

1.Database Adapter

```
package app.surachet.sqlproject;

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

class MyDatabaseHelper extends SQLiteOpenHelper {
    private static final String DB_NAME = "friend_db";
    private static final int DB_VERSION = 3;

    public static final String TABLE_NAME = "tbl_bio";

    public static final String COL_ID = "id";
    public static final String COL_NAME = "name";
    public static final String COL_LASTNAME = "lastname";
    public static final String COL_YEAR = "year";
    public static final String COL_SEX = "sex";
    public static final String COL_BOOK = "book";
    public static final String COL_SWIMMING = "swimming";

    public MyDatabaseHelper(Context context){
        super(context, DB_NAME, null, DB_VERSION);
    }

    public void onCreate(SQLiteDatabase db){

        //db.execSQL("CREATE TABLE "+TABLE_NAME +"(_id INTEGER PRIMARY KEY AUTOINCREMENT, "
        // +COL_NAME +" TEXT, "+COL_LASTNAME +"TEXT, "+COL_SCHOOL +"TEXT);");
        //db.execSQL("INSERT INTO "+TABLE_NAME +"("+COL_NAME +", "+COL_LASTNAME
        // +", "+COL_SCHOOL +" )VALUES ('Sleeping', 'For Less', 'Android School');");
    }

    public void onUpgrade(SQLiteDatabase db, int oldVersion, int newVersion){
        db.execSQL("DROP TABLE IF EXISTS "+TABLE_NAME);
        onCreate(db);
    }
}
```

2. Main page สำหรับนำเข้าสู่ฐานข้อมูล

```

package app.surachet.sqlproject;

import android.content.Intent;
import android.database.sqlite.SQLiteDatabase;
import android.os.Environment;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;
import android.view.View;
import android.widget.Button;
import android.widget.Toast;

import java.io.File;
import java.io.FileInputStream;
import java.io.FileNotFoundException;
import java.io.FileOutputStream;
import java.io.IOException;
import java.io.InputStream;
import java.io.OutputStream;
import java.nio.channels.FileChannel;
import java.text.DateFormat;
import java.util.Date;

public class Act_Main extends AppCompatActivity {
    MyDatabaseHelper mHelper;
    SQLiteDatabase mDb;

    Button buttonView,buttonAdd,buttonExport;

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

        buttonAdd =(Button)findViewById(R.id.btn_add);
        buttonExport =(Button)findViewById(R.id.btn_export);
        buttonView =(Button)findViewById(R.id.btn_view);

        importDatabase();

        buttonExport.setOnClickListener(new View.OnClickListener(){

            @Override
            public void onClick(View arg0){

                exportDB();

            }
        });

        buttonView.setOnClickListener(new View.OnClickListener(){

            @Override
            public void onClick(View arg0){

                Intent intent =new Intent(getApplicationContext(), Act_Viewdata.class);
                startActivity(intent);

            }
        });
    }
}

```

```

buttonAdd.setOnClickListener(new View.OnClickListener() {

    @Override
    public void onClick(View arg0){

        Intent intent =new Intent(getApplicationContext(), Act_Add.class);
        startActivity(intent);

    }
});

}

//Import database from asset folder

public void importDatabase() {
String url ="/data/data/"+getPackageName()+"/databases/friend_db";
File f =new File(url);
if(!f.exists()){
    try {
        mHelper =new MyDatabaseHelper(this);
        mDb =mHelper.getWritableDatabase();
        mDb.close();
        mHelper.close();
        InputStream in =getAssets().open("friend_db");
        OutputStream out =new FileOutputStream(url);
        byte[]buffer =new byte[in.available()];
        in.read(buffer);
        out.write(buffer, 0, buffer.length);
        in.close();
        out.close();
    } catch (FileNotFoundException e){
        e.printStackTrace();
    } catch (IOException e){
        e.printStackTrace();
    }
}
}

//Export database

private void exportDB(){
    try {
        File sd =Environment.getExternalStorageDirectory();
        File data =Environment.getDataDirectory();

        if (sd.canWrite()){
            String currentDBPath ="/data/"+getPackageName()+"/databases/friend_db";
            String currentDateTimeString =DateFormat.getDateInstance().format(new Date());
            String backupDBPath ="/friend_db"+currentDateTimeString;
            File currentDB =new File(data, currentDBPath);
            File backupDB =new File(sd, backupDBPath);

            FileChannel src =new FileInputStream(currentDB).getChannel();
            FileChannel dst =new FileOutputStream(backupDB).getChannel();
            dst.transferFrom(src, 0, src.size());
            src.close();
            dst.close();
            Toast.makeText(getApplicationContext(), backupDB.toString(), Toast.LENGTH_LONG.show());
        }
    } catch (Exception e){
        Toast.makeText(getApplicationContext(), e.toString(), Toast.LENGTH_LONG.show());
    }
}
}

```

```
@Override
public boolean onCreateOptionsMenu(Menu menu){
    //Inflate the menu; this adds items to the action bar if it is present.
    getMenuInflater().inflate(R.menu.menu_act_main, menu);
    return true;
}

@Override
public boolean onOptionsItemSelected(MenuItem item){
    //Handle action bar item clicks here.The action bar will
    //automatically handle clicks on the Home/Up button, so long
    //as you specify a parent activity in AndroidManifest.xml.
    int id =item.getItemId();

    //noinspection SimplifiableIfStatement
    if (id ==R.id.action_settings){
        return true;
    }

    return super.onOptionsItemSelected(item);
}
}
```

3. View Data

```
package app.surachet.sqlproject;

import android.app.AlertDialog;
import android.content.Intent;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.ArrayAdapter;
import android.widget.ListView;
import android.widget.Toast;

import java.util.ArrayList;

public class Act_Viewdata extends AppCompatActivity {
```

```
MyDatabaseHelper mHelper;
SQLiteDatabase mDb;
Cursor mCursor;
ListView listFriend;
```

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

```
mHelper = new MyDatabaseHelper(this);
mDb = mHelper.getReadableDatabase();

mCursor = mDb.rawQuery("SELECT * FROM "+MyDatabaseHelper.TABLE_NAME, null);
```

```
ArrayList<String> arr_list = new ArrayList<String>();
mCursor.moveToFirst();
while(mCursor.isAfterLast()){
    arr_list.add("ชื่อ :"+mCursor.getString(mCursor.getColumnIndex(MyDatabaseHelper.COL_NAME))
        +"\nนามสกุล:" +mCursor.getString(mCursor.getColumnIndex(MyDatabaseHelper.COL_LASTNAME))
        +"\nปีเกิด :"+mCursor.getString(mCursor.getColumnIndex(MyDatabaseHelper.COL_YEAR)));
    mCursor.moveToNext();
}
```

```
ArrayAdapter<String> adapterDir = new ArrayAdapter<String>(getApplicationContext(),
R.layout.my_listview, arr_list);

listFriend =(ListView)findViewById(R.id.lst_bio);
listFriend.setAdapter(adapterDir);
```

```
listFriend.setOnItemClickListener(new AdapterView.OnItemClickListener() {
    public void onItemClick(AdapterView<?> arg0, View arg1, int arg2, long arg3) {
        mCursor.moveToPosition(arg2);
```

```
String id = mCursor.getString(mCursor.getColumnIndex(MyDatabaseHelper.COL_ID));
String name = mCursor.getString(mCursor.getColumnIndex(MyDatabaseHelper.COL_NAME));
String lastname = mCursor.getString(mCursor.getColumnIndex(MyDatabaseHelper.COL_LASTNAME));
String year = mCursor.getString(mCursor.getColumnIndex(MyDatabaseHelper.COL_YEAR));
String sex = mCursor.getString(mCursor.getColumnIndex(MyDatabaseHelper.COL_SEX));
String book = mCursor.getString(mCursor.getColumnIndex(MyDatabaseHelper.COL_BOOK));
String swimming = mCursor.getString(mCursor.getColumnIndex(MyDatabaseHelper.COL_SWIMMING));
```

```
Intent intent = new Intent(getApplicationContext(), Act_Edit.class);
```

```
intent.putExtra("ID", id);
intent.putExtra("NAME", name);
intent.putExtra("LASTNAME", lastname);
intent.putExtra("YEAR", year);
intent.putExtra("SEX", sex);
intent.putExtra("BOOK", book);
intent.putExtra("SWIMMING", swimming);
```

```
startActivity(intent);
```

```
    }
});
```

```
listFriend.setOnItemClickListener(new AdapterView.OnItemClickListener() {
```

```
    @Override
```

```
    public boolean onItemClick(AdapterView<?> arg0, View arg1,
        int arg2, long arg3) {
```

```
        mCursor.moveToPosition(arg2);
```

```
        String id = mCursor.getString(mCursor.getColumnIndex(MyDatabaseHelper.COL_ID));
```

```
        mDb.execSQL("DELETE FROM tbl_bio WHERE id=" + id + "");
```

```
        Toast.makeText(getApplicationContext(), "ลบข้อมูลนักเรียนเรียบร้อยแล้ว"
            , Toast.LENGTH_SHORT).show();
```

```
        finish();
```

```
        return false;
```

```
    }
});
```

```
}
```

```
@Override
public boolean onCreateOptionsMenu(Menu menu){
    //Inflate the menu; this adds items to the action bar if it is present.
    getMenuInflater().inflate(R.menu.menu_act_viewdata, menu);
    return true;
}

@Override
public boolean onOptionsItemSelected(MenuItem item){
    //Handle action bar item clicks here.The action bar will
    //automatically handle clicks on the Home/Up button, so long
    //as you specify a parent activity in AndroidManifest.xml.
    int id =item.getItemId();

    //noinspection SimplifiableIfStatement
    if (id ==R.id.action_settings){
        return true;
    }

    return super.onOptionsItemSelected(item);
}
}
```

4. Add data

```
package app.surachet.sqlproject;

import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.CheckBox;
import android.widget.EditText;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import android.widget.Spinner;
import android.widget.Toast;

public class Act_Add extends AppCompatActivity {

    MyDatabaseHelper mHelper;
    SQLiteDatabase mDb;
    Cursor mCursor;

    EditText editName;
    EditText editLastname;
    RadioGroup radioGroup;
    RadioButton radMale;
    RadioButton radFemale;
    CheckBox chkBook;
    CheckBox chkSwimming;
    Spinner spinYear;
    Button buttonAdd;

    String textFromSpinner;
    String txtAns1;
    String C1Ans;
    String C2Ans;

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

        editName =(EditText)findViewById(R.id.edit_name);
        editLastname =(EditText)findViewById(R.id.edit_lastname);

        radioGroup =(RadioGroup)findViewById(R.id.rg_1);
        radMale =(RadioButton)findViewById(R.id.rad_1);
        radFemale =(RadioButton)findViewById(R.id.rad_2);

        spinYear =(Spinner)findViewById(R.id.spn_year);

        chkBook =(CheckBox)findViewById(R.id.chk_1);
        chkSwimming =(CheckBox)findViewById(R.id.chk_2);

        buttonAdd =(Button)findViewById(R.id.btn_add);
```



```
radioGroup.setOnCheckedChangeListener(new RadioGroup.OnCheckedChangeListener() {
```

```
    @Override
```

```
    public void onCheckedChanged(RadioGroup group, int checkedId) {
```

```
        // TODO Auto-generated method stub
```

```
        if (radMale.isChecked()) {
```

```
            txtAns1 = "1";
```

```
        }
```

```
        if (radFemale.isChecked()) {
```

```
            txtAns1 = "2";
```

```
        }
```

```
    }
```

```
});
```

```
chkBook.setOnClickListener(new View.OnClickListener() {
```

```
    @Override
```

```
    public void onClick(View v) {
```

```
        // TODO Auto-generated method stub
```

```
        if (chkBook.isChecked()) {
```

```
            C1Ans = "1";
```

```
        } else {
```

```
            C1Ans = "";
```

```
        }
```

```
    }
```

```
});
```

```
chkSwimming.setOnClickListener(new View.OnClickListener() {
```

```
    @Override
```

```
    public void onClick(View v) {
```

```
        // TODO Auto-generated method stub
```

```
        if (chkSwimming.isChecked()) {
```

```
            C2Ans = "2";
```

```
        } else {
```

```
            C2Ans = "";
```

```
        }
```

```
    }
```

```
});
```

```

String[] getYear = getResources().getStringArray(R.array.year);
ArrayAdapter<String> adapterYear = new ArrayAdapter<String>(this,
android.R.layout.simple_list_item_1, getYear);

spinYear.setAdapter(adapterYear);

spinYear.setOnItemSelectedListener(
    new AdapterView.OnItemSelectedListener() {
        public void onItemSelected(
            AdapterView<?> parent, View view, int position, long id) {
            textFromSpinner = parent.getItemAtPosition(position).toString();
        }

        public void onNothingSelected(AdapterView<?> parent) {
        }
    });

mHelper = new MyDatabaseHelper(this);
mdb = mHelper.getReadableDatabase();

buttonAdd.setOnClickListener(new View.OnClickListener() {

    @Override
    public void onClick(View arg0) {
        String name = editName.getText().toString();
        String lastname = editLastname.getText().toString();
        String year = textFromSpinner ;
        String sex = txtAns1;
        String book = C1Ans;
        String swimming = C2Ans;

        if (name.length() != 0 && lastname.length() != 0) {

            mCursor = mdb.rawQuery("SELECT * FROM "+MyDatabaseHelper.TABLE_NAME
                +" WHERE "+MyDatabaseHelper.COL_NAME +"='"+name +"'"
                +" AND "+MyDatabaseHelper.COL_LASTNAME +"='"+lastname +"', null);

            if(mCursor.getCount() == 0) {
                mdb.execSQL("INSERT INTO "+MyDatabaseHelper.TABLE_NAME +"("
                    +MyDatabaseHelper.COL_NAME +", "+MyDatabaseHelper.COL_LASTNAME +", "+
                    MyDatabaseHelper.COL_YEAR +", "+MyDatabaseHelper.COL_SEX +", "+MyDatabaseHelper.COL_BOOK +", "+
                    MyDatabaseHelper.COL_SWIMMING
                    +" ) VALUES ("
                    +name +"', '"+lastname +"', '"+year +"', '"+sex +"', '"+book +"', '"+swimming +"');");

                Toast.makeText(getApplicationContext(), "เพิ่มข้อมูลเพื่อนเรียบร้อยแล้ว", Toast.LENGTH_SHORT).show();
                finish();
            } else {
                Toast.makeText(getApplicationContext(), "คุณมีข้อมูลเพื่อนคนนี้อยู่แล้ว", Toast.LENGTH_SHORT).show();
            }
        } else {
            Toast.makeText(getApplicationContext(), "กรุณาใส่ข้อมูลให้ครบทุกช่อง", Toast.LENGTH_SHORT).show();
        }
    }
});
}

```

```
@Override
public boolean onCreateOptionsMenu(Menu menu){
    //Inflate the menu; this adds items to the action bar if it is present.
    getMenuInflater().inflate(R.menu.menu_act_add, menu);
    return true;
}

@Override
public boolean onOptionsItemSelected(MenuItem item){
    //Handle action bar item clicks here.The action bar will
    //automatically handle clicks on the Home/Up button, so long
    //as you specify a parent activity in AndroidManifest.xml.
    int id =item.getItemId();

    //noinspection SimplifiableIfStatement
    if (id ==R.id.action_settings) {
        return true;
    }

    return super.onOptionsItemSelected(item);
}
}
```

5. Edit data ***

```

package app.surachet.sqlproject;

import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.CheckBox;
import android.widget.EditText;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import android.widget.Spinner;
import android.widget.Toast;

public class Act_Edit extends AppCompatActivity {

    MyDatabaseHelper mHelper;
    SQLiteDatabase mDb;
    Cursor mCursor;

    EditText editName;
    EditText editLastname;
    RadioGroup radioGroup;
    RadioButton radMale;
    RadioButton radFemale;
    CheckBox chkBook;
    CheckBox chkSwimming;
    Spinner spinYear;
    Button buttonAdd;

    String textFromSpinner;
    String txtAns1;
    String C1Ans;
    String C2Ans;

    String id, name, lastname, year, sex, book, swimming;

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

        id = getIntent().getExtras().getString("ID");
        name = getIntent().getExtras().getString("NAME");
        lastname = getIntent().getExtras().getString("LASTNAME");
        year = getIntent().getExtras().getString("YEAR");
        sex = getIntent().getExtras().getString("SEX");
        book = getIntent().getExtras().getString("BOOK");
        swimming = getIntent().getExtras().getString("SWIMMING");

        editName = (EditText) findViewById(R.id.edit_name);
        editLastname = (EditText) findViewById(R.id.edit_lastname);

        radioGroup = (RadioGroup) findViewById(R.id.rg_1);
        radMale = (RadioButton) findViewById(R.id.rad_1);
        radFemale = (RadioButton) findViewById(R.id.rad_2);
    }
}

```

```

spinYear =(Spinner)findViewById(R.id.spn_year);

chkBook =(CheckBox)findViewById(R.id.chk_1);
chkSwimming =(CheckBox)findViewById(R.id.chk_2);

buttonAdd =(Button)findViewById(R.id.btn_add);

```

//กำหนดค่าให้กับ object โดยใช้ตัวแปรที่ส่งมา

```
buttonAdd.setText("Update");
```

```
editName.setText(name);
editLastname.setText(lastname);
```

```
String[]getYear =getResources().getStringArray(R.array.year);
ArrayAdapter<String> adapterYear =new ArrayAdapter<String>(this,
android.R.layout.simple_list_item_1, getYear);
```

```
spinYear.setAdapter(adapterYear);
```

```
int position =adapterYear.getPosition(year);
spinYear.setSelection(position);
```

```
if (sex.equals("1")){radMale.setChecked(true);}
if (sex.equals("2")){radFemale.setChecked(true);}

```

```
if (book.equals("1")){chkBook.setChecked(true);}else {chkBook.setChecked(false);}
if (swimming.equals("1")){chkSwimming.setChecked(true);}else {chkBook.setChecked(false);}

```

```
spinYear.setOnItemClickListener(
new AdapterView.OnItemClickListener() {
public void onItemClick(
AdapterView<?> parent, View view, int position, long id){

textFromSpinner =parent.getItemAtPosition(position).toString();

}

public void onNothingSelected(AdapterView<?> parent){

}

});
```

```
radioGroup.setOnCheckedChangeListener(new RadioGroup.OnCheckedChangeListener() {
```

@Override

```
public void onCheckedChanged(RadioGroup group, int checkedId){
//TODO Auto-generated method stub
```

```
if (radMale.isChecked()) {
```

```
txtAns1 ="1";
```

```
}
```

```
if (radFemale.isChecked()) {
```

```
txtAns1 ="2";
```

```
}
```

```
}
```

```
});
```

```

chkBook.setOnClickListener(new View.OnClickListener() {

    @Override
    public void onClick(View v) {
        // TODO Auto-generated method stub

        if (chkBook.isChecked()) {

            C1Ans ="1";

            } else {

            C1Ans ="";

        }
    }
});

mHelper =new MyDatabaseHelper(this);
mdb =mHelper.getReadableDatabase();

buttonAdd.setOnClickListener(new View.OnClickListener() {

    @Override
    public void onClick(View arg0) {

        String name =editName.getText().toString();
        String lastname =editLastname.getText().toString();
        String year =textFromSpinner ;
        String sex =txtAns1;
        String book =C1Ans;
        String swimming =C2Ans;

        if(name.length()!=0 && lastname.length()!=0) {
            mdb.execSQL("UPDATE "+MyDatabaseHelper.TABLE_NAME +"SET "
                +MyDatabaseHelper.COL_NAME +"='"+name +"', "
                +MyDatabaseHelper.COL_LASTNAME +"='"+lastname +"', "
                +MyDatabaseHelper.COL_YEAR +"='"+year +"', "
                +MyDatabaseHelper.COL_BOOK +"='"+book +"', "
                +MyDatabaseHelper.COL_SWIMMING +"='"+swimming
                +"' WHERE "+MyDatabaseHelper.COL_ID +"='"+id +'");

            Toast.makeText(getApplicationContext(), "แก้ไขข้อมูลเพื่อนเรียบร้อยแล้ว"
                , Toast.LENGTH_SHORT).show();

            finish();

        } else {
            Toast.makeText(getApplicationContext(), "กรุณาใส่ข้อมูลเพื่อนให้ครบทุกช่อง"
                , Toast.LENGTH_SHORT).show();

        }
    }
});
}

```

```
@Override
public boolean onCreateOptionsMenu(Menu menu){
    //Inflate the menu; this adds items to the action bar if it is present.
    getMenuInflater().inflate(R.menu.menu_act__edit, menu);
    return true;
}

@Override
public boolean onOptionsItemSelected(MenuItem item){
    //Handle action bar item clicks here.The action bar will
    //automatically handle clicks on the Home/Up button, so long
    //as you specify a parent activity in AndroidManifest.xml.
    int id =item.getItemId();

    //noinspection SimplifiableIfStatement
    if (id ==R.id.action_settings){
        return true;
    }

    return super.onOptionsItemSelected(item);
}
}
```