

1. MySQL 설치

다운로드

윈도우 설치

설치

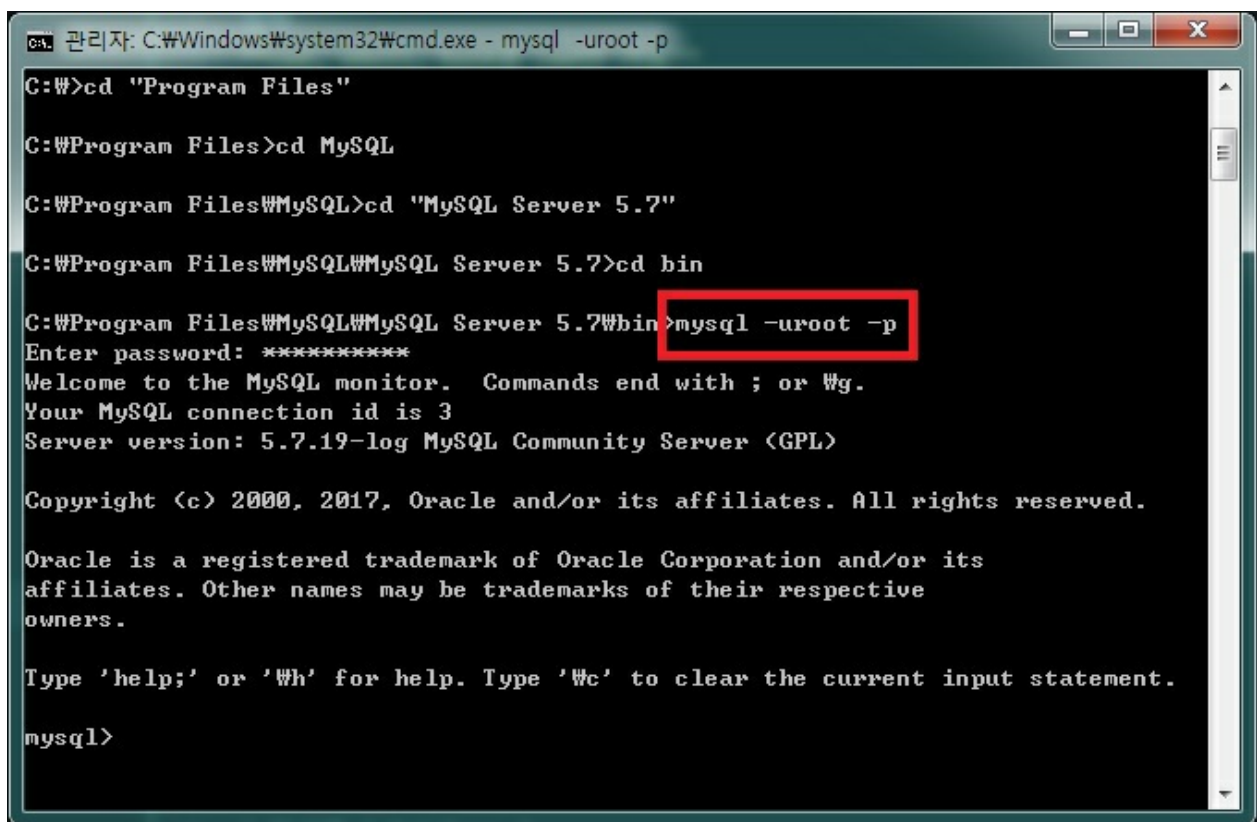
다운로드 링크에서 mysql installer 다운로드 후 MySQL Server 설치
나머지는 선택 사항

접속

cmd, shell, bash중 cmd만 가능

cmd에서 mysql server 설치 폴더로 이동 후

mysql -uroot -p 입력 후 비밀번호 입력



```
관리자: C:\Windows\system32\cmd.exe - mysql -uroot -p
C:\>cd "Program Files"
C:\Program Files>cd MySQL
C:\Program Files\MySQL>cd "MySQL Server 5.7"
C:\Program Files\MySQL\MySQL Server 5.7>cd bin
C:\Program Files\MySQL\MySQL Server 5.7\bin>mysql -uroot -p
Enter password: *****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 3
Server version: 5.7.19-log MySQL Community Server (GPL)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql>
```

우분투 설치

설치

```
sudo apt-get install mysql-server mysql-client
```

접속

```
mysql -uroot -p
```

- -u : user
- root : root(최고 권한 유저), default
- -p : password

```

기존:9 http://ppa.launchpad.net/git-core/ppa/ubuntu yakkety InRelease
기존:10 http://security.ubuntu.com/ubuntu yakkety-security InRelease
기존:11 http://ppa.launchpad.net/webupd8team/java/ubuntu yakkety InRelease
기존:12 http://apt.postgresql.org/pub/repos/apt xenial-pgdg InRelease
패키지 목록을 읽는 중입니다... 완료
xlwindlx@ubuntu:~$ mysql -uroot -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 5
Server version: 5.7.18-0ubuntu0.16.10.1 (Ubuntu)

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Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> show databases;
+-----+
| Database                |
+-----+
| information_schema      |
| mysql                   |
| performance_schema     |
| sys                     |
+-----+
4 rows in set (0.00 sec)

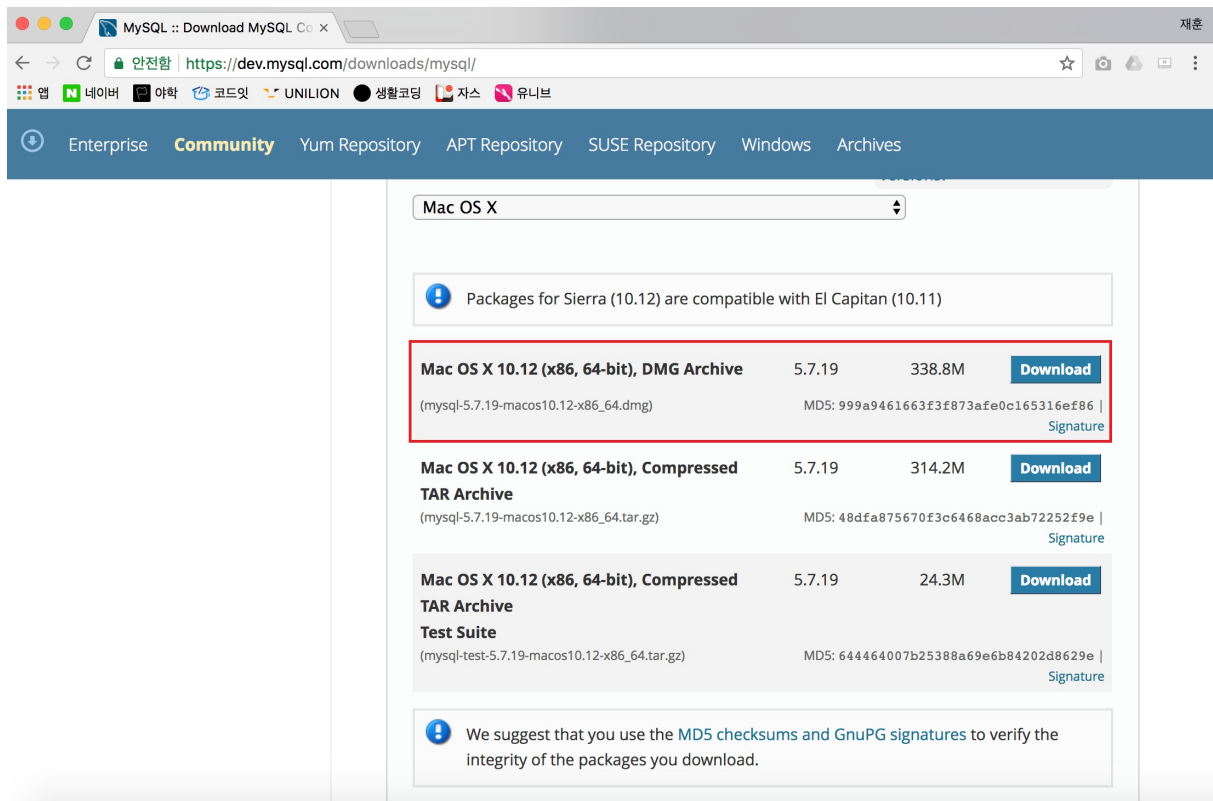
mysql> use mysql;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> select * from mysql;

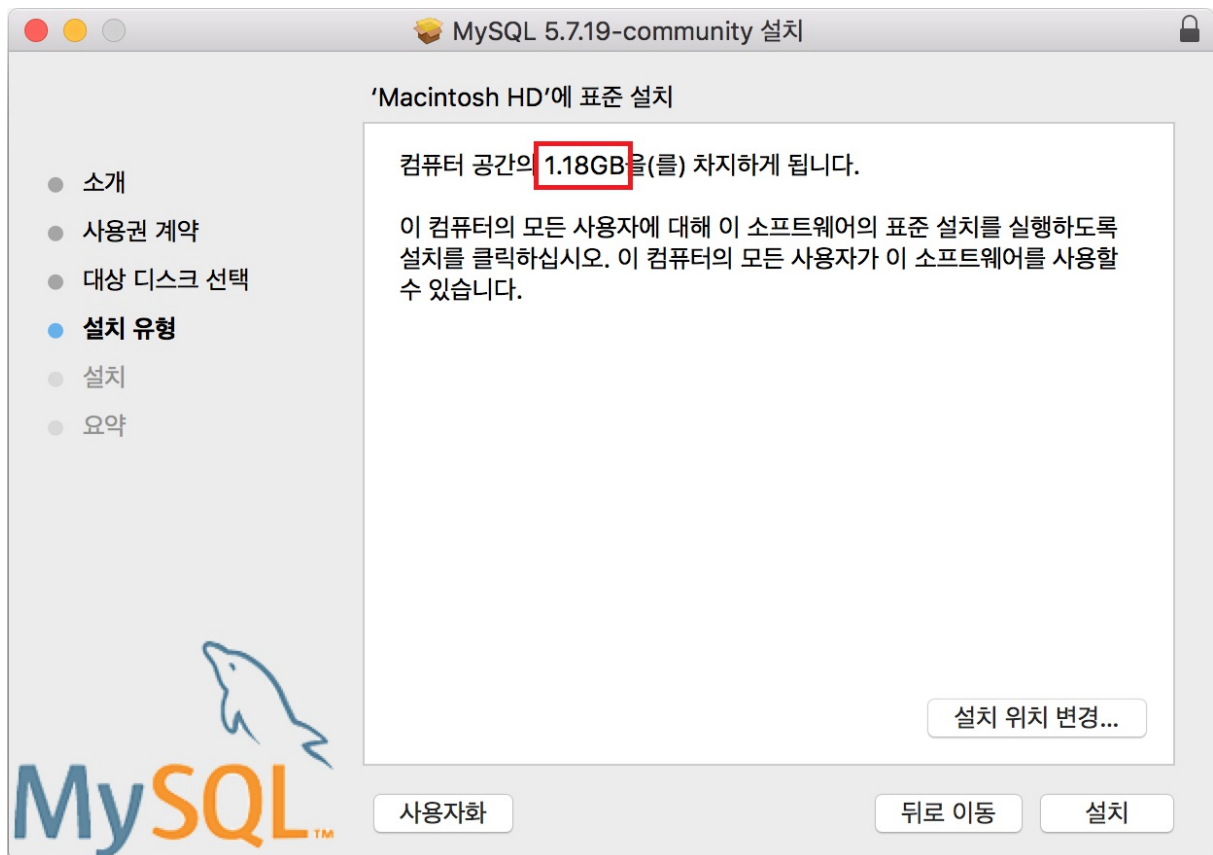
```

맥 설치

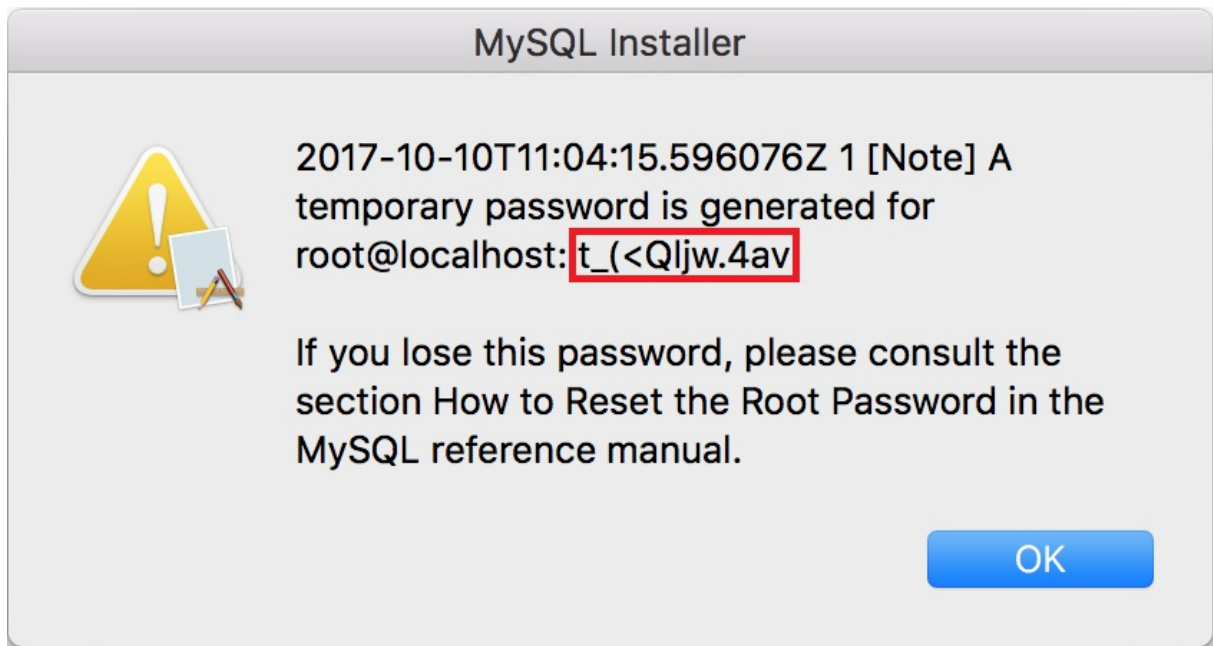
1. 다운로드 할 인스톨러



2. ★ 용량 ★



3. 초기비밀번호 생성



4. MySQL메뉴 생성



5. 서버 가동



6. MySQL 접속

```
bin — mysql -u root -p — 80x24
Last login: Tue Oct 10 20:08:59 on ttys000
[ijaehun-ui-MacBook-Pro:~ leejaehoon$ cd /usr/local/mysql/bin
[ijaehun-ui-MacBook-Pro:bin leejaehoon$ ./mysql -u root -p
[Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 51
Server version: 5.7.19

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> █
```

2. 기본 명령어

Database의 범위

범위	MySQL
도서관	Database
책	table
정보	data

즉 database > table > data이다.

DB 생성

```
CREATE DATABASE DB이름
```

ex) CREATE DATABASE 02

전체 DB 보기

```
SHOW DATABASES
```

DB 선택

```
USE DB이름
```

ex) use 02

table 생성

```
CREATE TABLE table이름 (col과 속성 값)
```

ex)


```
CREATE TABLE products (
  id INT NOT NULL AUTO_INCREMENT PRIMARY KEY,
  name VARCHAR(50) NOT NULL,
  modulenum VARCHAR(15) NOT NULL,
  series VARCHAR(30) NOT NULL
);
```

```
mysql> create table products (id int not null auto_increment primary key, name varchar(50) not null, modulenum varchar(15) not null, series varchar(30) not null);
Query OK, 0 rows affected (0.13 sec)

mysql> desc products;
```

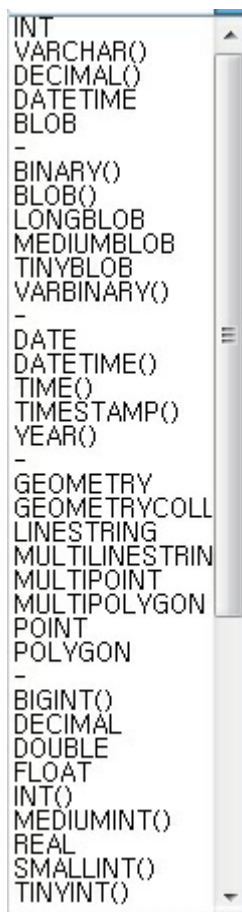
Field	Type	Null	Key	Default	Extra
id	int(11)	NO	PRI	NUL	auto_increment
name	varchar(50)	NO		NUL	
modulenum	varchar(15)	NO		NUL	
series	varchar(30)	NO		NUL	

```
4 rows in set (0.01 sec)
```

**** 각 column의 속성 값 ****

속성	설명
NOT NULL	빈칸 불가
AUTO_INCREMENT	자동 증가
PRIMARY KEY	기본 값으로 설정

...



table의 정보 확인

```
DESCRIBE 테이블이름
```

```
ex) DESC products;
```

데이터 저장(삽입)

INSERT into 테이블명 (col1, col2) VALUE (col1의 데이터, col2의 데이터)

ex)

```
INSERT INTO products (name, modelnumber, series) VALUES ('Eric Clapton Stratocaster', '0117602386', 'Artist');
```

```
mysql> INSERT INTO products (name, modelnumber, series) VALUES ('Eric Clapton Stratocaster', '0117602386', 'Artist');
Query OK, 1 row affected (0.01 sec)
```

```
mysql> select * from products;
```

id	name	modelnumber	series
1	Eric Clapton Stratocaster	0117602386	Artist

1 row in set (0.00 sec)

데이터 조회

SELECT col명 FROM 테이블명

ex) SELECT * FROM products;

The screenshot shows the MySQL Workbench interface. In the central editor, the query `SELECT * FROM o2.products;` is entered. Below the query editor, the results are displayed in a table grid. The table has four columns: id, name, modelnumber, and series. The data rows are:

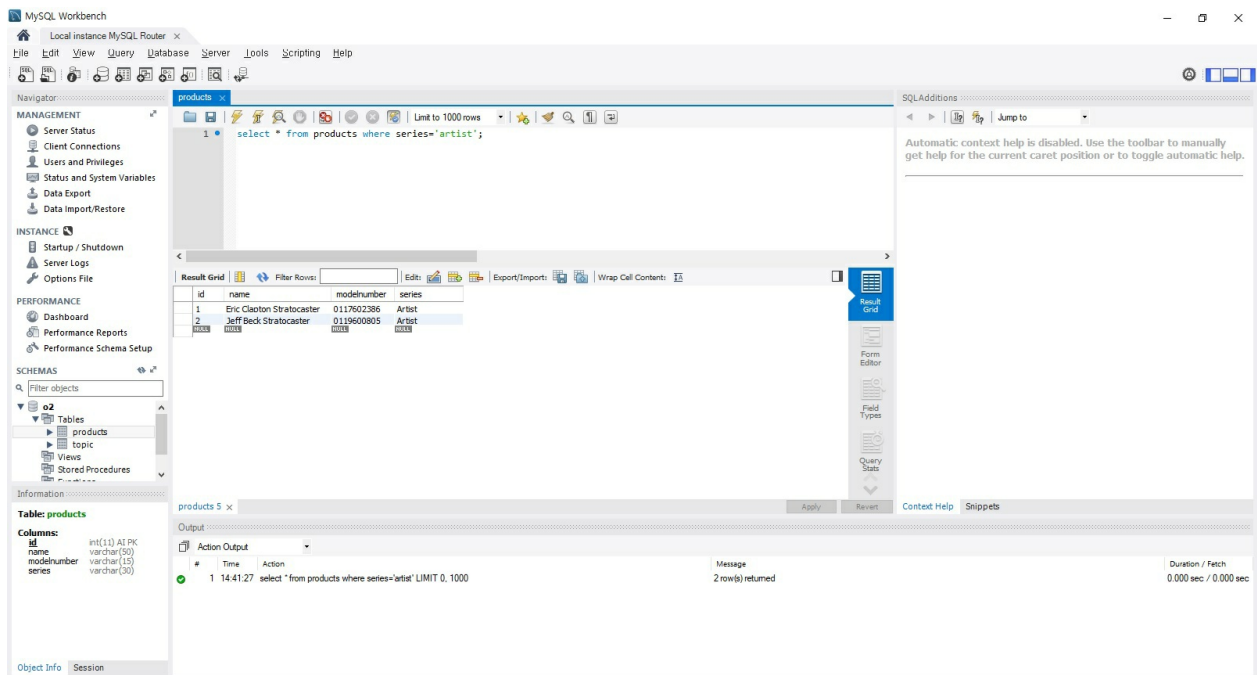
id	name	modelnumber	series
1	Eric Clapton Stratocaster	0117602386	Artist
2	Jeff Beck Stratocaster	0119600805	Artist
3	American Deluxe Stratocaster	011900	American Deluxe
4	American Deluxe Tele	011950	American Deluxe

At the bottom of the interface, the 'Output' tab shows the execution details: 'Action Output' for the query, with a message '4 row(s) returned' and a duration of '0.000 sec / 0.000 sec'.

조건 검사

select col명 FROM 테이블명 WHERE 조건

ex) select * from products where series='Artist'



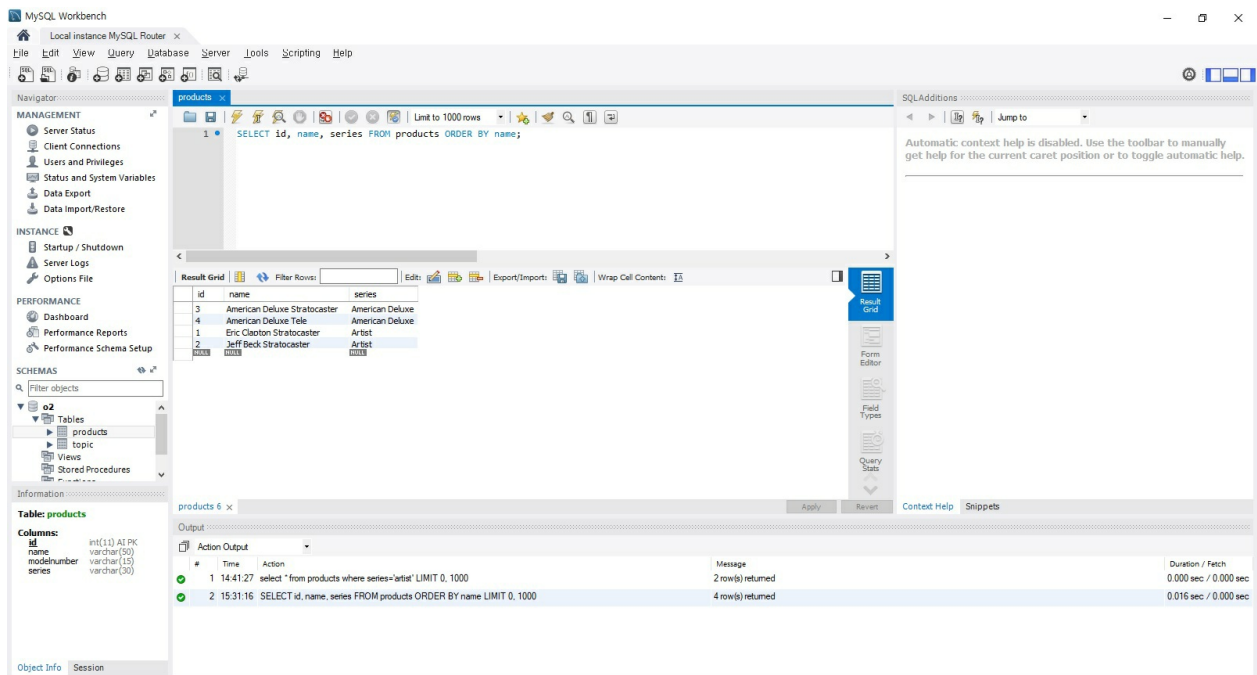
기본적인 MySQL 연산자

연산자	설명
=	좌우변이 같다.
!= or <>	좌우변이 다르다.
<	우변이 크다.
>	좌변이 크다.
<=	우변이 좌변보다 크거나 같다.
>=	좌변이 우변보다 크거나 같다.
OR	논리합
AND	논리곱

데이터 정렬

```
SELECT * from 테이블명 **ORDER BY** col명
```

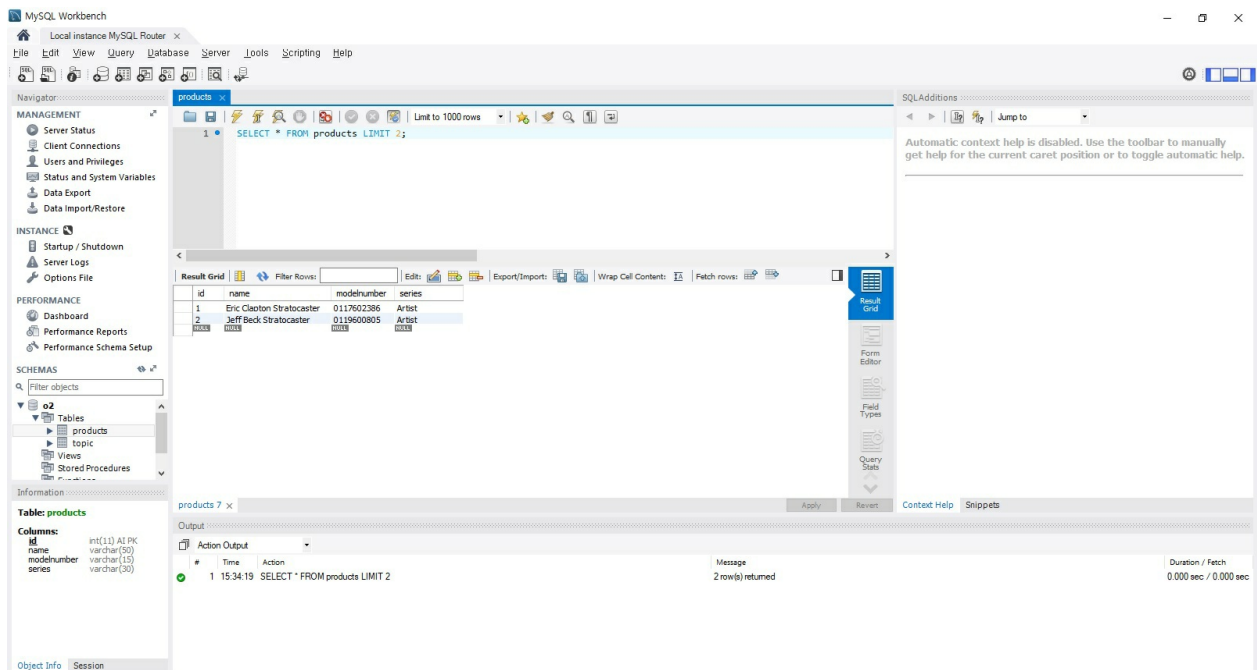
ex) `SELECT id, name, series FROM products ORDER BY name;`



특정 위치에 있는 데이터 선택

`SELECT * FROM 테이블명 **LIMIT 2**;`

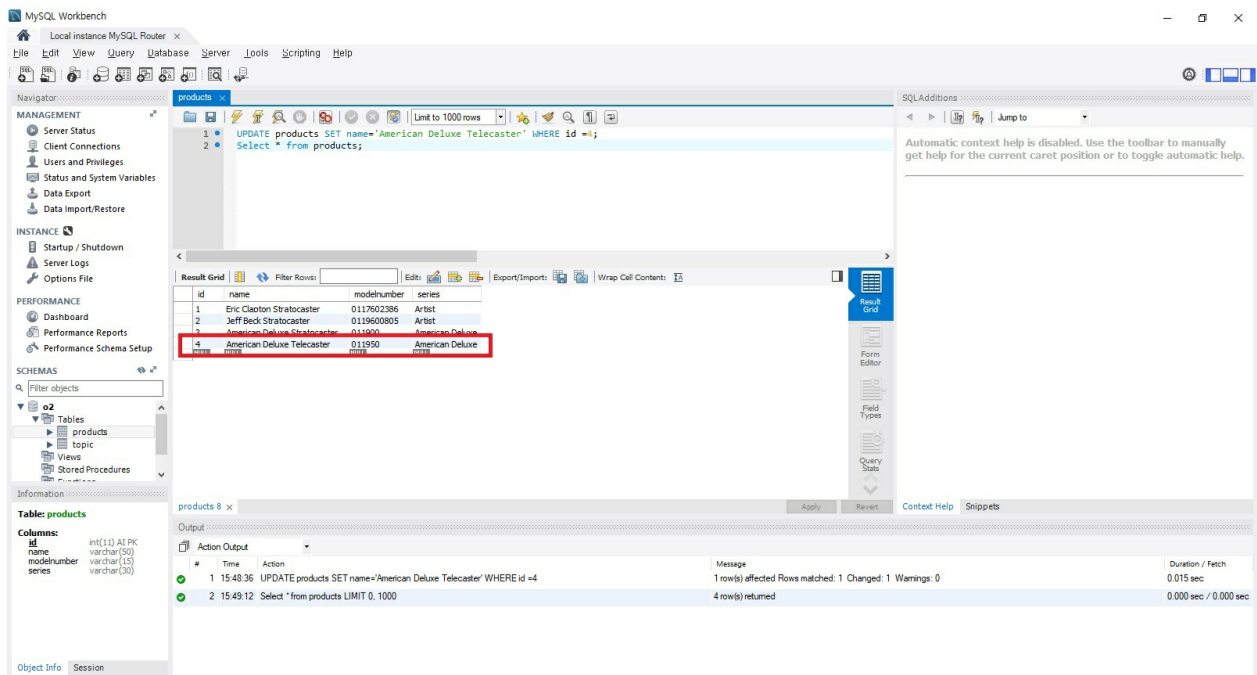
ex) `SELECT * FROM products LIMIT 2;`



데이터 수정

`UPDATE 테이블명 SET col명=값 WHERE 변경할row`

ex) `UPDATE products SET name='American Deluxe Telecaster' WHERE id =4;`



데이터 삭제

DELETE FROM products WHERE 삭제할row명

ex) DELETE FROM products WHERE id=10;

조건문으로 row를 설정하지 않으면 모든 데이터가 삭제되므로 주의

table 삭제

DROP TABLE 테이블명;

database 삭제

DROP DATABASE DB명;

3. MySQL 모듈

mysql의 메소드

createConnection(options) : DB접속

- options에 들어갈 객체의 속성
 - host : 호스트명
 - port : 포트명
 - user : mysql user이름
 - password : mysql user 비밀번호
 - database : 연결할 DB명
 - debug : 디버그모드 사용 유무

```
var mysql = require('mysql');

var client = mysql.createConnection({
  user : 'root',
  password : '비밀번호',
  database : o2
```

```
});
```

Connection객체의 method

`query(sql[callback])` : query 실행

```
client.query('SELECT * FROM products', function(error, result, fields) {
  if(error) {
    console.log('query문장 오류');
  }
  else {
    console.log(result);
  }
});
```

토큰

데이터를 입력할 때 ?토큰을 사용하는데 이는 JS뿐만 아니라 DB를 사용하는 많은 framework에서 공통적으로 사용하는 방법입니다. 알고자

```
client.query('INSERT INTO products (name, modelnumber, seires) VALUES (?, ?, ?)',
[request.params.name, request.params.modelnumber, request.params.series],
function(error, data, fields) {
  ~~~
});
```

4. MySQL 모듈을 사용한 CRUD 구현

사전 작업

```
npm install express ejs mysql body-parser
```

데이터 표시

[list](#)

데이터 삭제

데이터 추가

[insert](#)

데이터 수정

전체코드

[app.js](#)

[list](#)

[insert](#)

[edit](#)