

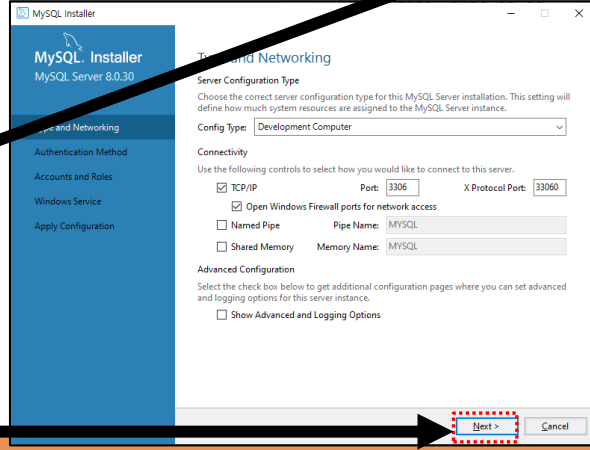
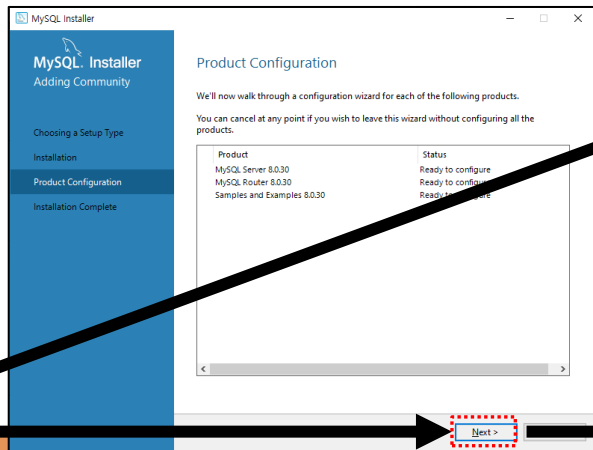
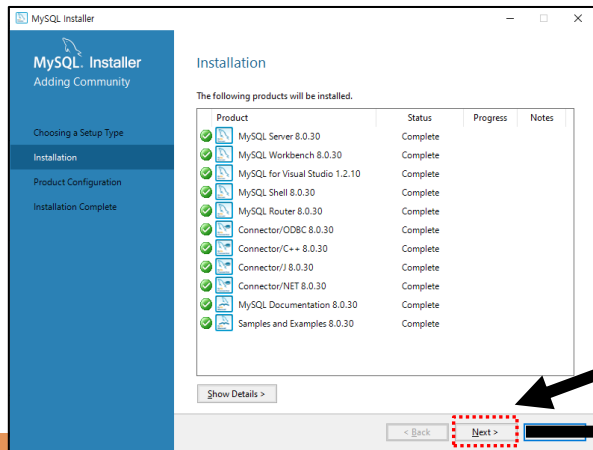
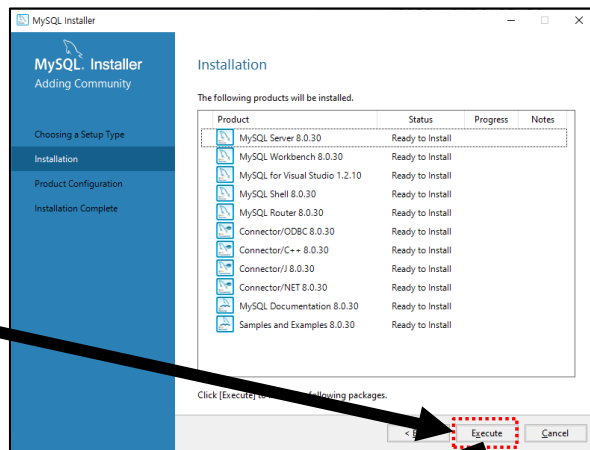
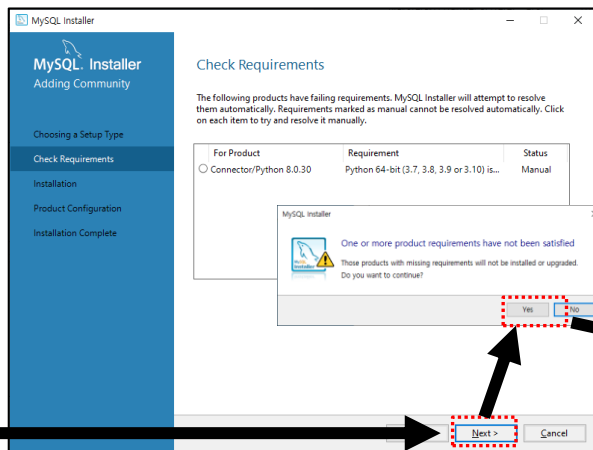
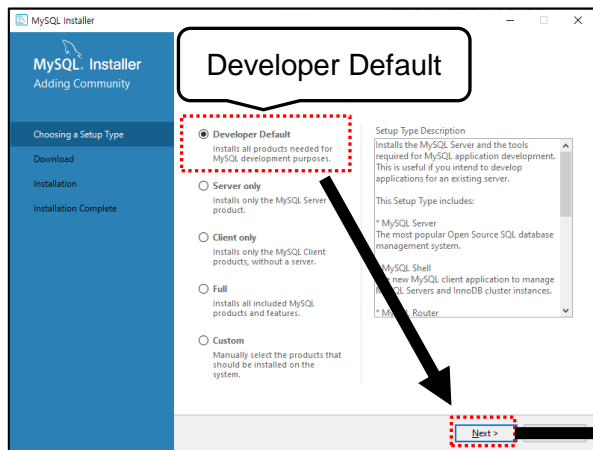
MySQL & H2 설치

지능물류빅데이터연구소 이상현

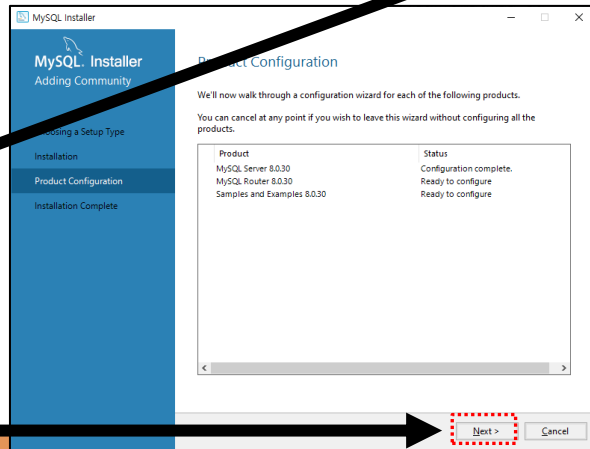
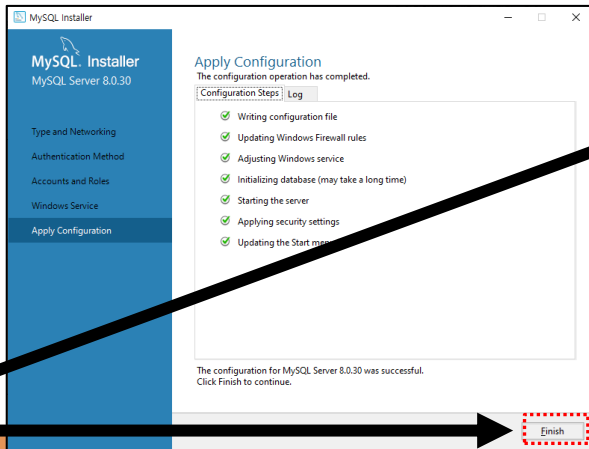
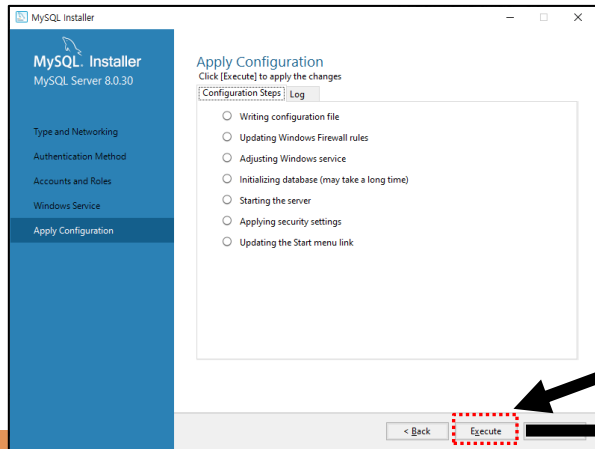
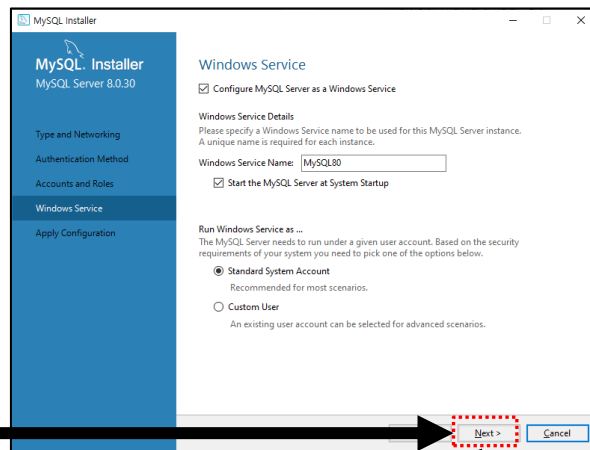
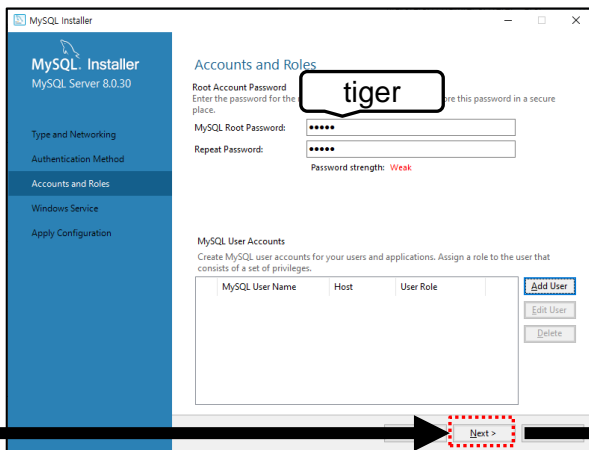
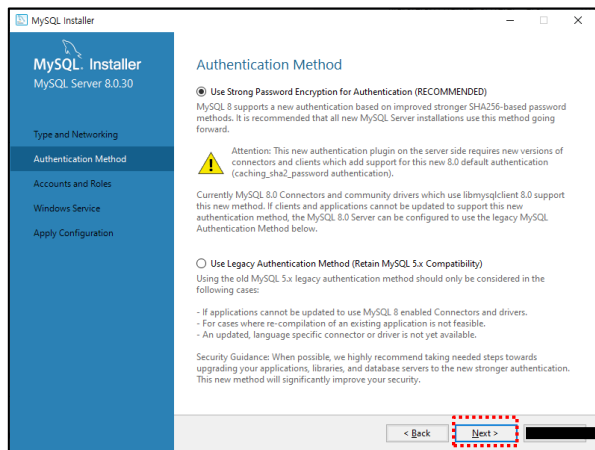
MySQL 설치

1. 웹 브라우저를 열어 MySQL 홈페이지에 접속 <https://www.mysql.com>
2. 상단 메뉴에서 [Downloads]를 클릭
3. 화면 중앙 [MySQL Community (GPL) Downloads >>]를 클릭
4. [MySQL Community Server]를 클릭
5. 화면 중앙 [MySQL Installer for Windows]를 클릭
6. [mysql-installer-web-community-8.0.30.0.msi]를 Download
7. 화면 하단 [No thanks, just start my download]를 클릭
8. 다운받은 파일을 실행해서 설치

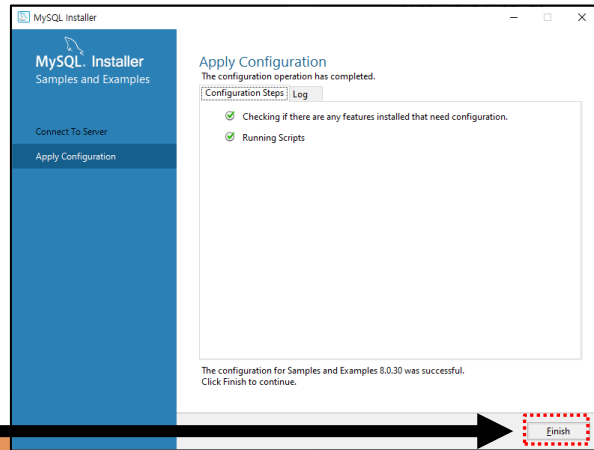
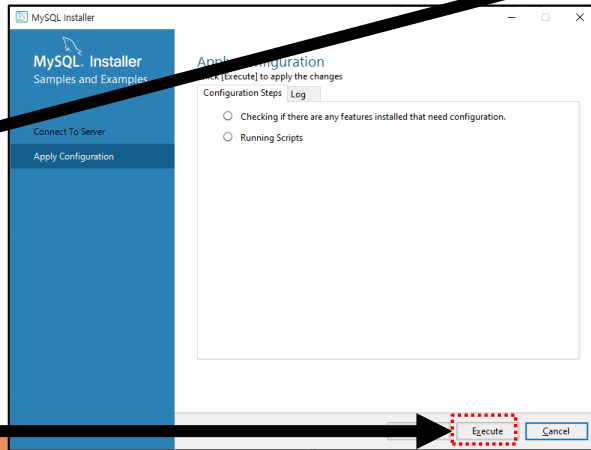
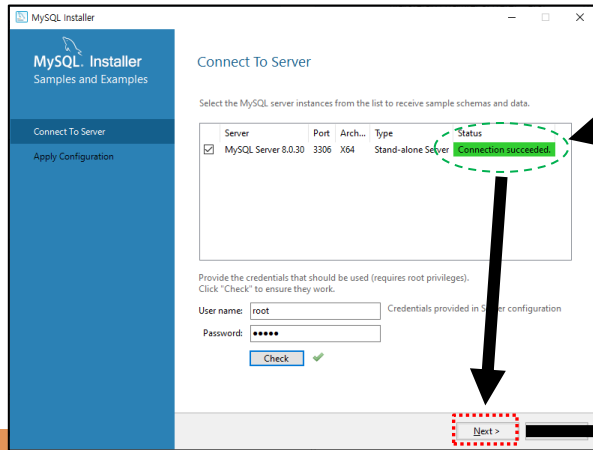
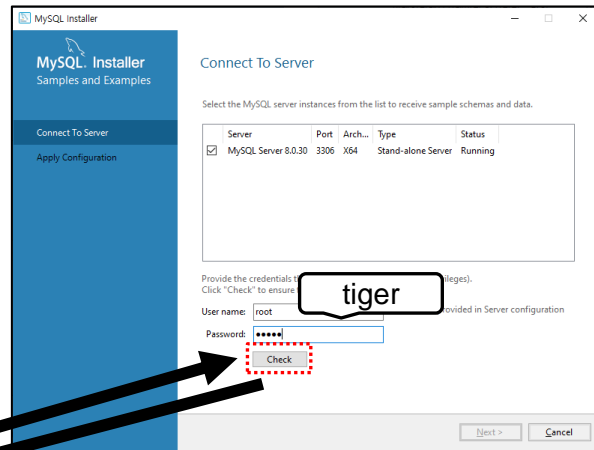
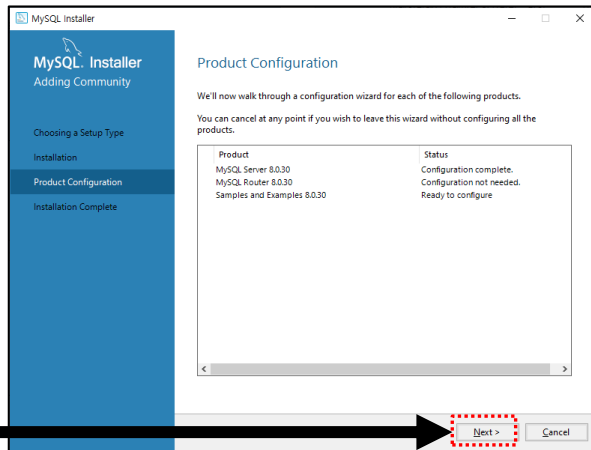
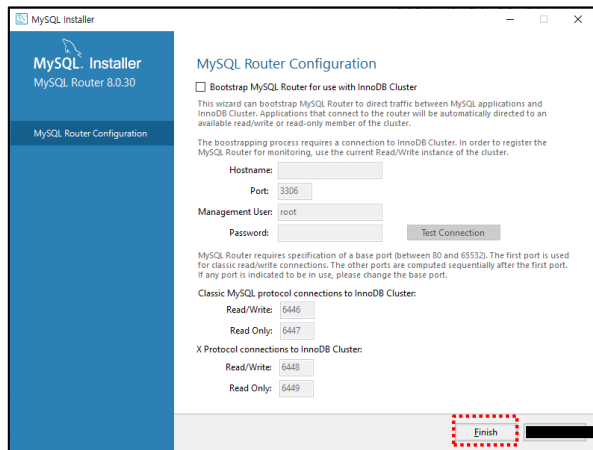
MySQL 설치



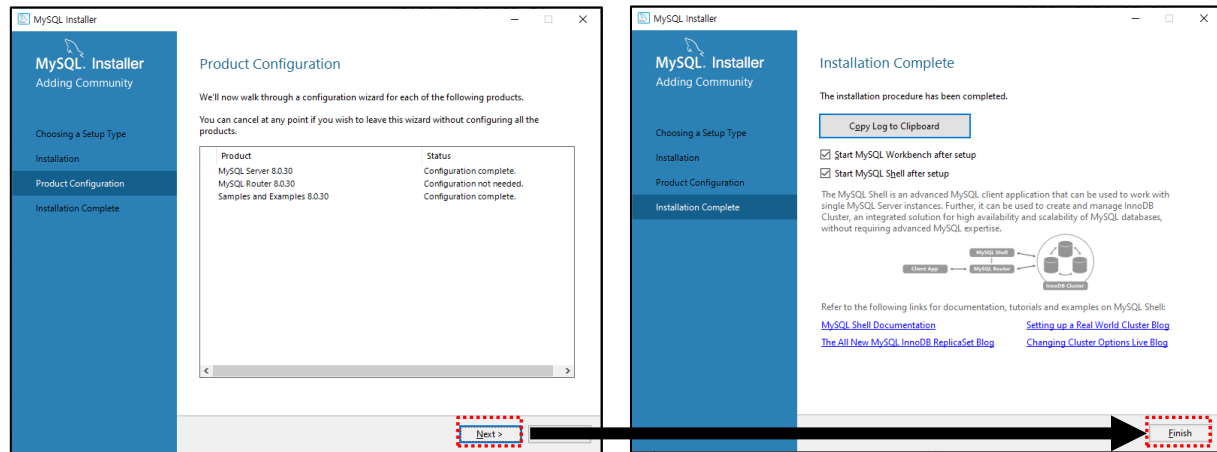
MySQL 설치



MySQL 설치

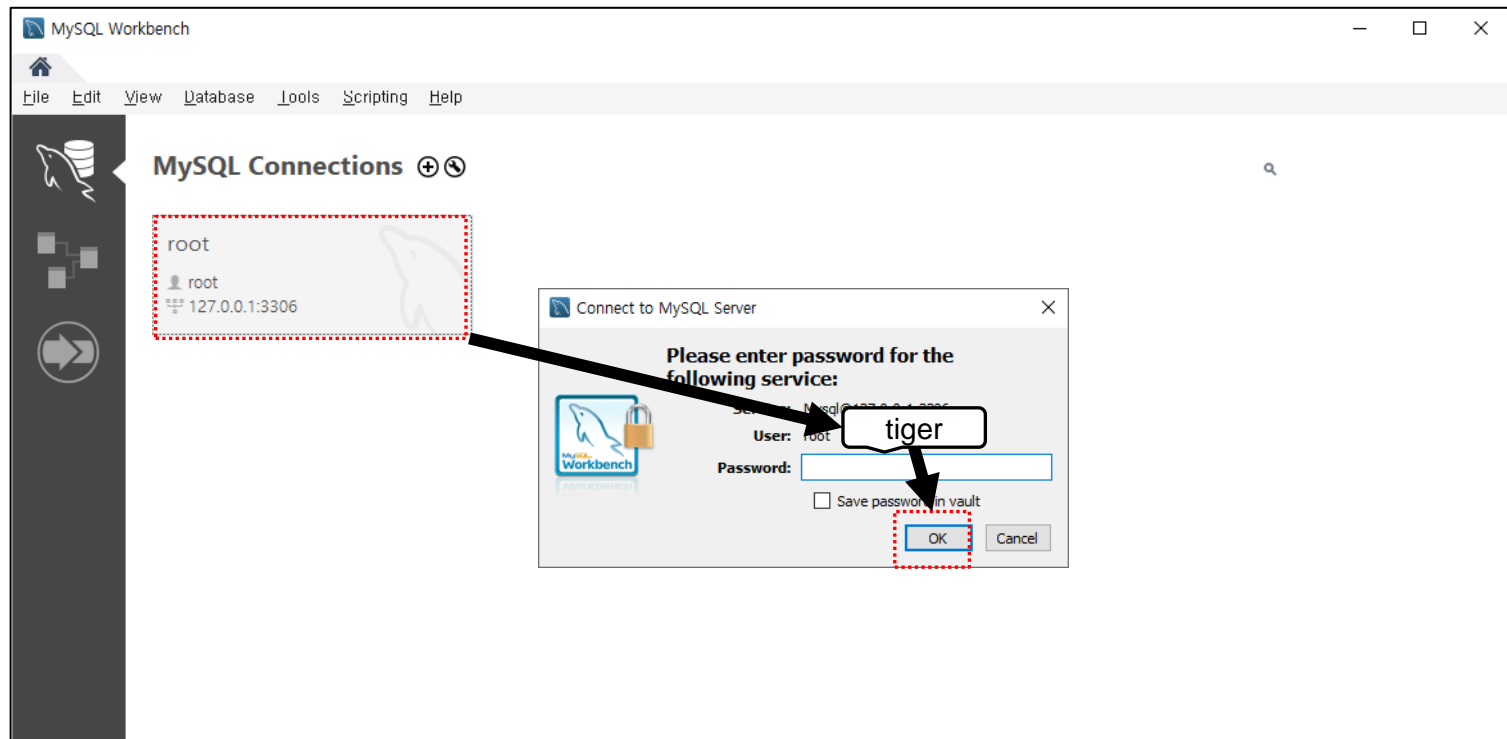


MySQL 설치



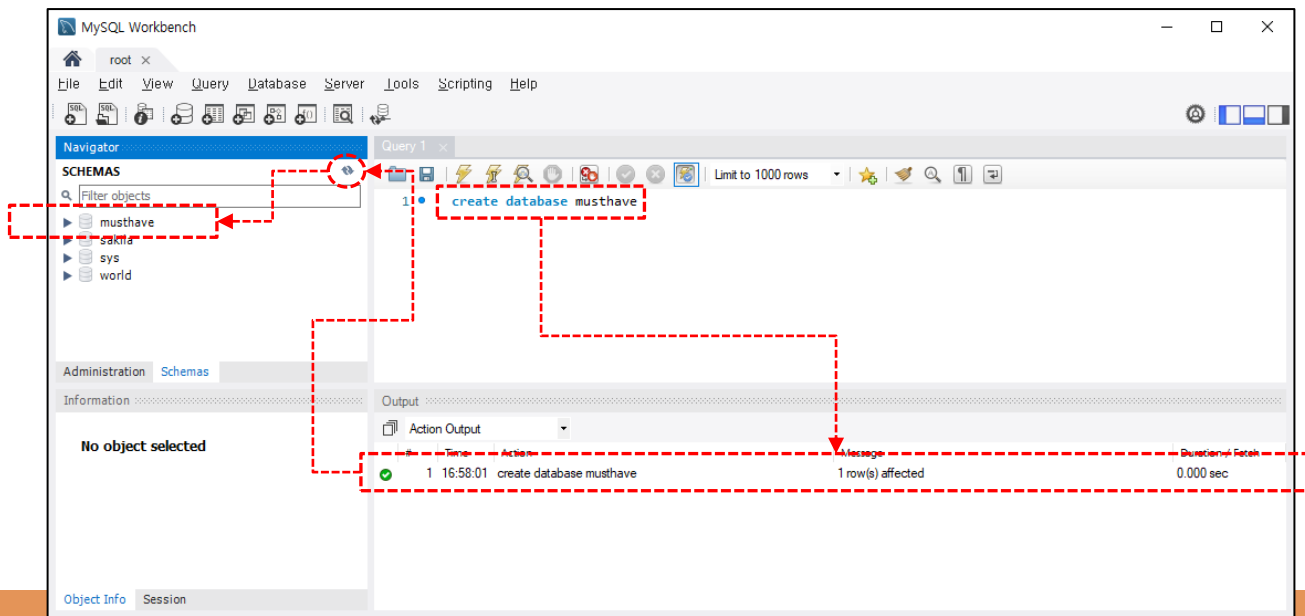
데이터베이스 생성

- 시작 메뉴에서 [MySQL] - [MySQL Workbench 8.0 CE]를 실행



데이터베이스 생성

- 질의 Tab 생성 : [Ctrl+t] or [File]-[New Query Tab]
- SQL 입력 : `create database musthave;`
- SQL 실행 : [Ctrl+Enter] or [Query] - [Execute Current Statement]
- 결과 확인 : [Navigator] Refresh 아이콘 클릭



사용자 계정 생성 및 권한 설정

- [Navigator] - [Administration Tab] - [Users and Privileges]

User	From Host
mysql.infoschema	localhost
mysql.session	localhost
mysql.sys	localhost
root	localhost

Add Account Delete Refresh

Login Account Limits Administrative Roles Schema Privileges

Login Name:

Authentication Type:

Limit to Hosts Matching:

Password:
Weak password.

Confirm Password:

Expire Password

Login Name : musthave
Password : tiger

사용자 계정 생성

Login Account Limits Administrative Roles Schema Privileges

Schema Privileges

Schema:

Privileges:

Schema and Host fields may use % and _ wildcards.
The server will match specific entries before wildcarded ones.

Revoke All Privileges Delete Entry **Add Entry...**

권한 설정

New Schema Privilege Definition

Select the Schema for which the user 'newuser' will have the privileges you want to define.

Schema

☐ All Schema (%) This rule will apply to any schema name.

☐ Schemas matching pattern: This rule will apply to schemas that match the given name or pattern.
You may use _ and % as wildcards in a pattern.
Escape these characters with \ in case you want their literal value.

☒ Selected schema: Select a specific schema name for the rule to apply to.

Cancel **OK**

사용자 계정 생성 및 권한 설정

Login Account Limits Administrative Roles Schema Privileges

Schema: musthave Privileges: none

Schema and Host fields may use % and _ wildcards. The server will match specific entries before wildcarded ones.

The user 'newuser'@'%' will have the following access rights on the schema 'musthave':

Object Rights

- ☐ SELECT
- ☐ INSERT
- ☐ UPDATE
- ☐ DELETE
- ☐ EXECUTE
- ☐ SHOW VIEW

DDL Rights

- ☐ CREATE
- ☐ ALTER
- ☐ REFERENCES
- ☐ INDEX
- ☐ CREATE VIEW
- ☐ CREATE ROUTINE
- ☐ ALTER ROUTINE
- ☐ EVENT
- ☐ DROP
- ☐ TRIGGER

Other Rights

- ☐ GRANT OPTION
- ☐ CREATE TEMPORARY TABLES
- ☐ LOCK TABLES

Unselect All Select "ALL" Revert Apply

Object Rights

- ☒ SELECT
- ☒ INSERT
- ☒ UPDATE
- ☒ DELETE
- ☒ EXECUTE
- ☒ SHOW VIEW

DDL Rights

- ☒ CREATE
- ☒ ALTER
- ☒ REFERENCES
- ☒ INDEX
- ☒ CREATE VIEW
- ☒ CREATE ROUTINE
- ☒ ALTER ROUTINE
- ☒ EVENT
- ☒ DROP
- ☒ TRIGGER

Other Rights

- ☐ GRANT OPTION
- ☒ CREATE TEMPORARY TABLES
- ☒ LOCK TABLES

Unselect All Select "ALL" Revert Apply

User Accounts	
User	From Host
musthave	%
mysql.infoschema	localhost
mysql.session	localhost
mysql.sys	localhost
root	localhost

World 데이터베이스

1. world.sql download
2. MySQL Workbench 실행 후 root 로그인
3. [File]-[Open SQL Script...] or [Ctrl+Shift+o]
 - 1번에서 다운받은 world.sql 선택
4. [Query]-[Execute (All or Selection)] or [Ctrl+Shift+Enter]

Query 실습

- DataBase : **world**
- Table : **country, countrylanguage**
- Query
 1. 'English'를 사용하고 있는 나라의 수를 출력하세요.
 2. 대한민국이 사용하고 있는 언어를 출력하세요.
 3. 'English'를 공식언어(**IsOfficial**)로 사용하고 있는 나라의 대륙과 이름을 출력하세요.
 4. 'English'를 사용하는 나라의 수를 대륙별로 출력하세요.

H2Database 설치 및 실행

1. 웹 브라우저를 열어 H2Database 홈페이지에 접속 <https://www.h2database.com>
2. 화면 중앙 [Windows Installer]를 Download
3. 다운받은 파일을 실행해서 설치 시작
4. [시작메뉴] - [H2] - [H2 Console] 실행

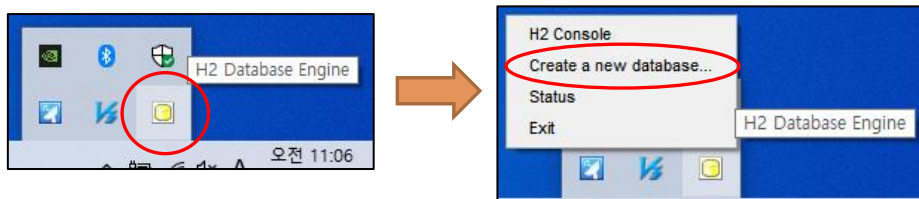


The screenshot shows the '로그인' (Login) window of the H2 Database console. It contains the following fields and controls:

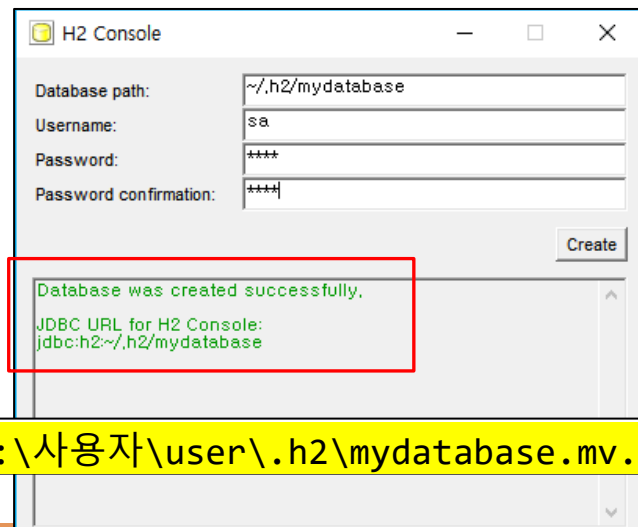
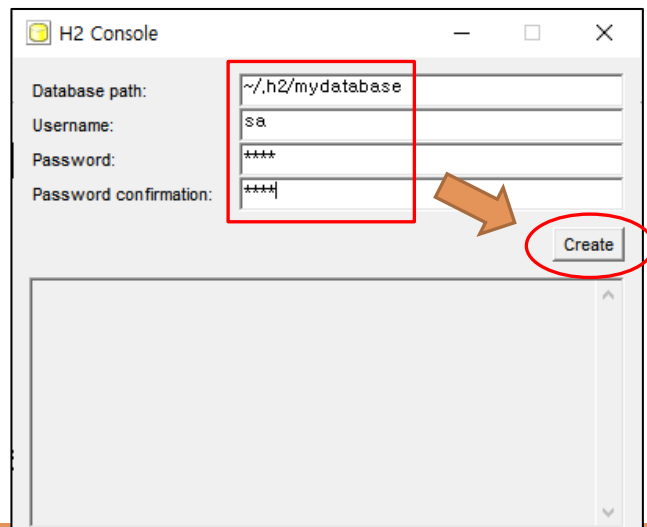
- 저장한 설정:** A dropdown menu showing 'Generic H2 (Server)'.
- 설정 이름:** A text input field containing 'Generic H2 (Server)', with '저장' (Save) and '삭제' (Delete) buttons to its right.
- 드라이버 클래스:** A text input field containing 'org.h2.Driver'.
- JDBC URL:** A text input field containing 'jdbc:h2:tcp://localhost/~test'.
- 사용자명:** A text input field containing 'sa'.
- 비밀번호:** An empty text input field.
- At the bottom, there are two buttons: '연결' (Connect) and '연결 시험' (Test Connection).

H2Database 생성 및 설정

1. 작업표시줄 트레이 아이콘에서 [H2 Database Engine] 아이콘에서 오른쪽 마우스 클릭



2. Create a new database... 선택 → 본인 DB 명을 아래와 같이 입력 (~/.h2/mydatabase)



H2Database 생성 및 설정

1. H2 Console 실행

2. [JDBC URL:] 을 오른쪽 그림처럼 입력

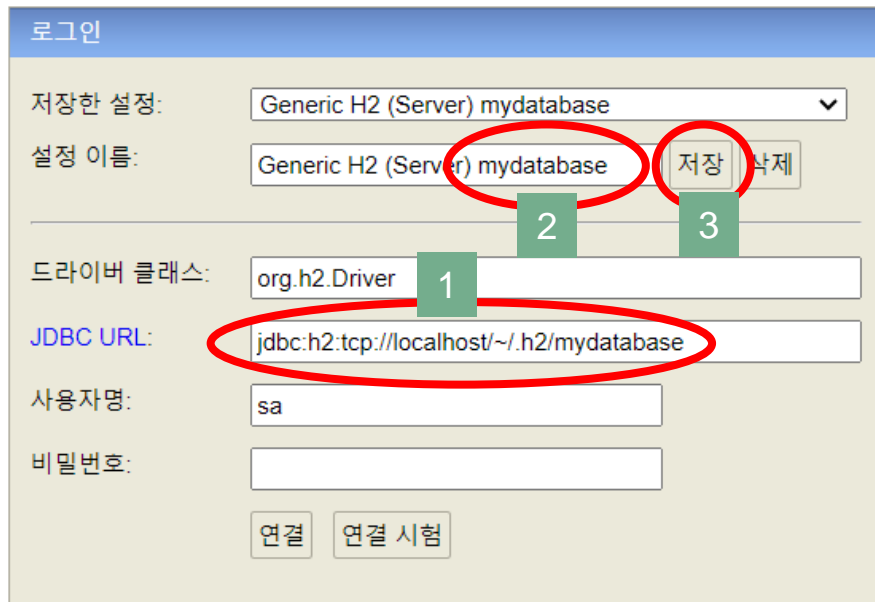
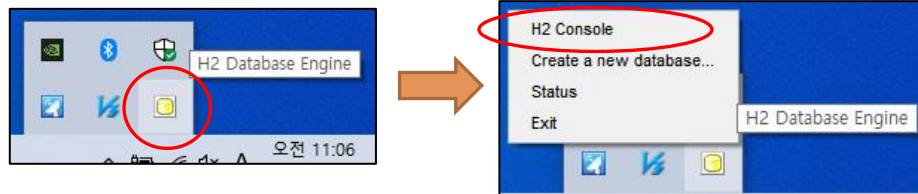
- **mydatabase**는 예제 이름임.
- 본인 DB이름으로 변경

3. 설정 이름 제일 뒤에 DB명 추가

4. 설정 이름 저장

5. 비밀번호 입력

6. 연결



H2Database 실행 화면

jdbc:h2:tcp://localhost/~/.h2/mydatabase

INFORMATION_SCHEMA

사용자

H2 2.2.224 (2023-09-17)

Navigator

실행 Run Selected 자동 완성 지우기 SQL 문:

SQL 입력창

중요 명령

?	이 도움말 페이지 보기
	명령 이력 보기
Ctrl+엔터	현재의 SQL 문 실행
Shift+엔터	Executes the SQL statement defined by the text selection
Ctrl+Space	자동 완성
	데이터베이스 연결 끊기

샘플 SQL 스크립트

테이블이 존재하는 경우 삭제하기	DROP TABLE IF EXISTS TEST;
새 테이블 만들기	CREATE TABLE TEST(ID INT PRIMARY KEY,
컬럼은 ID와 NAME	NAME VARCHAR(255));
행 추가	INSERT INTO TEST VALUES(1, 'Hello');
행 추가	INSERT INTO TEST VALUES(2, 'World');
테이블 질의	SELECT * FROM TEST ORDER BY ID;
행 데이터 변경	UPDATE TEST SET NAME='Hi' WHERE ID=1;
행 삭제	DELETE FROM TEST WHERE ID=2;
도움말	HELP ...

SQL 결과 출력창