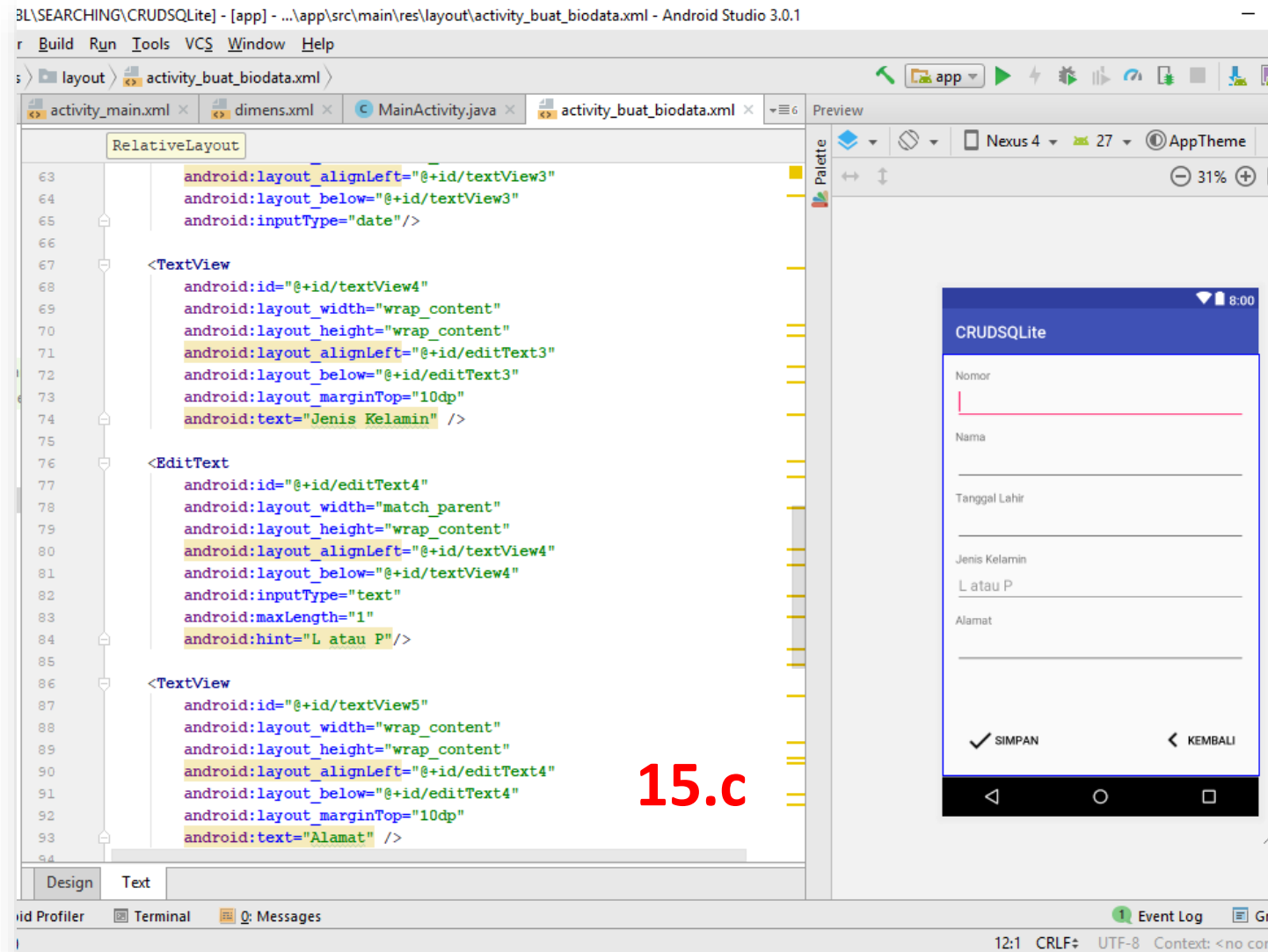


## 15.b

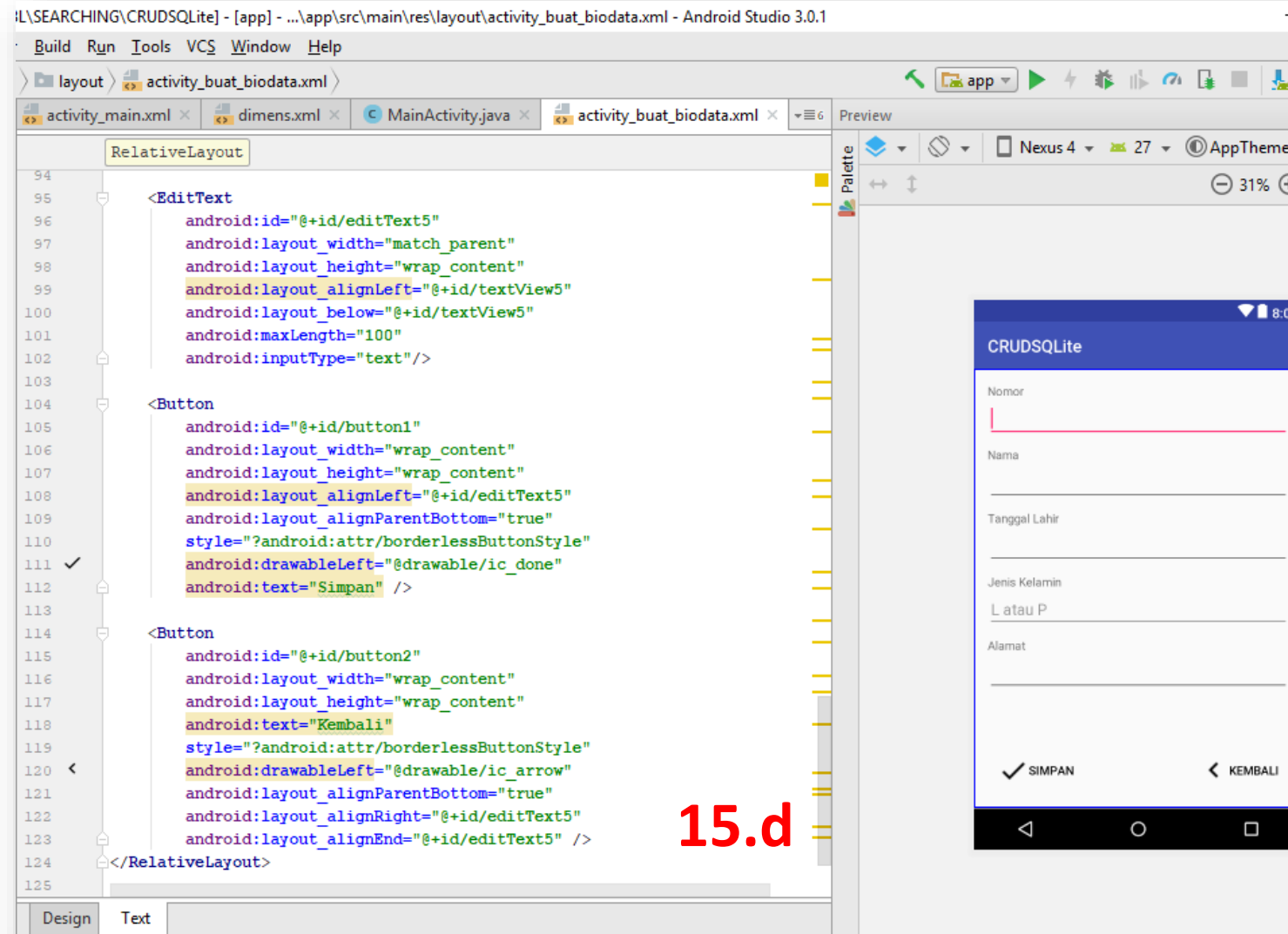


Activity\_buat\_biodata.xml dan ketik source code seperti gambar dibawah ini

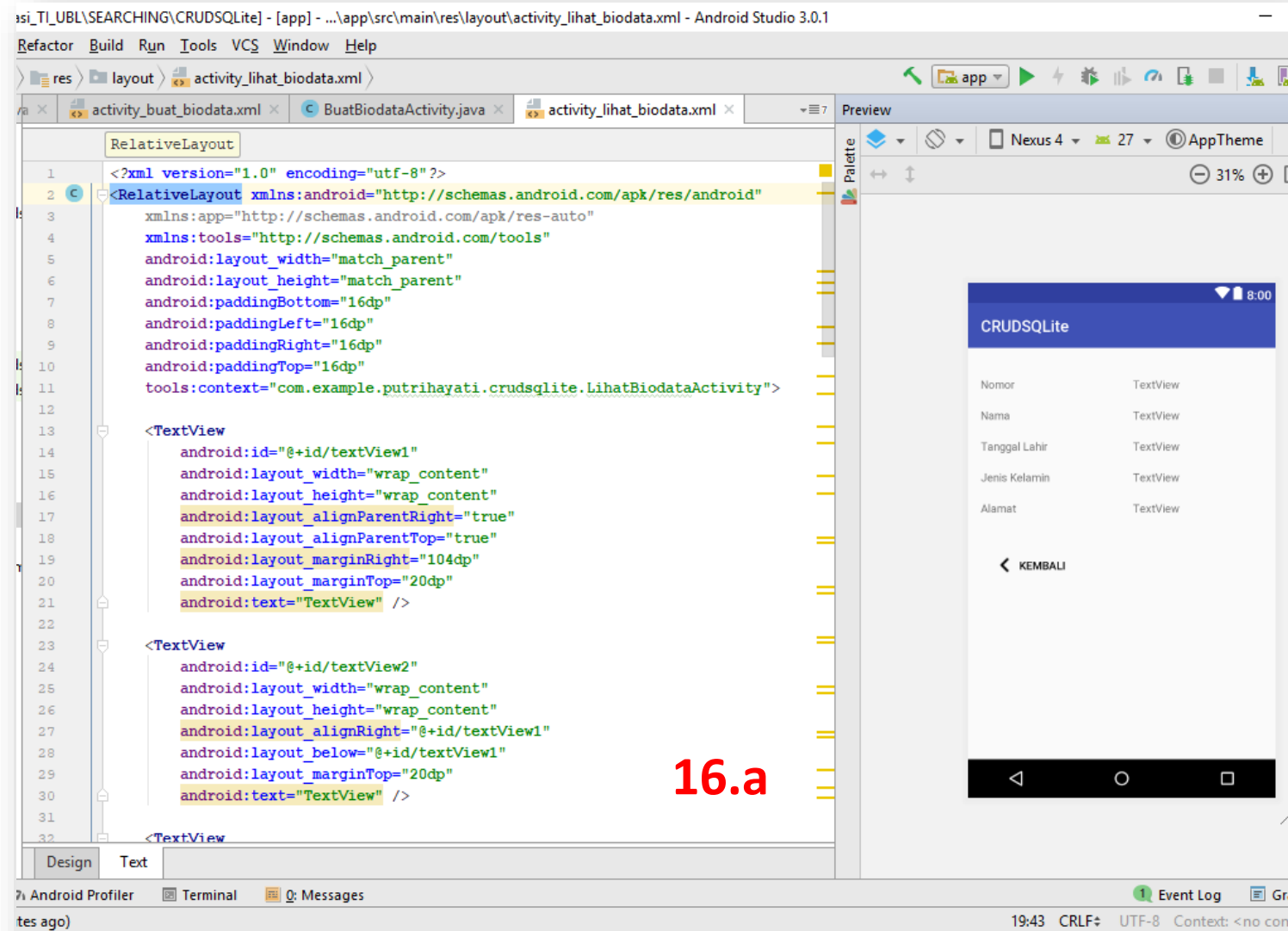
## 9.1 Praktikum

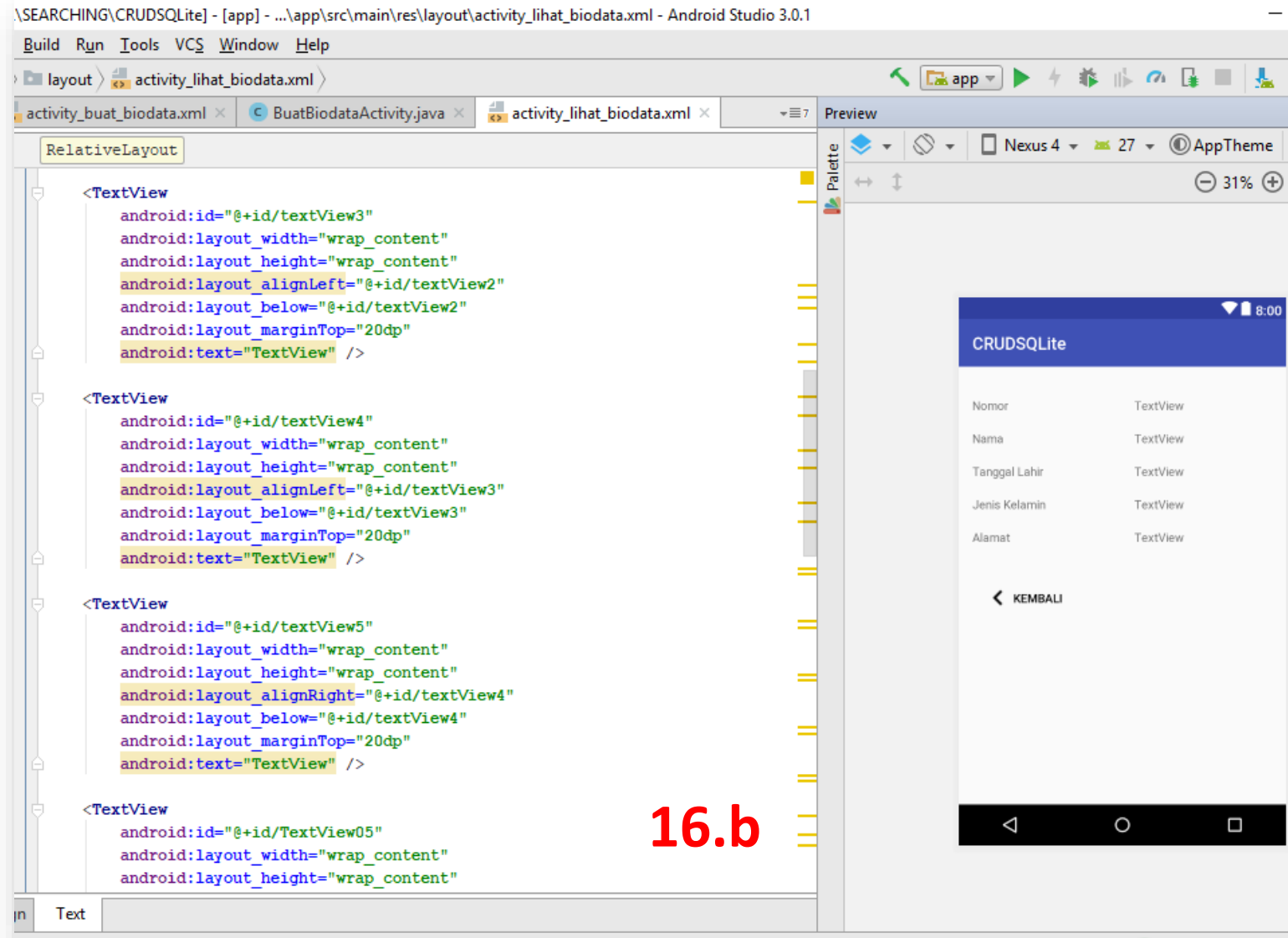




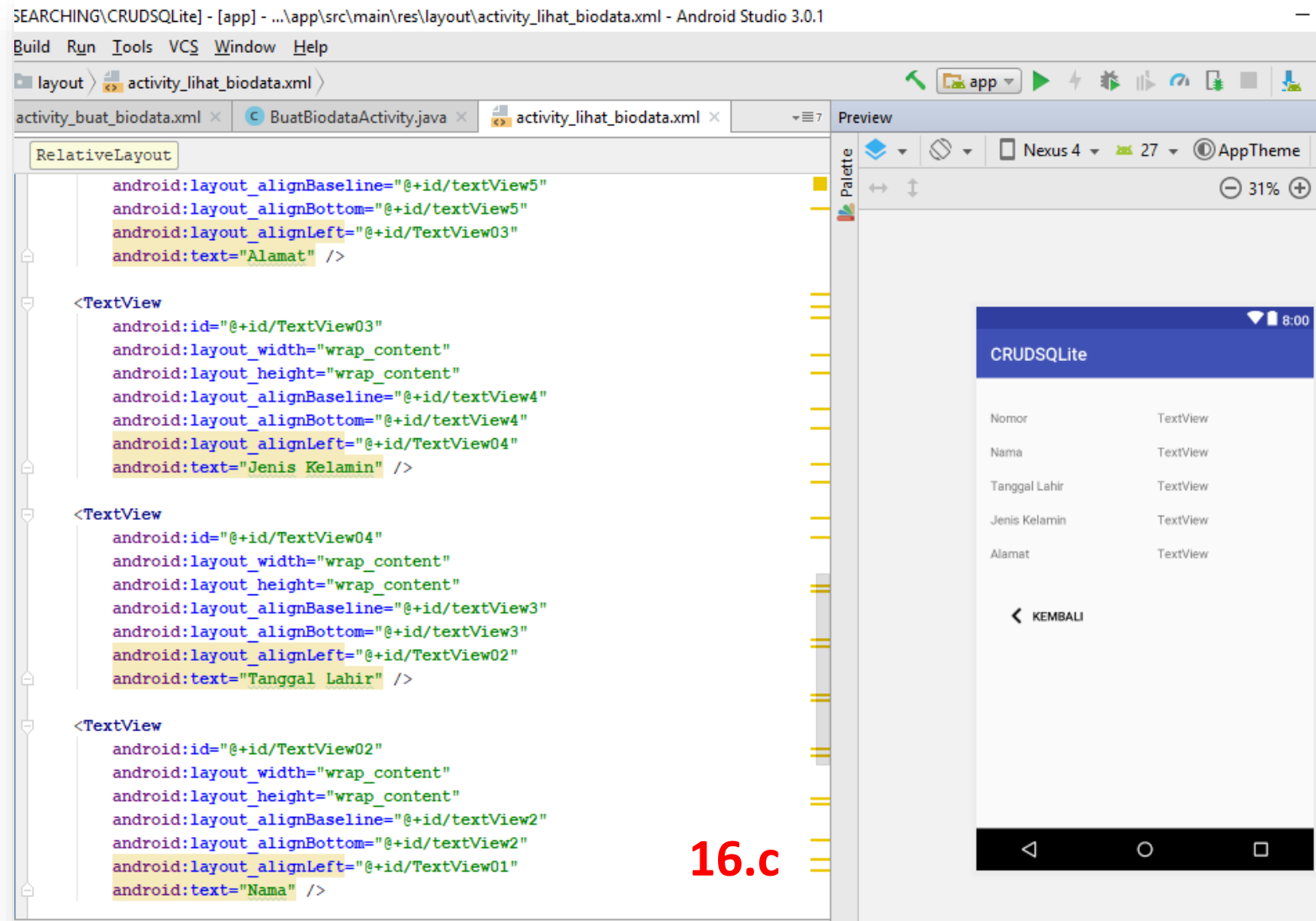


15.d



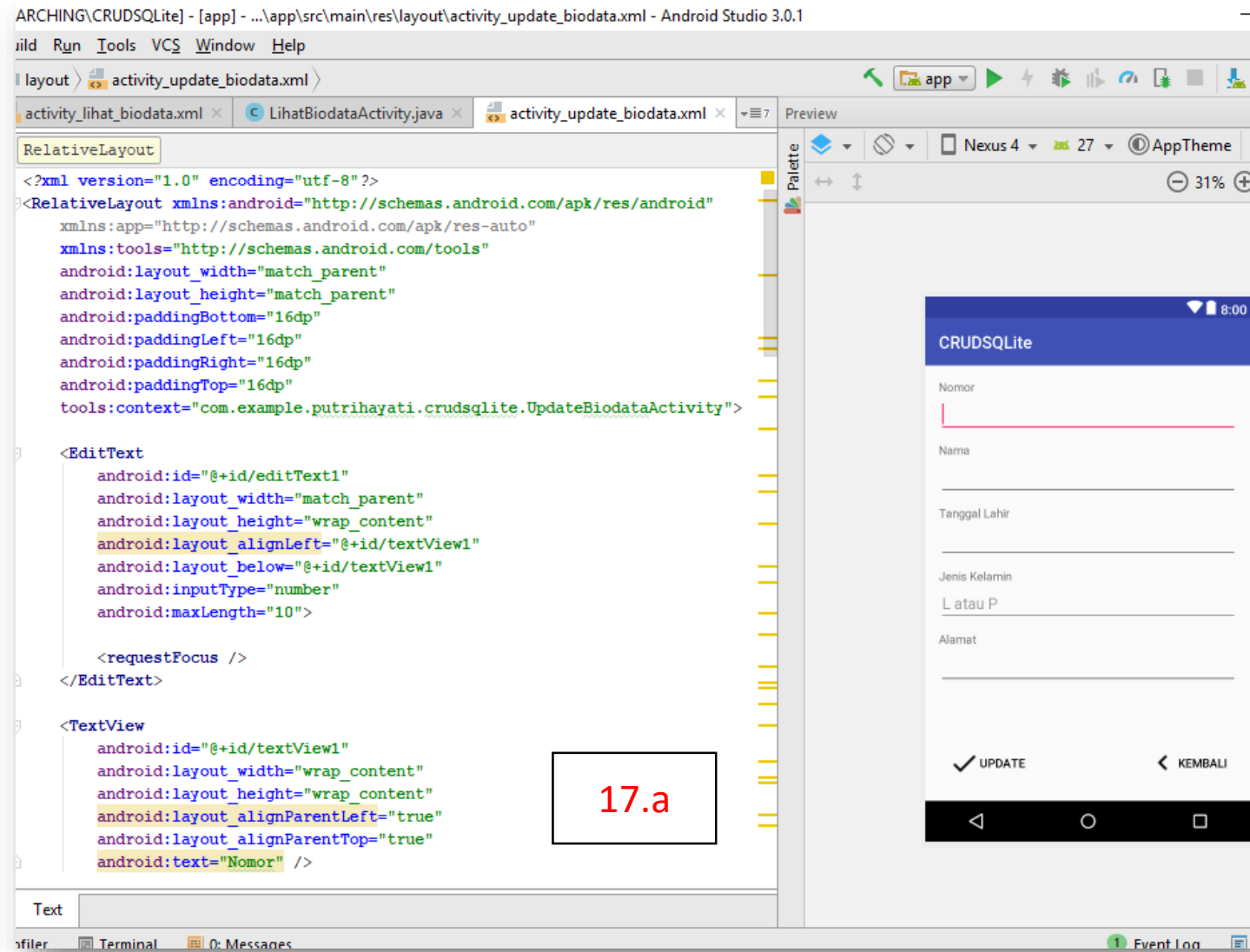


16.b



16.c





```
<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:text="Nama" />
```

```
<EditText
    android:id="@+id/editText2"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_alignLeft="@+id/textView2"
    android:layout_below="@+id/textView2"
    android:inputType="text"
    android:maxLength="20"/>
```

```
<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:text="Tanggal Lahir" />
```

```
<EditText
    android:id="@+id/editText3"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
```

17.b

CRUDSQLite

Nomor

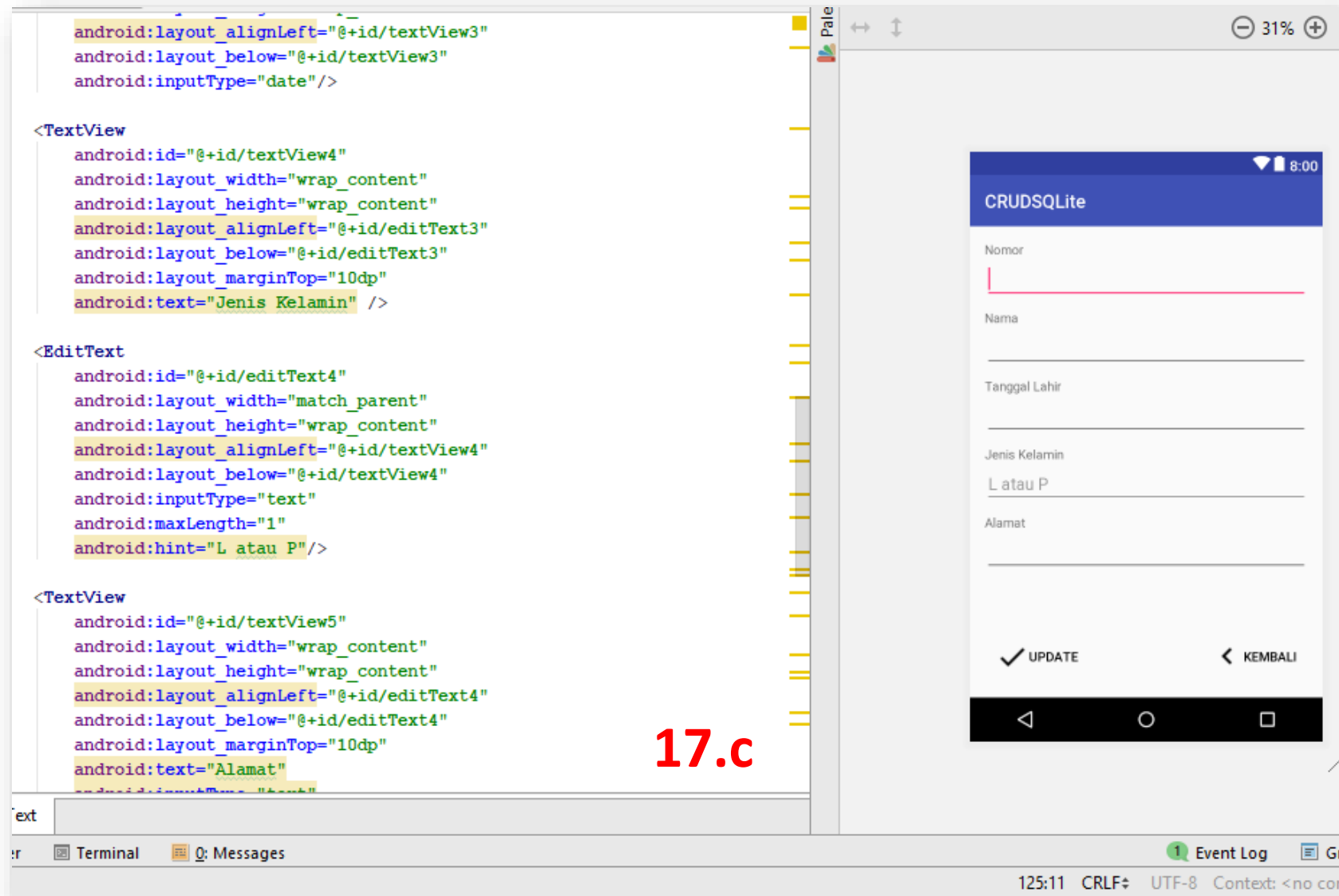
Nama

Tanggal Lahir

Jenis Kelamin  
L atau P

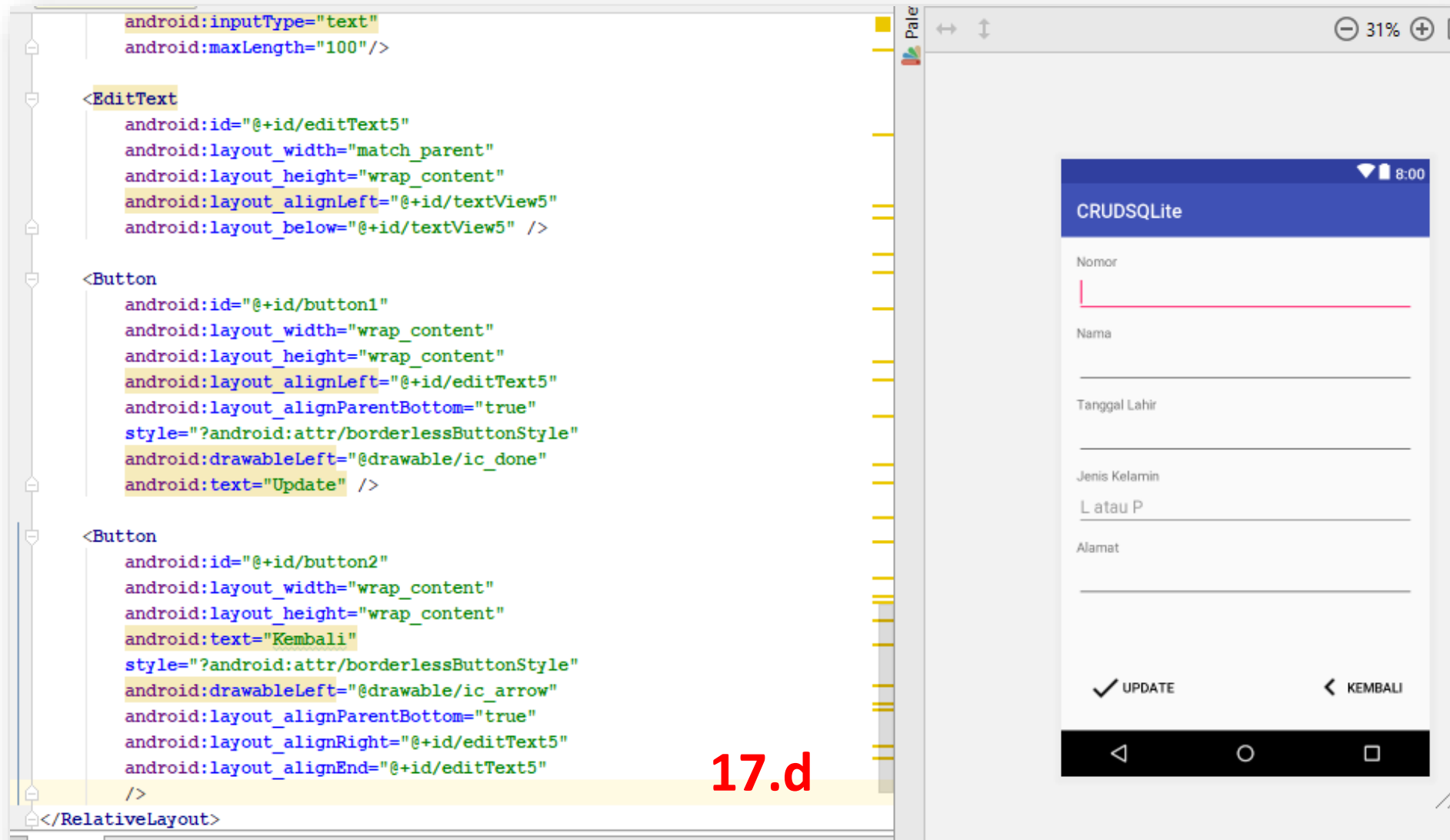
Alamat

✓ UPDATE      < KEMBALI

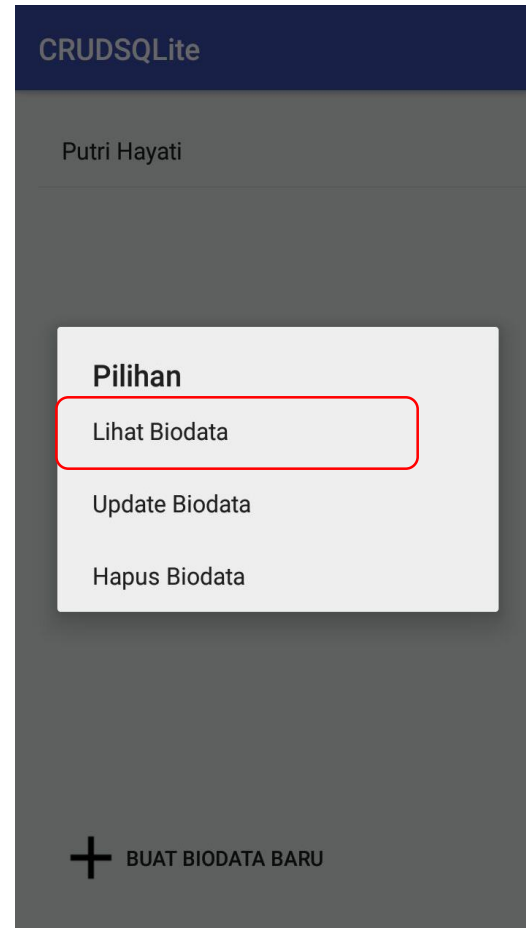
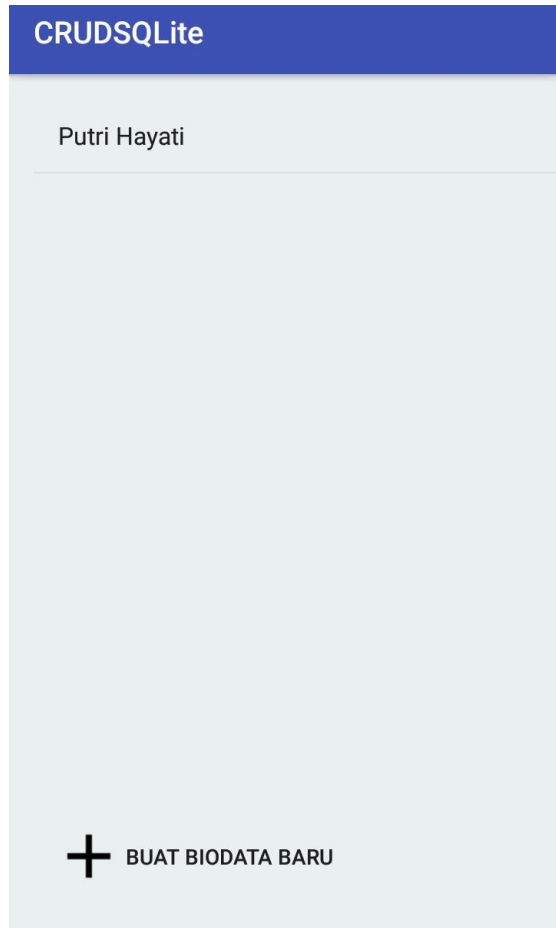


17.c





### RUN APLIKASI :



## RUN APLIKASI :

CRUDSQLite

Putri Hayati

Pilihan

Lihat Biodata

Update Biodata

Hapus Biodata

+

 BUAT BIODATA BARU

CRUDSQLite

Nomor  
1

Nama  
Putri HayatiMKom

Tanggal Lahir  
19910802

Jenis Kelamin  
P

Alamat  
Slipi

✓ SIMPAN

< KEMBALI

CRUDSQLite

Nomor  
TextView

Nama  
Putri HayatiMKom

Tanggal Lahir  
19910802

Jenis Kelamin  
P

Alamat  
Slipi

< KEMBALI

## RUN APLIKASI :

**CRUDSQLite**

Nomor	TextView
Nama	Putri HayatiMKom
Tanggal Lahir	19910802
Jenis Kelamin	P
Alamat	Slipi

**< KEMBALI**

**CRUDSQLite**

Putri HayatiMKom

**+ BUAT BIODATA BARU**

**CRUDSQLite**

Nomor	2
Nama	Budi
Tanggal Lahir	19960308
Jenis Kelamin	L
Alamat	Tangerang

**✓ SIMPAN** **< KEMBALI**

## RUN APLIKASI :

CRUDSQLite

Putri HayatiMKom

Budi

+ BUAT BIODATA BARU

CRUDSQLite

Putri Hayati

**Pilihan**

Lihat Biodata

Update Biodata

Hapus Biodata

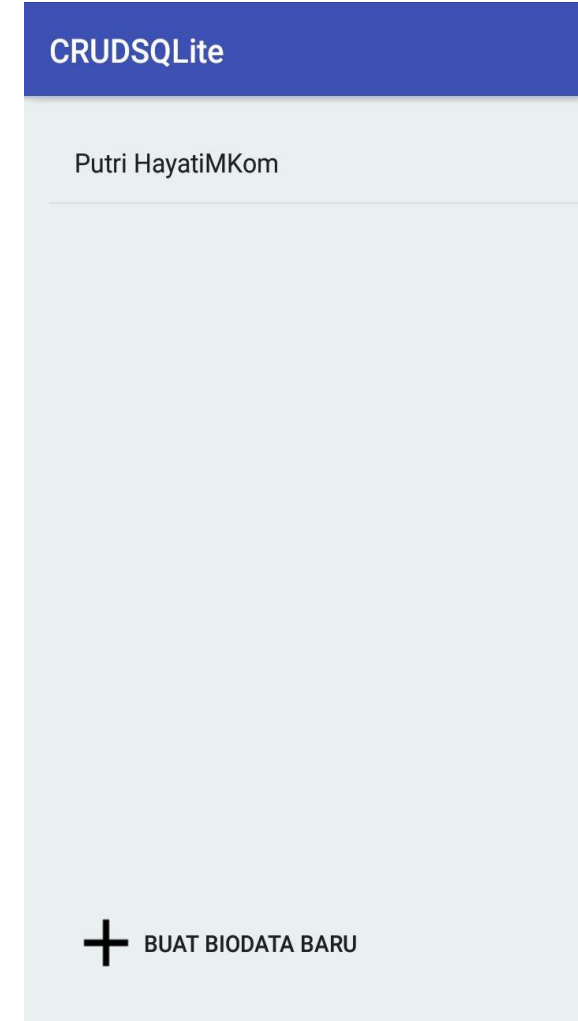
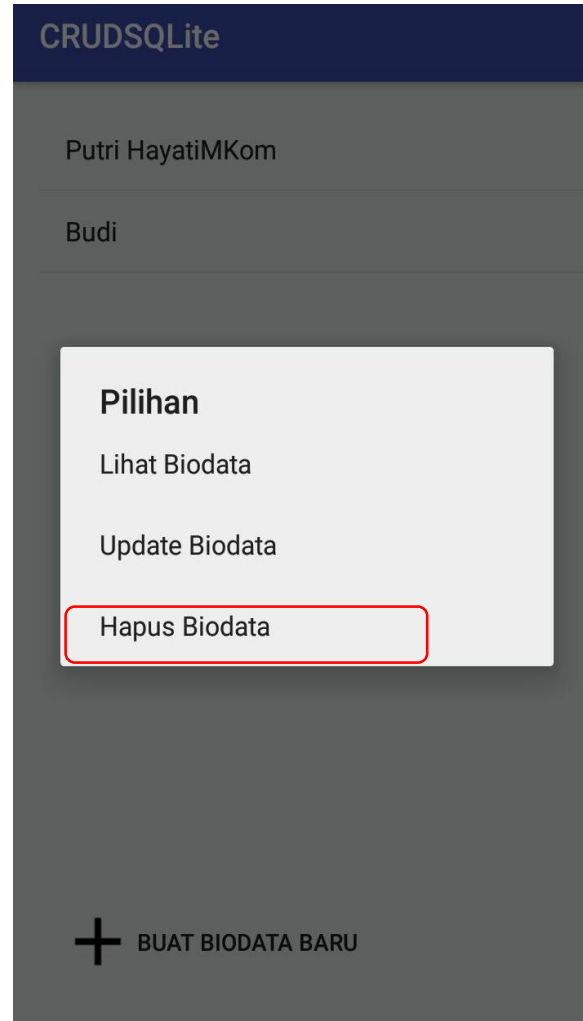
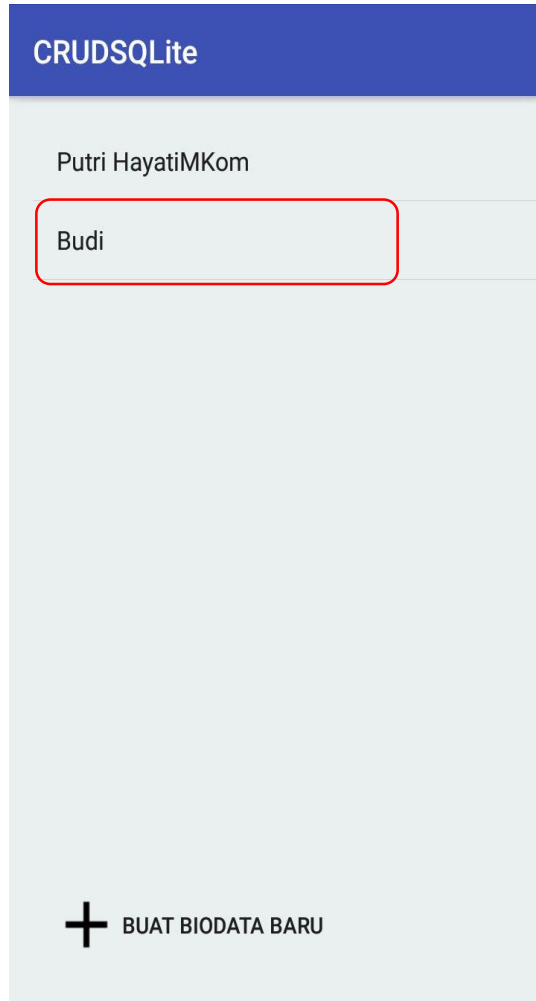
+ BUAT BIODATA BARU

CRUDSQLite

Nomor	TextView
Nama	Budi
Tanggal Lahir	19960308
Jenis Kelamin	L
Alamat	Tangerang

< KEMBALI

### RUN APLIKASI :



Any Question ?

