

# 구글의 안드로이드 SQLite 사용하기



안백전자 교육사업부



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# SQLite Overview

- Richard Hipp (2000)
- 작지만 성능이 굉장히 뛰어난 데이터베이스 엔진
- iPhone, 심비안, 모질라 파이어폭스, 맥OS, 솔라리스etc
  
- Free S/W
- Tiny : 150kb >
- 설치나 관리가 용이
  - 서버X, 구성파일X, 데이터 베이스 관리자 X
  - SQLite 데이터 베이스는 File이다!
  - 파일에 SQL(Structured Query Language)를 사용해서 접근

# SQLite 라이선스

- 소스 코드는 별도의 domain에 있음 (라이선스X)
- 선을 행하고 악을 멀리하라
- 자신을 용서하고 남을 용서하라
- 서로 나누며 자신이 베푼 만큼만 취하라

# SQL 기본

- DDL(Data Definition Language)

```
Create table mytable (  
  _id integer primary key autoincrement  
  name text,  
  phone text );
```

- Modification

```
Insert into mytable values(null, 'Park' , '939-6511' );
```

- Query

```
Select name, phone from mytable  
where (name like "%Park%") ;
```

SQL은 대소문자 구별X

# 안드로이드 프로젝트 생성

- 다음 내용을 입력
- [완료] 선택

Project Name : TestDB  
Build Target : Android 1.5

Application Name :

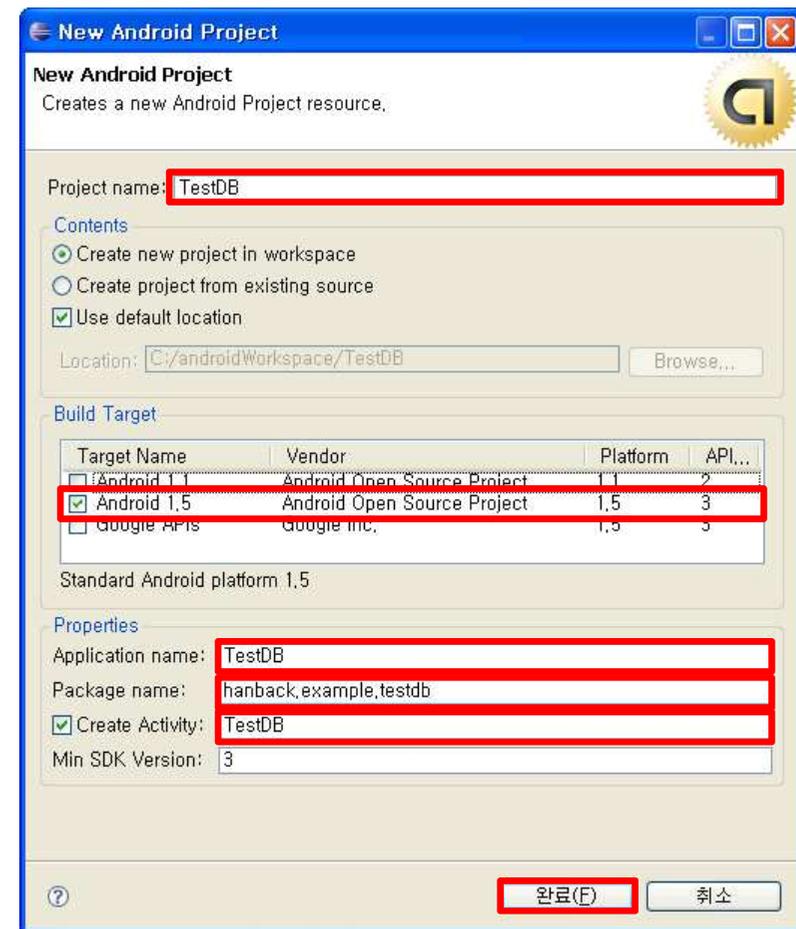
TestDB

Package Name :

hanback.example.testdb

Activity Name :

TestDB



# 예제코드

```
public class TestDB extends ListActivity {
    private SQLiteDatabase dbase;
    private Cursor cursor;

    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);

        dbase = this.openOrCreateDatabase("PhoneBook", MODE_PRIVATE, null);

        dbase.execSQL("drop table if exists users");
        dbase.execSQL("create table users (" +
            "_id integer primary key autoincrement, " +
            "Name text not null, " +
            "Phone text not null);" );

        dbase.execSQL("insert into users " +
            "(Name, Phone) values ('Park', '939-6511');");
    }
}
```

# 예제코드

```
dbase.execSQL("insert into users " +
              "(Name, Phone) values ('Park', '939-6511');");

ContentValues insertValue = new ContentValues();
insertValue.put("Name", "Kim");
insertValue.put("Phone", "851-9656");
dbase.insert("users", null, insertValue);

cursor = dbase.query("users",
                    new String[] {"Name", "Phone"},
                    null,
                    null,
                    null,
                    null,
                    "_id",
                    "5");
```

# 예제코드

```
ArrayList<HashMap<String, String> > list = new ArrayList<HashMap<String, String> >();
if (cursor != null)
    if (cursor.moveToFirst()) {
        do {
            HashMap<String, String> item = new HashMap<String, String>();
            for (int i = 0; i < cursor.getColumnCount(); ++i) {
                item.put(cursor洗getColumnName(i), cursor.getString(i));
                list.add(item);
            }
        } while (cursor.moveToNext());
    }

SimpleAdapter adapter = new SimpleAdapter(
    this,
    list,
    R.layout.main,
    new String[] {"Name", "Phone"},
    new int[] {R.id.TextView01, R.id.TextView02} );
this.setAdapter(adapter);

if (dbase != null)
    dbase.close();
```

# 결과 확인

3G 10:10 PM

**TestDB**

Park  
939-6511

Park  
939-6511

Kim  
851-9656

Kim  
851-9656

Threads Heap File Explorer

Name	Size	Date	Time	Permissions	Info
data		2009-07-06	05:26	drwxrwx--x	
anr		2009-07-06	05:26	drwxrwxrwx	
app		2009-07-06	05:26	drwxrwx--x	
app-private		2009-07-06	05:26	drwxrwx--x	
dalvik-cache		2009-07-06	05:26	drwxrwx--x	
data		2009-07-06	05:26	drwxrwx--x	
com.android.alarmclock		2009-07-06	05:26	drwxr-xr-x	
com.android.browser		2009-07-06	05:26	drwxr-xr-x	
com.android.calculator2		2009-07-06	05:26	drwxr-xr-x	
com.android.camera		2009-07-06	05:26	drwxr-xr-x	
com.android.contacts		2009-07-06	05:26	drwxr-xr-x	
com.android.customlocale		2009-07-06	05:26	drwxr-xr-x	
com.android.development		2009-07-06	05:26	drwxr-xr-x	
com.android.email		2009-07-06	05:27	drwxr-xr-x	
com.android.fallback		2009-07-06	05:27	drwxr-xr-x	
com.android.googlesearch		2009-07-06	05:27	drwxr-xr-x	
com.android.htmlviewer		2009-07-06	05:27	drwxr-xr-x	
com.android.inputmethod.latin		2009-07-06	05:27	drwxr-xr-x	
com.android.inputmethod.pinyin		2009-07-06	05:27	drwxr-xr-x	
com.android.launcher		2009-07-06	05:27	drwxr-xr-x	
com.android.mms		2009-07-06	05:27	drwxr-xr-x	
com.android.music		2009-07-06	05:27	drwxr-xr-x	
com.android.netspeed		2009-07-06	05:27	drwxr-xr-x	
com.android.packageinstaller		2009-07-06	05:27	drwxr-xr-x	
com.android.phone		2009-07-06	05:27	drwxr-xr-x	
com.android.providers.contacts		2009-07-06	05:26	drwxr-xr-x	
com.android.providers.downloads		2009-07-06	05:26	drwxr-xr-x	
com.android.providers.drm		2009-07-06	05:27	drwxr-xr-x	
com.android.providers.media		2009-07-06	05:27	drwxr-xr-x	
com.android.providers.settings		2009-07-06	05:27	drwxr-xr-x	
com.android.providers.telephony		2009-07-06	05:27	drwxr-xr-x	
com.android.providers.userdictionary		2009-07-06	05:27	drwxr-xr-x	
com.android.sdksetup		2009-07-06	05:27	drwxr-xr-x	
com.android.settings		2009-07-06	05:27	drwxr-xr-x	
com.android.soundrecorder		2009-07-06	05:27	drwxr-xr-x	
com.android.spare_parts		2009-07-06	05:27	drwxr-xr-x	
com.android.term		2009-07-06	05:27	drwxr-xr-x	
hanback.example.greeting		2009-07-06	07:16	drwxr-xr-x	
hanback.example.lifecycle		2009-07-07	05:35	drwxr-xr-x	
hanback.example.test		2009-07-06	05:51	drwxr-xr-x	
hanback.example.testcustomview		2009-07-07	00:45	drwxr-xr-x	
hanback.example.testdb		2009-07-07	22:07	drwxr-xr-x	
databases		2009-07-07	22:07	drwxrwx--x	
PhoneBook	5120	2009-07-07	22:07	-rw-rw----	
lib		2009-07-07	22:07	drwxr-xr-x	



# adb로 파일 내용 확인하기

```
Microsoft Windows XP [Version 5.1.2600]

C:\#android-sdk-windows-1.5_r2\tools>adb shell
# cd /data/data/hanback.example.testdb/databases
cd /data/data/hanback.example.testdb/databases
# ls
ls
PhoneBook
# sqlite3 PhoneBook
sqlite3 PhoneBook
SQLite version 3.5.9
Enter ".help" for instructions
sqlite> .tables
.tables
android_metadata  users
sqlite> select * from usres;
select * from usres;
SQL error: no such table: usres
sqlite> select * from users;
select * from users;
1|Park|939-6511
2|Kim|851-9656
sqlite>
```