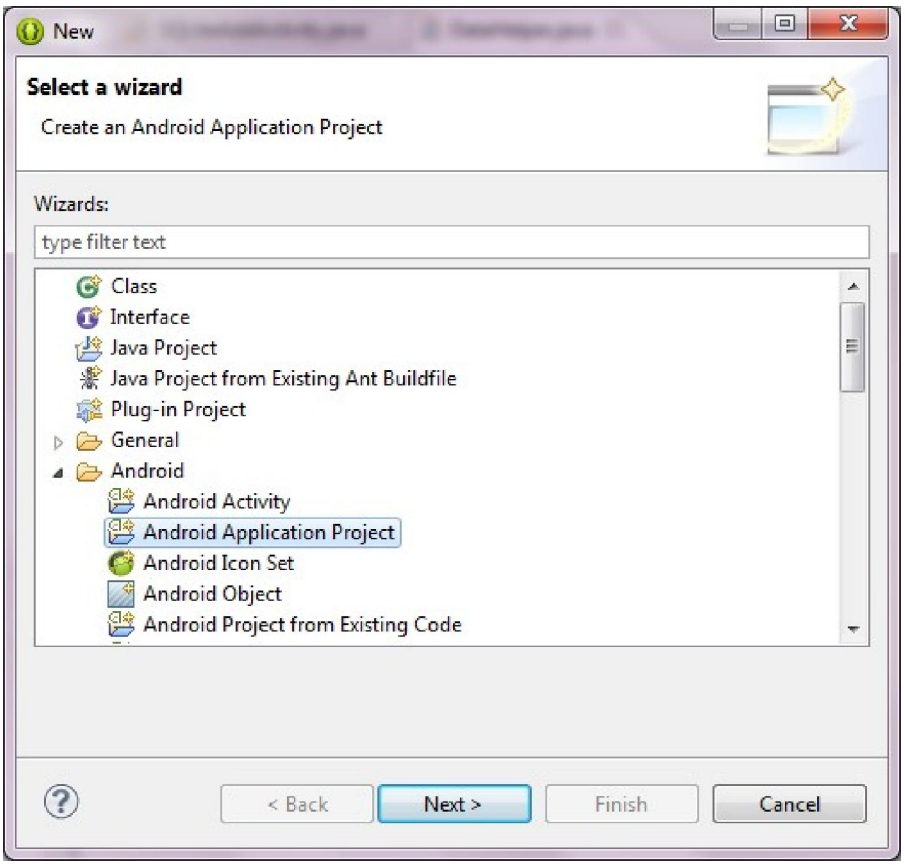
PERTEMUAN 14:

SQLITE

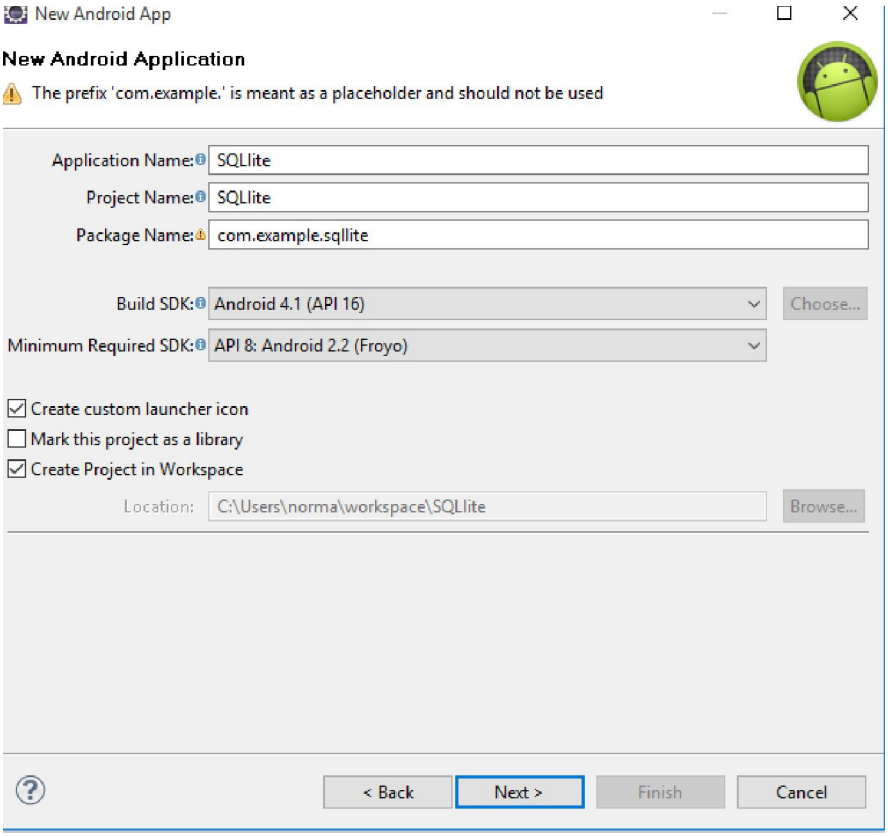
A. TUJUAN PEMBELAJARAN

Adapun tujuan pembelajaran yang akan dicapai sebagai berikut:

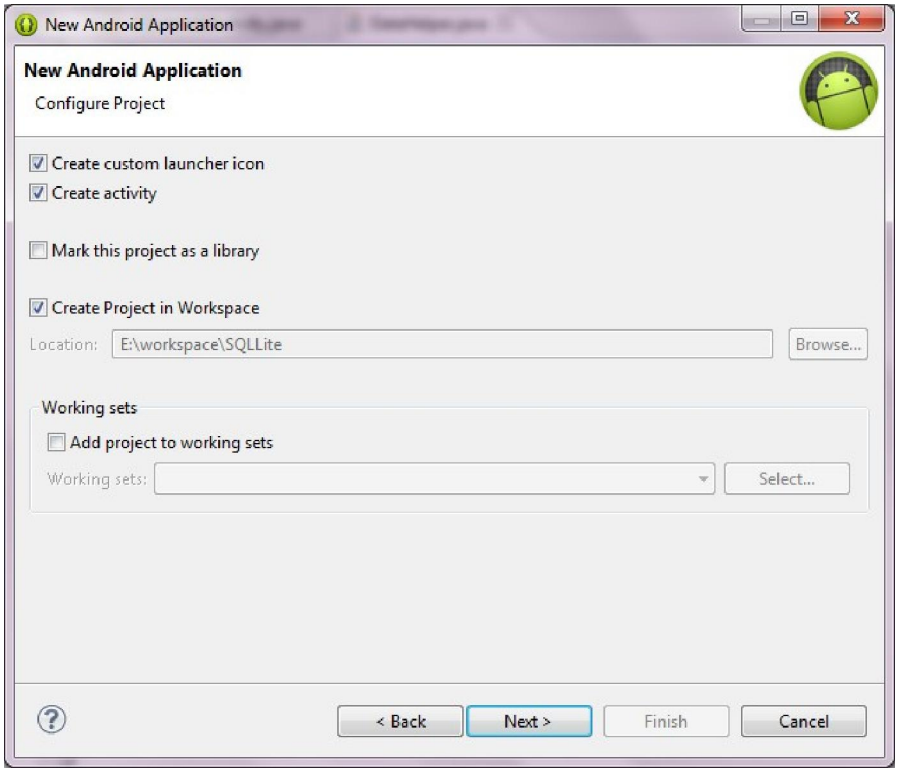
14. 1 Membuat Project SQL Lite



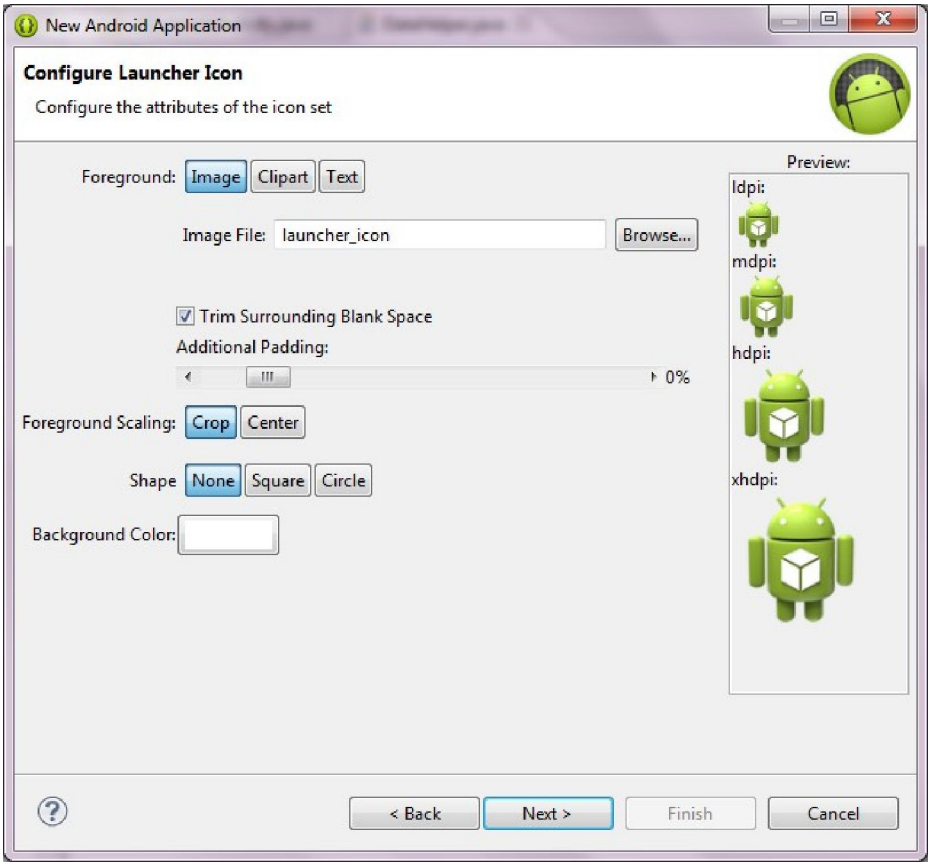
Gambar 14. 1



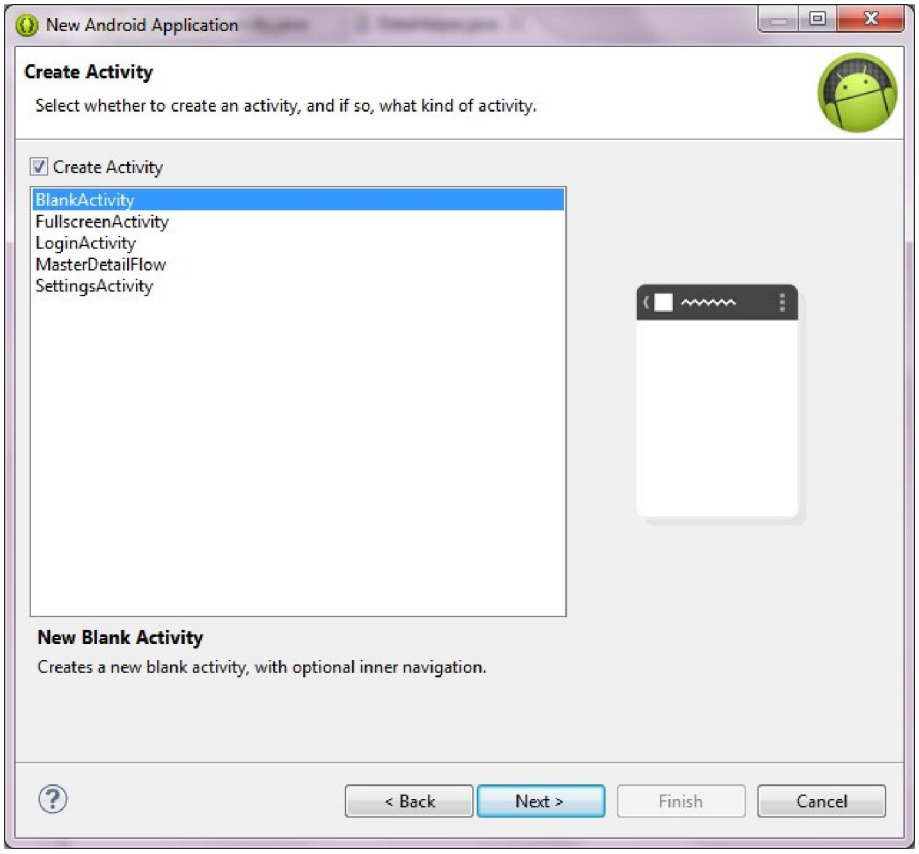
Gambar 14. 2



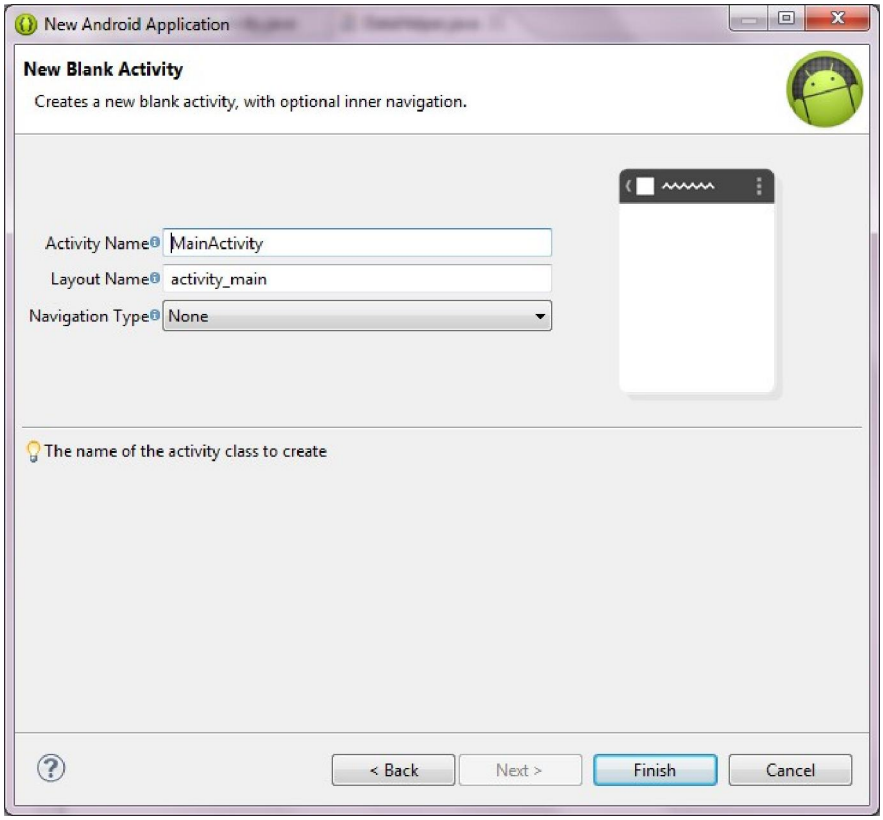
Gambar 14. 3


New Android Application
Configure Launcher Icon
Configure the attributes of the icon set
Foreground:
Image
Clipart
Text
Image File:
launcher_icon
Browse...
Trim Surrounding Blank Space
Additional Padding:
0%
Foreground Scaling:
Crop
Center
Shape
None
Square
Circle
Background Color:
Preview:
ldpi:
mdpi:
hdpi:
xhdpi:
< Back
Next >
Finish
Cancel

Gambar 14. 4

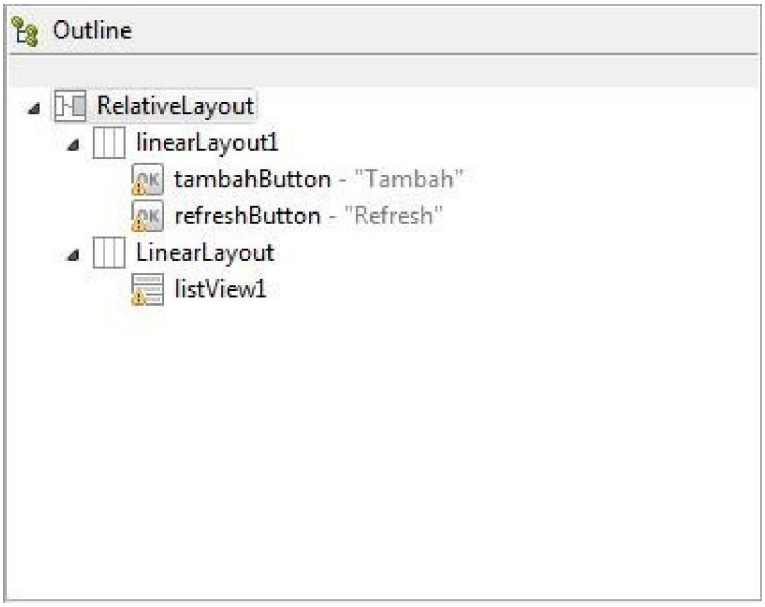

New Android Application
Create Activity
Select whether to create an activity, and if so, what kind of activity.
Create Activity
BlankActivity
FullscreenActivity
LoginActivity
MasterDetailFlow
SettingsActivity
New Blank Activity
Creates a new blank activity, with optional inner navigation.
< Back
Next >
Finish
Cancel

Gambar 14. 5



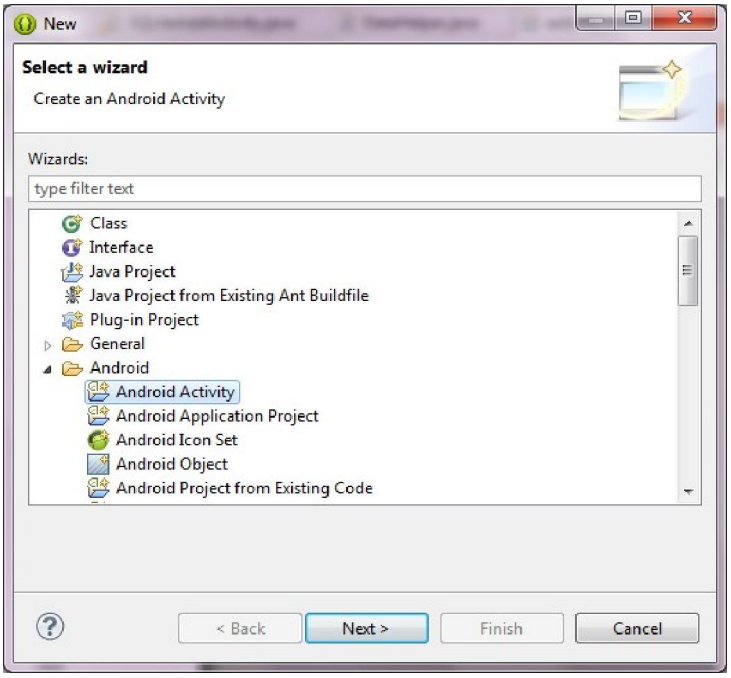
Gambar 14. 6

Gambar 14. 7

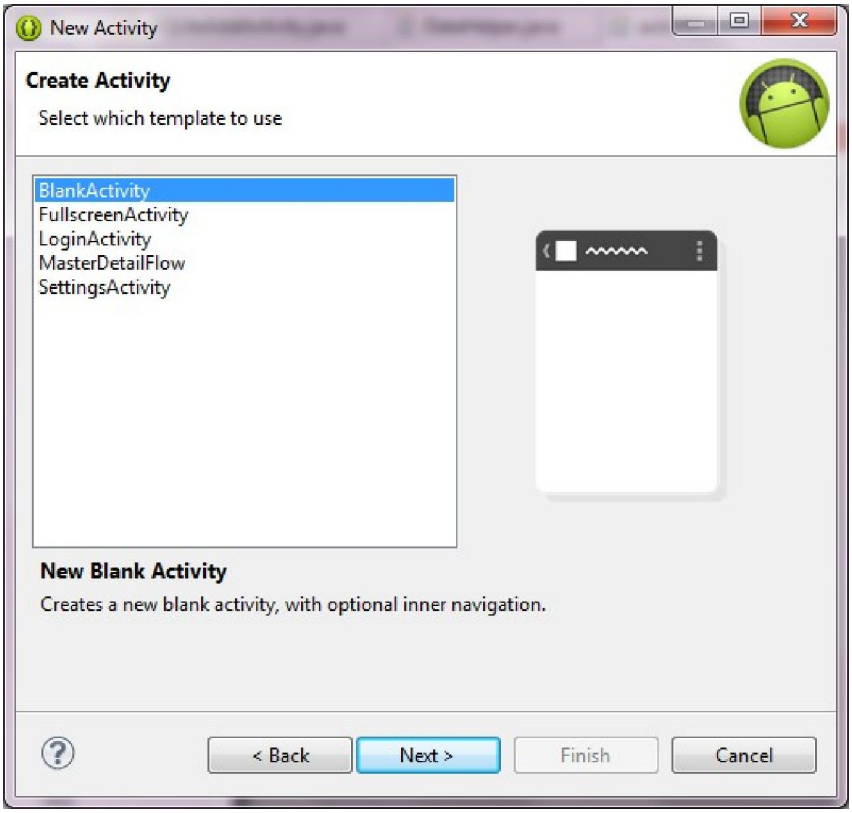


Gambar 14. 8

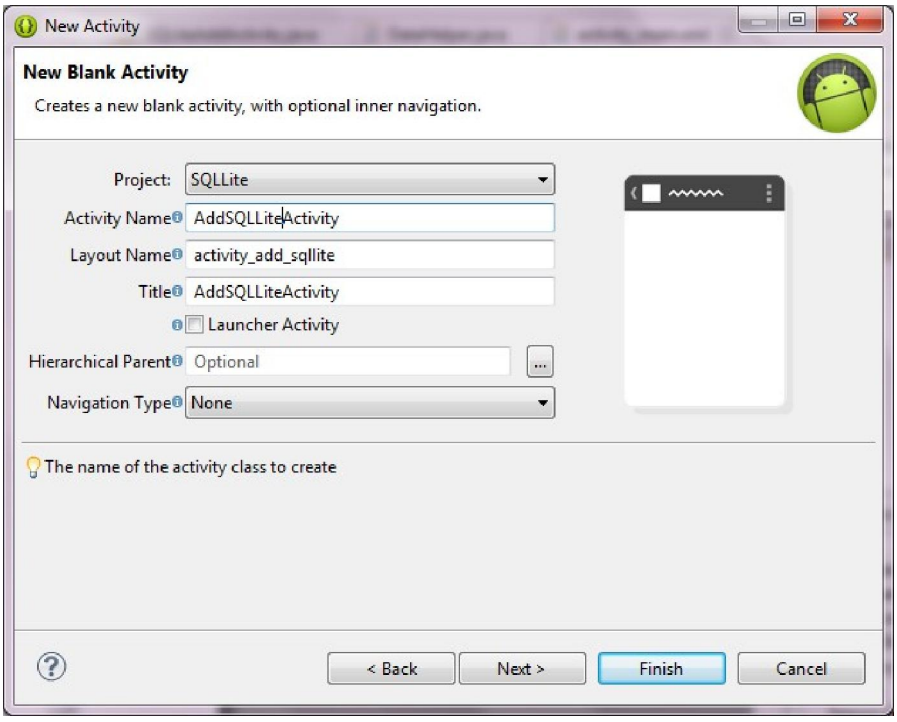
Pada nama project, klik kanan dan pilih New >> Other, kemudian pilih Android Activity seperti gambar 15.9 berikut ini:



Gambar 14. 9



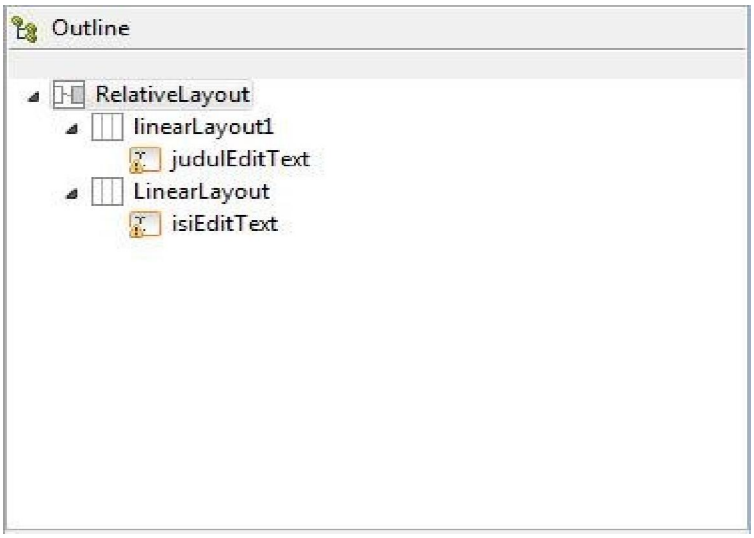
Gambar 14. 10



Gambar 14. 11

Klik tombol Finish.

Gambar 14. 12



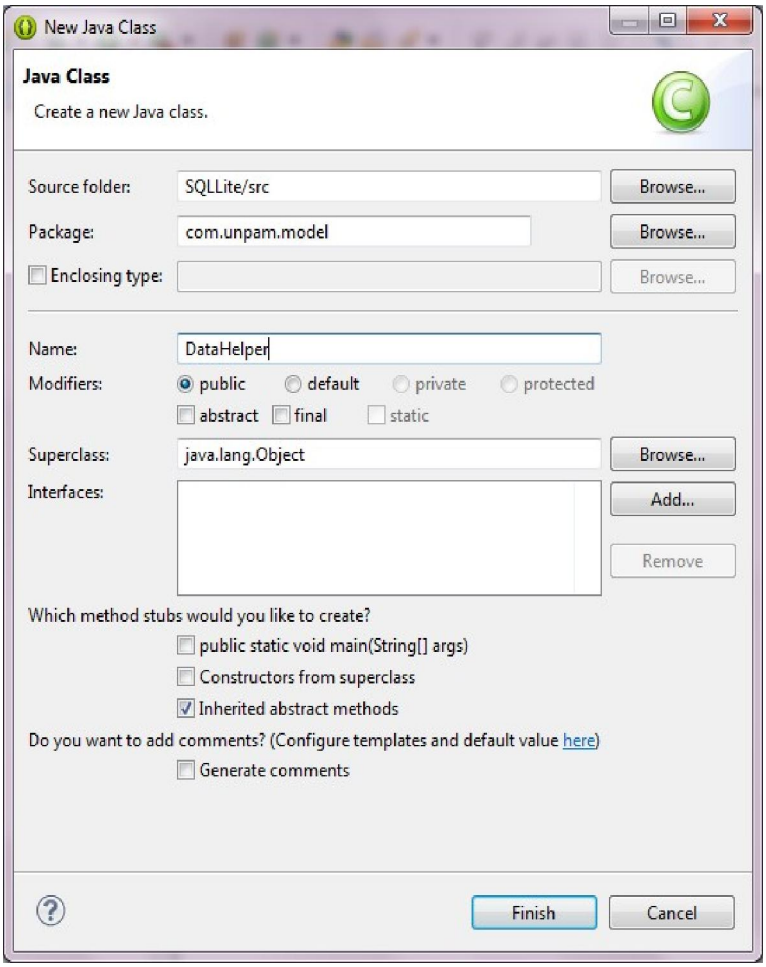
Gambar 14. 13

Source code XML:

```
<RelativeLayout
xmlns:android="http://schemas.android.com/apk/res/android"xmlns:tools="http://
schemas.android.com/tools"android:layout_width="match_parent"android:layout
_height="match_parent"
tools:context=".AddSQLLiteActivity">

<LinearLayoutandroid:id="@+id/linearLayout1"androi
        d:layout_width="wrap_content"android:layout_h
        eight="wrap_content"android:layout_alignParent
        Left="true"android:layout_alignParentRight="tru
        e"android:layout_alignParentTop="true">

<EditText
android:id="@+id/judulEditText"android:layout_width="
          wrap_content"android:layout_height="wrap_conte
          nt"android:layout_weight="1"
android:hint="Judul">

<requestFocus/>
</EditText>
</LinearLayout>
<LinearLayoutandroid:layout_width="wrap_content"andro
id:layout_height="wrap_content"
```

```
android:layout_alignParentBottom="true"
android:layout_alignParentLeft="true"
android:layout_alignParentRight="true"
android:layout_below="@+id/linearLayout1">

<EditText
        android:id="@+id/isiEditText"android:layout_width="wrap_content"android:layout_height="match_par
        android:hint="Isi"/>

</LinearLayout>

</RelativeLayout>
```

Pada nama project, klik kanan dan pilih New >> Class.



Gambar 14. 14

```
package com.unpam.model;

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

publicclass DataHelper {
     privatestaticfinal String DATABASE_NAME = "notepad.db";

privatestaticfinalintDATABASE_VERSION = 1;
privatestaticfinal String TABLE_NAME = "notes";  private
Context context;
private SQLiteDatabase db;
private SQLiteStatement insertStmt;

 privatestaticfinal String INSERT = "insert into " + TABLE_NAME +
                  "(judul, isi) values (?,?)";

     public DataHelper(Context context) {
     this.context = context;
          OpenHelper openHelper = new OpenHelper(this.context);
          this.db = openHelper.getWritableDatabase();
     this.insertStmt = this.db.compileStatement(INSERT);
     }

     privatestaticclass OpenHelper extends SQLiteOpenHelper {
          OpenHelper(Context context) {
     super(context, DATABASE_NAME, null,
DATABASE_VERSION);
          }
@Override
publicvoid onCreate(SQLiteDatabase db) {
                db.execSQL("CREATE TABLE " + TABLE_NAME + "(_id
INTEGER PRIMARY KEY, judul TEXT, isi TEXT)");
          }

 @Override
publicvoid onUpgrade(SQLiteDatabase db, int
oldVersion, int newVersion) {
                Log.w("Example", "Upgrading database, this will
drop tables and recreate.");               db.execSQL("DROP
TABLE IF EXISTS " + TABLE_NAME);
                onCreate(db);
```

```
            }
      }
 publiclong insert(String judul, String isi) {
      this.insertStmt.bindString(1, judul);
      this.insertStmt.bindString(2, isi);
            returnthis.insertStmt.executeInsert();
                              @Override
                  publicvoid onCreate(SQLiteDatabase db) {
                 db.execSQL("CREATE TABLE " + TABLE_NAME + "(_id
          INTEGER PRIMARY KEY, judul TEXT, isi TEXT)");
}

 @Override
publicvoid onUpgrade(SQLiteDatabase db, int
oldVersion, int newVersion) {
  Log.w("Example", "Upgrading database, this will drop tables
and recreate.");                db.execSQL("DROP TABLE IF
EXISTS " + TABLE_NAME);
                onCreate(db);
            }
      }
publiclong insert(String judul, String isi) {
      this.insertStmt.bindString(1, judul);
      this.insertStmt.bindString(2, isi);
            returnthis.insertStmt.executeInsert();
 }
publiclong insert2(String judul, String isi) {
      ContentValues cv = new ContentValues();
           cv.put("judul", judul);
      cv.put("isi", isi);
            returndb.insert(TABLE_NAME, null, cv);
 }

 public Cursor getAll() {
 returndb.query(TABLE_NAME, null, null, null, null,
null, "_id DESC");
 }

public Cursor getById(int id) {
 returndb.query(TABLE_NAME, null, "_id=" + id, null, null, null,
                             null);
     }
publicvoid close() {
      db.close();
}
```

```
publicint deleteById(int id) {
returndb.delete(TABLE_NAME, "_id =" + id, null);
}

publicint updateById(int id, String judul, String isi) {
      ContentValues cv = new ContentValues();
      cv.put("judul", judul);
       cv.put("isi", isi);
returndb.update(TABLE_NAME, cv, "_id = " + id, null);
 }
}
```

```
 package com.unpam.sqllite;
 import android.app.Activity;
 import android.app.AlertDialog;
 import android.content.DialogInterface;
 import android.content.Intent;
 import android.database.Cursor;
 import android.os.Bundle;
 import android.view.Menu;
 import android.view.View;
 import android.view.View.OnClickListener;
 import android.widget.AdapterView;
 import android.widget.AdapterView.OnItemLongClickListener;
 import android.widget.ListView;
 import android.widget.SimpleCursorAdapter;
 import android.widget.Toast;

 import com.unpam.model.DataHelper;
 publicclass MainActivity extends Activity implements
OnClickListener, OnItemLongClickListener {
      ListView listView;
      SimpleCursorAdapter adapter;

      @SuppressWarnings("deprecation")
      @Override
       protectedvoid onCreate(Bundle savedInstanceState) {
            super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_main);

 listView = (ListView) findViewById(R.id.listView1);
 listView.setOnItemLongClickListener(this);
   findViewById(R.id.tambahButton).setOnClickListener(this);
   findViewById(R.id.refreshButton).setOnClickListener(this);
DataHelper dh = new DataHelper(this);
           Cursor c = dh.getAll();
           String[] from = new String[] { "judul","isi" };
 int[] to = newint[] { android.R.id.text1, android.R.id.text2 };
           try{
                 adapter = newSimpleCursorAdapter(this,
android.R.layout.simple_list_item_2, c, from, to);
           }catch (Exception ex){}
      listView.setAdapter(adapter);
      }

      @Override
       publicboolean onCreateOptionsMenu(Menu menu) {
 // Inflate the menu; this adds items to the action bar if it is
present.
           getMenuInflater().inflate(R.menu.activity_main,
 menu);
```

```
 returntrue;
      }

      @Override
      protectedvoid onResume() {
      adapter.notifyDataSetChanged();
            super.onResume();
      }

      @Override
       publicvoid onClick(View v) {
            // TODO Auto-generated method stub
            switch (v.getId()) {
            case R.id.tambahButton:
                  startActivity(new Intent(this,
AddSQLLiteActivity.class));
            break;
case R.id.refreshButton:
                  DataHelper dh = new DataHelper(this);
                  Cursor c = dh.getAll();
                  String[] from = new String[] { "judul","isi" };
                  int[] to = newint[] { android.R.id.text1,
android.R.id.text2 };
                  try{
                        adapter = newSimpleCursorAdapter(this,
android.R.layout.simple_list_item_2, c, from, to);
                  }catch (Exception ex){}

      listView.setAdapter(adapter);
      break;          default:
                  break;
            }
      }
@Override
publicboolean onItemLongClick(AdapterView<?> arg0, View arg1,
int arg2, long arg3) {
            // TODO Auto-generated method stub
finalint id = (int) adapter.getItemId(arg2);
AlertDialog.Builder builder = new AlertDialog.Builder(this);
     builder.setMessage("Apakah id="+id+" akan dihapus")
     .setCancelable(true)
     .setPositiveButton("Ya", new
DialogInterface.OnClickListener() {

publicvoid onClick(DialogInterface dialog, int which) {
                     // TODO Auto-generated method stub
```

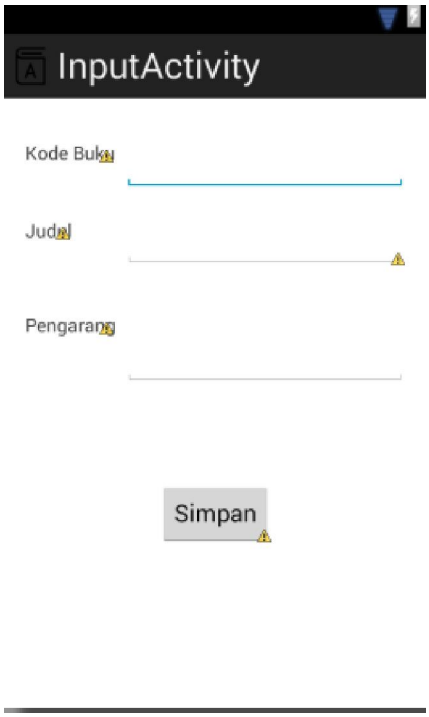
```
                    hapusData(id);
               }
          })
          .setNegativeButton("Tidak", new
DialogInterface.OnClickListener() {

publicvoid onClick(DialogInterface dialog, int which) {
                    // TODO Auto-generated method stub
                    dialog.cancel();
               }
          });

     AlertDialog alertDialog = builder.create();
alertDialog.show();
           returnfalse;
     }

privatevoid hapusData(long id){
DataHelper dh = new DataHelper(this);
          try{
               dh.deleteById((int)id);
          }catch (Exception ex){
               Toast.makeText(this, "Error: "+ex.getMessage(),
Toast.LENGTH_LONG).show();
          }
     }
 }
```

```
package com.unpam.sqllite;
import android.app.Activity;
import android.database.Cursor;
import android.os.Bundle;
import android.view.Menu;
import android.widget.EditText;
import android.widget.Toast;

import com.unpam.model.DataHelper;

publicclass AddSQLLiteActivity extends Activity {
DataHelper dh;
EditText judul, isi;
intid=0;
@Override
 protectedvoid onCreate(Bundle savedInstanceState) {
     super.onCreate(savedInstanceState);
          setContentView(R.layout.activity_add_sqllite);

          judul = (EditText) findViewById(R.id.judulEditText);
          isi = (EditText) findViewById(R.id.isiEditText);

          dh = new DataHelper(this);

          if (getIntent().getExtras() != null) {
     id = getIntent().getIntExtra("_id", 0);
     Cursor c = dh.getById(id);
 if (c.moveToFirst()) { // pasti hanya satu karena
_id unik
                    do {
                         String strJudul =
c.getString(c.getColumnIndex("judul"));
                         String strIsi =
c.getString(c.getColumnIndex("isi"));
                         // TODO isi field
                    } while (c.moveToNext());
               }
```

```
            }
      }

@ Override
       publicboolean onCreateOptionsMenu(Menu menu) {
 // Inflate the menu; this adds items to the action bar if it is
present.
 getMenuInflater().inflate(R.menu.activity_add_sqllite,
menu);
             returntrue;
      }

@Override
 protectedvoid onPause() {
 if (!judul.getText().toString().equals("")) {
           if (id> 0) {

// TODO update ke db
                 } else {
                       id = (int)
dh.insert2(judul.getText().toString(),
isi.getText().toString());
                       Toast.makeText(this,"Disimpan: " +
Integer.toString(id) + ": " + judul.getText(),
Toast.LENGTH_SHORT).show();
                 }
           }
           super.onPause();
  }
}
```

C. SOAL LATIHAN/TUGAS

1. Buatlah aplikasi katalog buku, dengan form input seperti pada gambar



2. Tampilkan setiap hasil inputannya ke dalam listview

D. DAFTAR PUSTAKA

Allen, Grant. 2012.Beginning Android 4. New York : Apress.

Safaat, H. Nazruddin. 2015.ANDROID Pemrograman Aplikasi Mobile Smartphone dan Tablet PC Berbasis Android. Bandung: Informatika