

제02장

MySQL 설치

MySQL

학습목표

1. MySQL의 특징에 대해서 알 수 있다.
2. MySQL을 설치할 수 있다.
3. Workbench 초기 설정을 진행하고 Path를 등록할 수 있다.

목차

1. MySQL 이란?
2. MySQL 설치
3. Workbench 설정 및 Path 등록

```

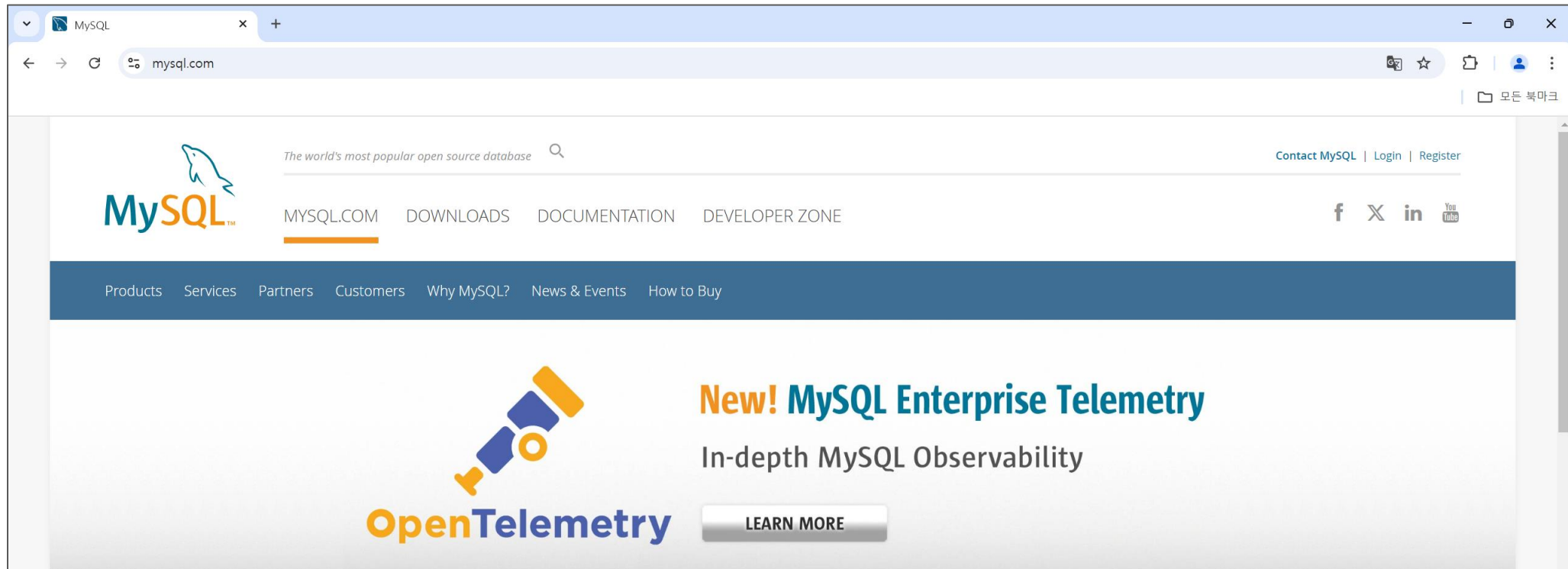
each: function(e, t, n) {
    var r, i = 0,
        o = e.length,
        a = M(e);
    if (n) {
        if (a) {
            for (; o > i; i++)
                if (r = t.apply(e[i], n), r === !1) break;
        } else
            for (i in e)
                if (r = t.apply(e[i], n), r === !1) break;
    } else if (a) {
        for (; o > i; i++)
            if (r = t.call(e[i], e[i]), r === !1) break;
    } else
        for (i in e)
            if (r = t.call(e[i], e[i]), r === !1) break;
    return e;
},
trim: b && !b.call("\uffff\u00a0") ? function(e) {
    return null == e ? "" : b.call(e);
} : function(e) {
    return null == e ? "" : (e + "").replace(C, "");
},
makeArray: function(e, t) {
    var n = t || [];
    return null != e && (M(Object(e)) ? x.merge(n, "string"
),
isArray: function(e, t, n) {
    var r;
    if (t) {
        if (n) return m.call(t, e, n);
        for (r = t.length, r = r ? 0 > r ? Math.max(0, r + n
            if (n in t && t[n] === e) return n;
    }
}

```

1. MySQL 이란?

MySQL

- MySQL 홈페이지
<https://mysql.com>

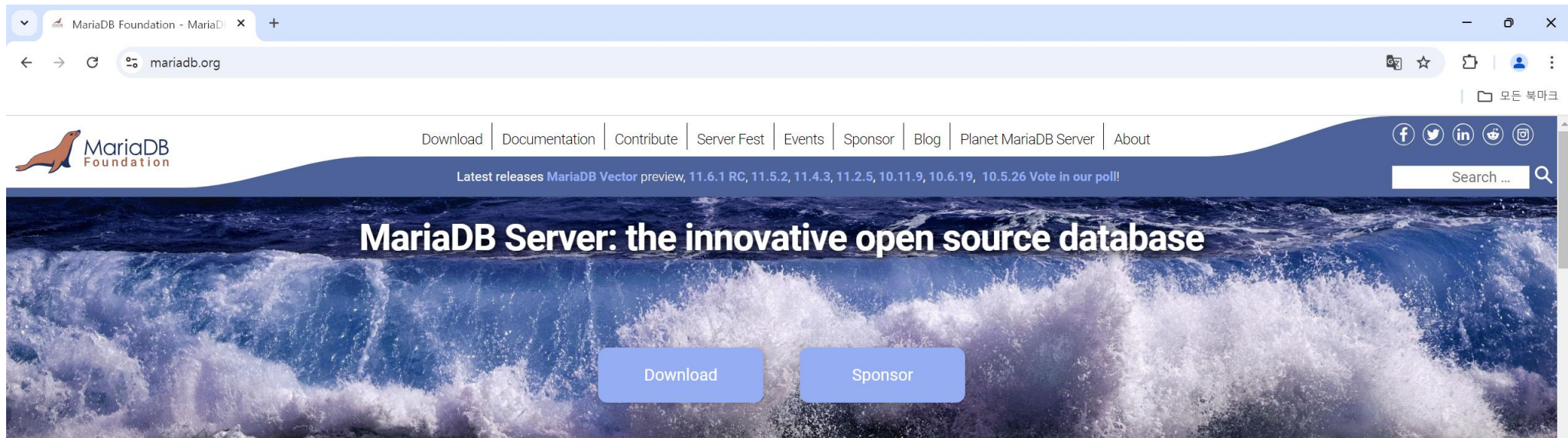


MySQL

- 미국 오라클(Oracle)사에서 제공하는 관계형 DBMS
- 오픈소스로 제공되지만 상용 버전과 무료 버전이 모두 존재함
- 상용 버전
 - Standard < Enterprise < Cluster CGE
- 무료 버전
 - Community (Enterprise 에디션과 거의 차이 없음)

MariaDB

- MySQL의 수정 버전
- 오라클 소유의 불확실한 MySQL 라이선스 문제를 해결하기 위해서 만들어짐
- MySQL과 동일한 소스코드를 사용하므로 사용방법이 거의 동일함



MariaDB 홈페이지 <https://mariadb.org>


```

each: function(e, t, n) {
    var r, i = 0,
        o = e.length,
        a = M(e);
    if (n) {
        if (a) {
            for (; o > i; i++)
                if (r = t.apply(e[i], n), r === !1) break;
        } else
            for (i in e)
                if (r = t.apply(e[i], n), r === !1) break;
    } else if (a) {
        for (; o > i; i++)
            if (r = t.call(e[i], e[i]), r === !1) break;
    } else
        for (i in e)
            if (r = t.call(e[i], e[i]), r === !1) break;
    return e;
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trim: b && !b.call("\uffff\u00a0") ? function(e) {
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} : function(e) {
    return null == e ? "" : (e + "").replace(C, "");
},
makeArray: function(e, t) {
    var n = t || [];
    return null != e && (M(Object(e)) ? x.merge(n, "string"
    ),
inArray: function(e, t, n) {
    var r;
    if (t) {
        if (n) return m.call(t, e, n);
        for (r = t.length, r = r ? 0 > n ? Math.max(0, r + n) : n; r < t.length; r++)
            if (n in t && t[n] === e) return n;
    }
}

```

2. MySQL 설치

MySQL 다운로드

■ MySQL 다운로드

<https://dev.mysql.com/downloads/>

[Learn More »](#)

[Customer Download from My Oracle Support \(MOS\) »](#)

[Trial Download from Oracle edelivery »](#)

[MySQL Community \(GPL\) Downloads »](#)

무료 버전인
MySQL Community Server
선택

⬇ MySQL Community Downloads

- MySQL Yum Repository
- MySQL APT Repository
- MySQL SUSE Repository
- **MySQL Community Server**
- MySQL NDB Cluster
- MySQL Router
- MySQL Shell
- MySQL Operator
- MySQL NDB Operator
- MySQL Workbench
- MySQL Installer for Windows
- C API (libmysqlclient)
- Connector/C++
- Connector/J
- Connector/NET
- Connector/Node.js
- Connector/ODBC
- Connector/Python
- MySQL Native Driver for PHP
- MySQL Benchmark Tool
- Time zone description tables
- Download Archives

MySQL 다운로드

■ MySQL 8.0.x 버전 다운로드

MySQL 8.0 버전

General Availability (GA) Releases Archives

MySQL Community Server 8.0.40

Select Version:
8.0.40

Select Operating System:
Microsoft Windows

Recommended Download:

MySQL Installer
for Windows

All MySQL Products. For All Windows Platforms.
In One Package.

Starting with MySQL 5.6 the MySQL Installer package replaces the standalone MSI packages.


Windows (x86, 32 & 64-bit), MySQL Installer MSI

[Go to Download Page >](#)

MySQL 다운로드

■ mysql-installer-community 다운로드

MySQL Installer 8.0.40

 **Note:** MySQL 8.0 is the final series with MySQL Installer. As of MySQL 8.1, use a MySQL product's MSI or Zip archive for installation. MySQL Server 8.1 and higher also bundle MySQL Configurator, a tool that helps configure MySQL Server.

Select Version:

Select Operating System:

Windows (x86, 32-bit), MSI Installer (mysql-installer-web-community-8.0.40.0.msi)	8.0.40	2.1M	Download
Windows (x86, 32-bit), MSI Installer (mysql-installer-community-8.0.40.0.msi)	8.0.40	306.5M	Download

MySQL 다운로드

■ 로그인 없이 다운로드

⬇ MySQL Community Downloads

Login Now or Sign Up for a free account.

An Oracle Web Account provides you with the following advantages:

- Fast access to MySQL software downloads
- Download technical White Papers and Presentations
- Post messages in the MySQL Discussion Forums
- Report and track bugs in the MySQL bug system

Login »

using my Oracle Web account

Sign Up »

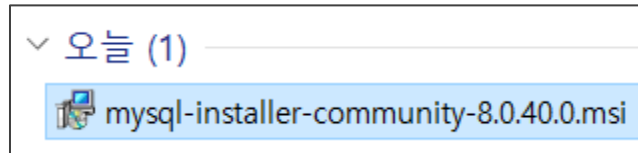
for an Oracle Web account

MySQL.com is using Oracle SSO for authentication. If you already have an Oracle Web account, click the Login link. Otherwise, you can signup for a free account by clicking the Sign Up link and following the instructions.

No thanks, just start my download.

MySQL 설치 시작

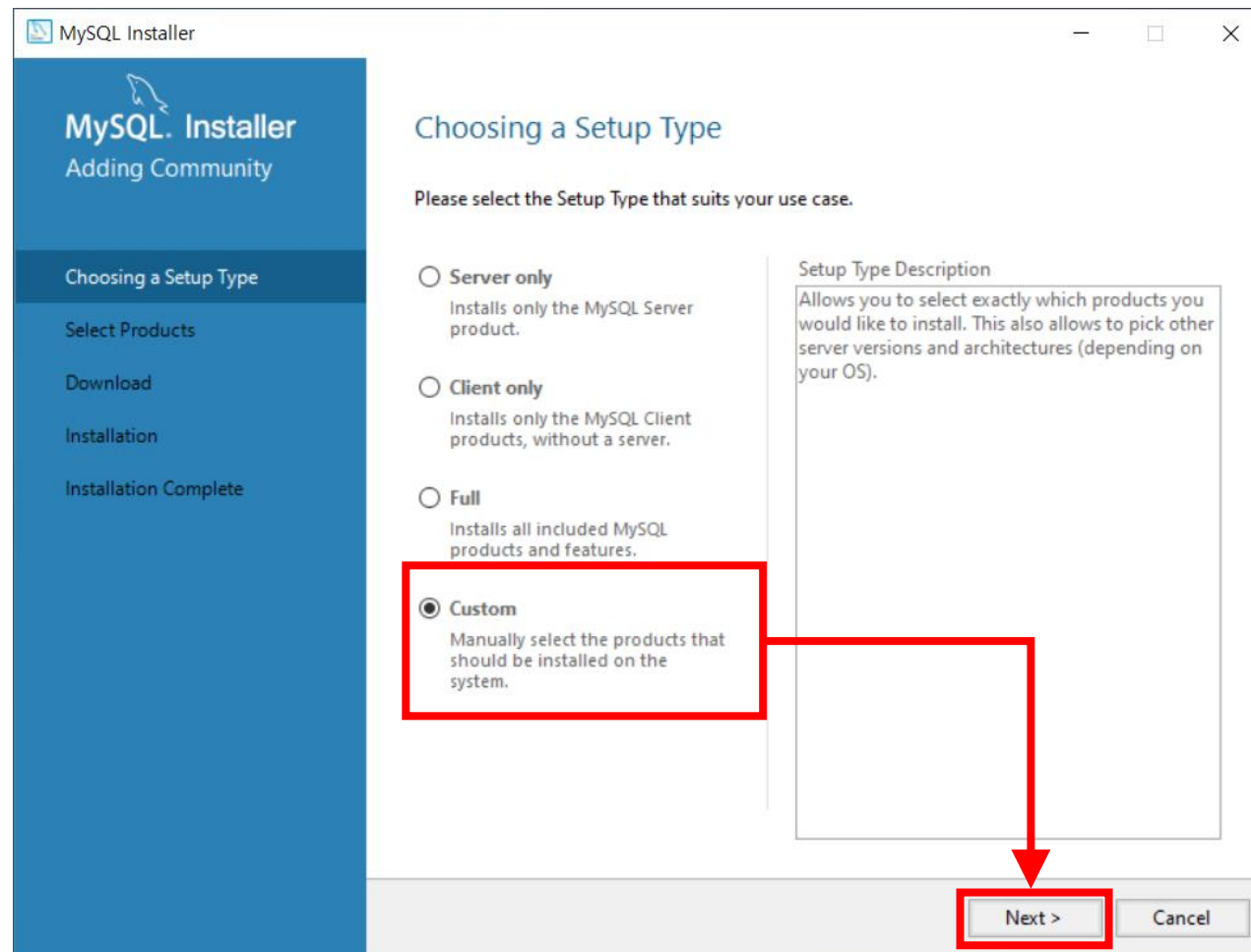
- 설치 파일 실행



더블 클릭으로 설치 시작

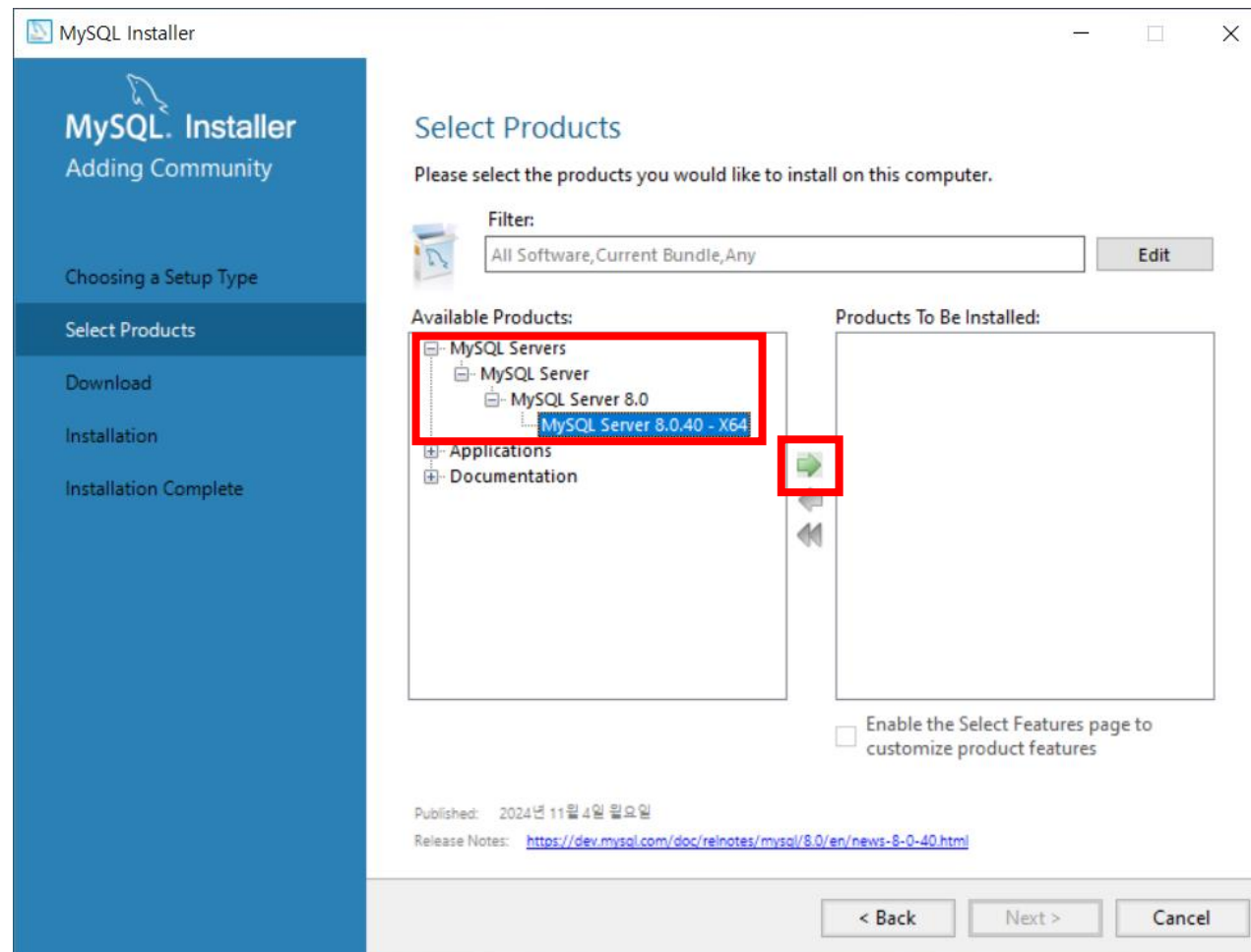
MySQL 설치

■ 설치 타입 : Custom



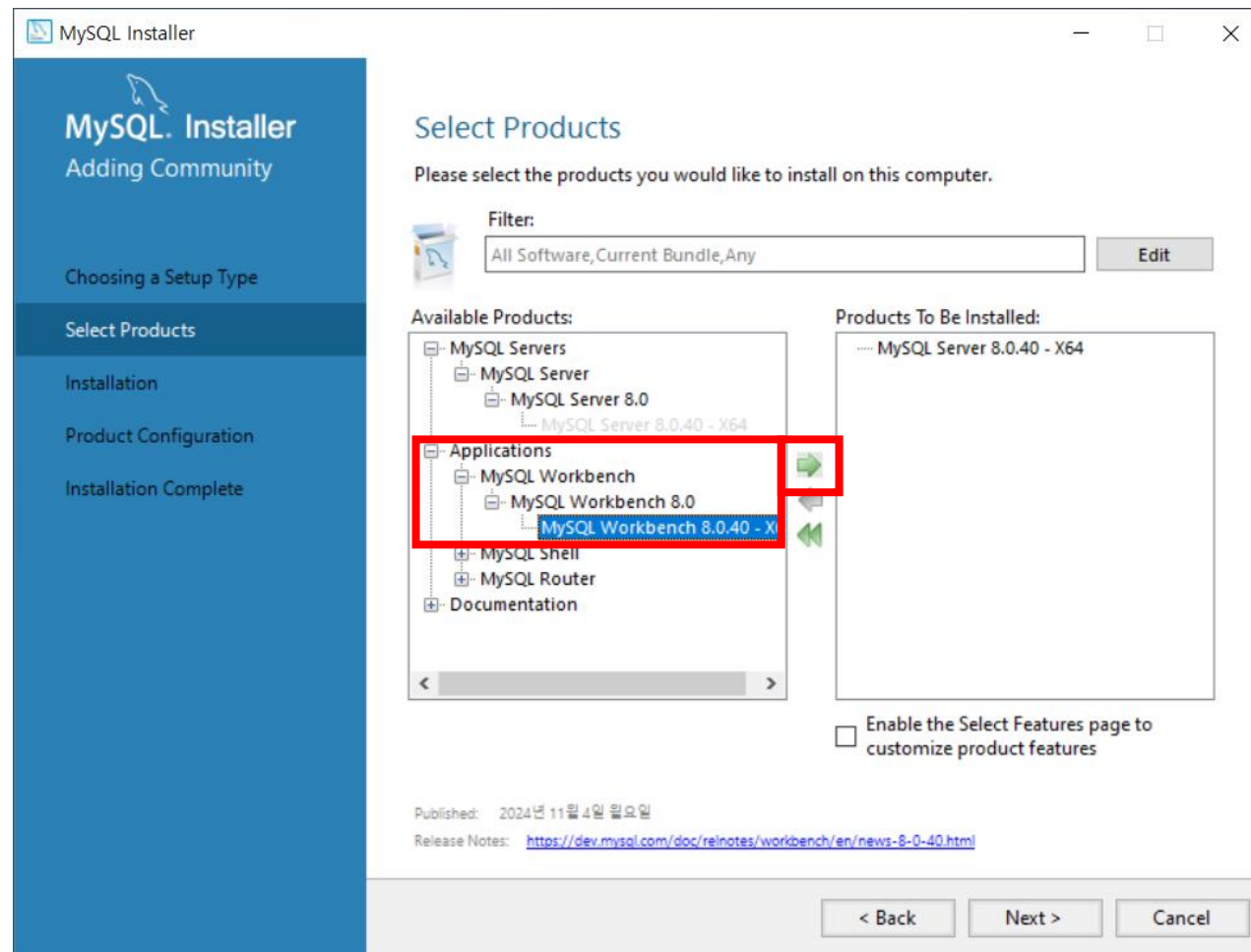
MySQL 설치

■ MySQL Server 선택



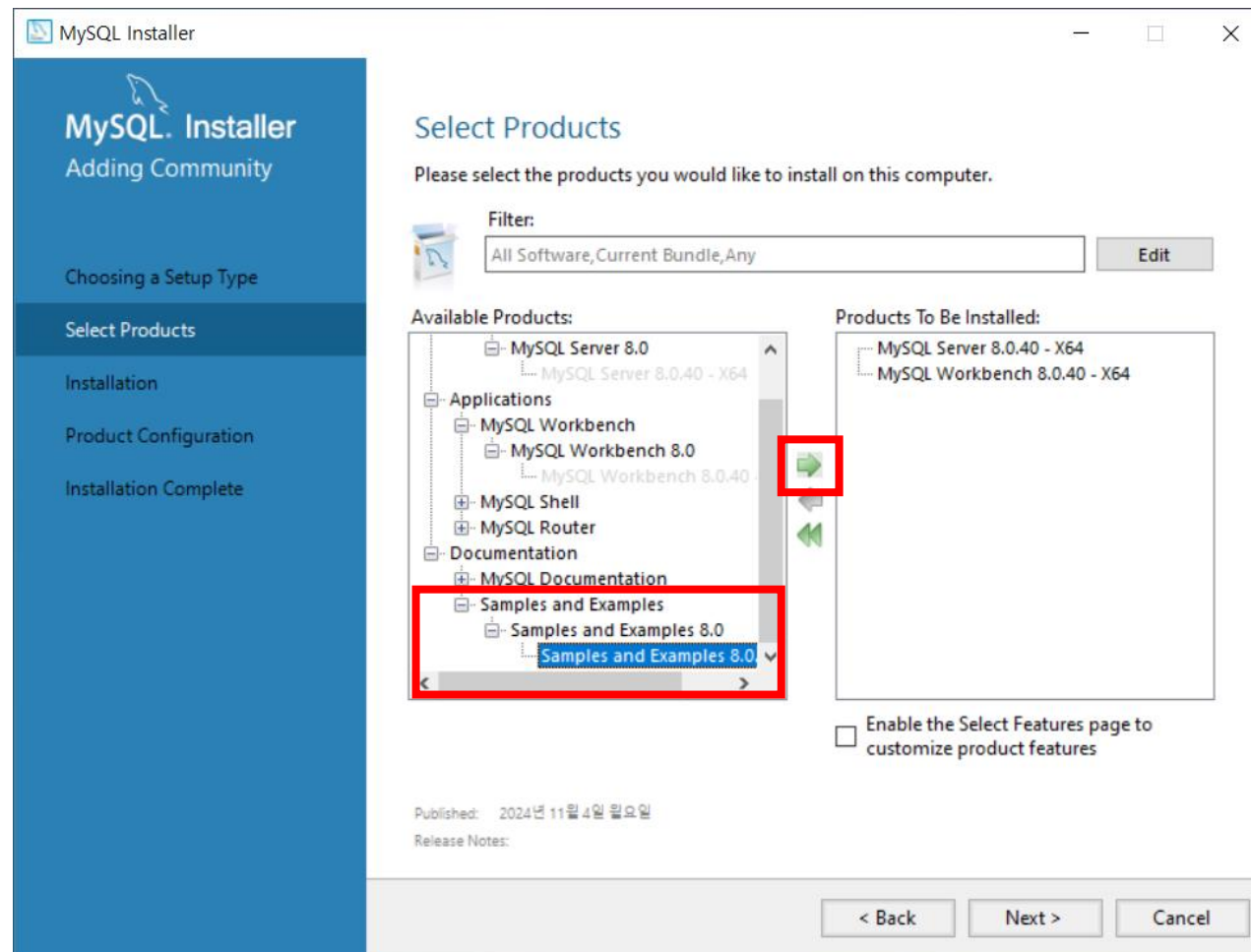
MySQL 설치

■ MySQL Workbench 선택



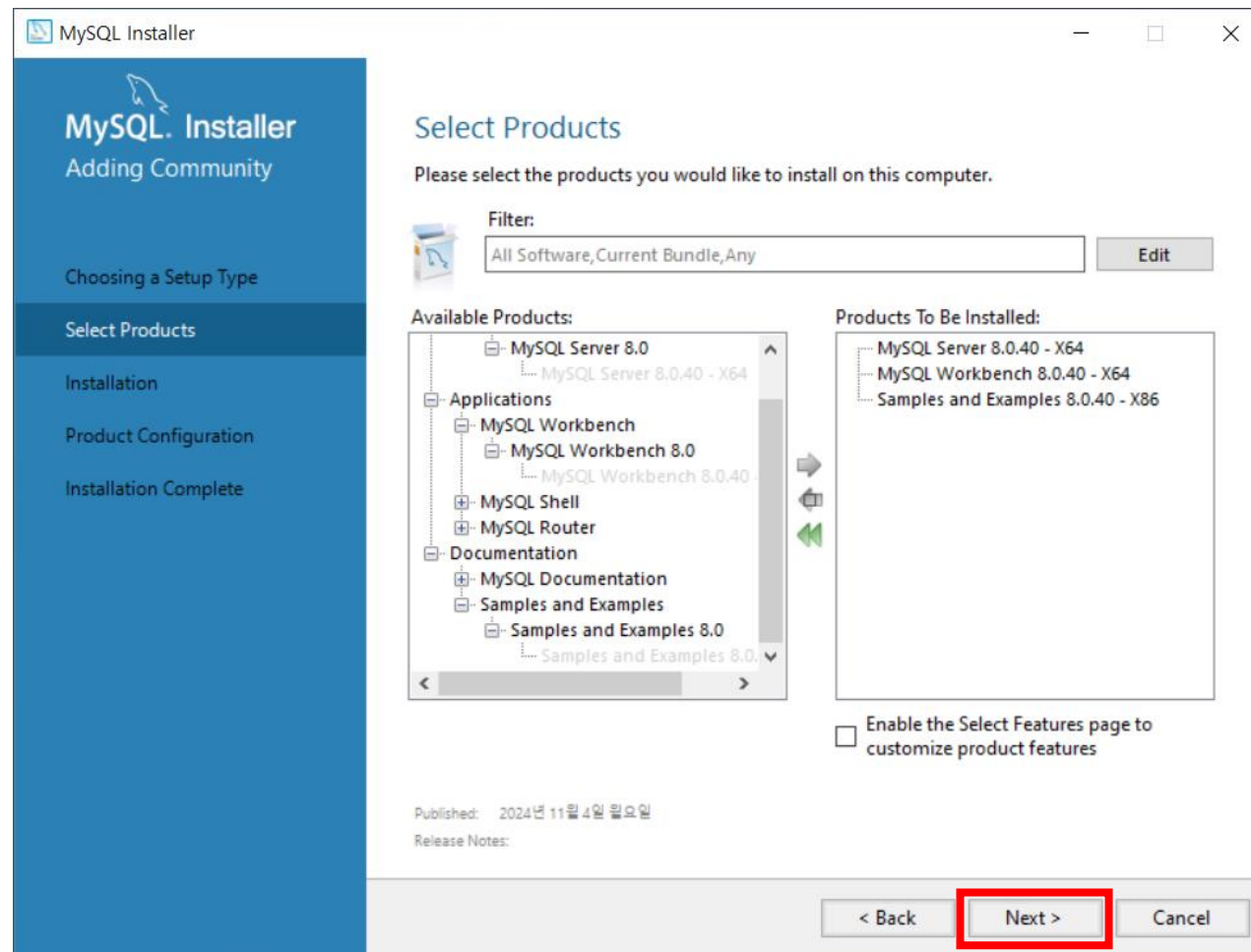
MySQL 설치

■ Samples and Example 선택



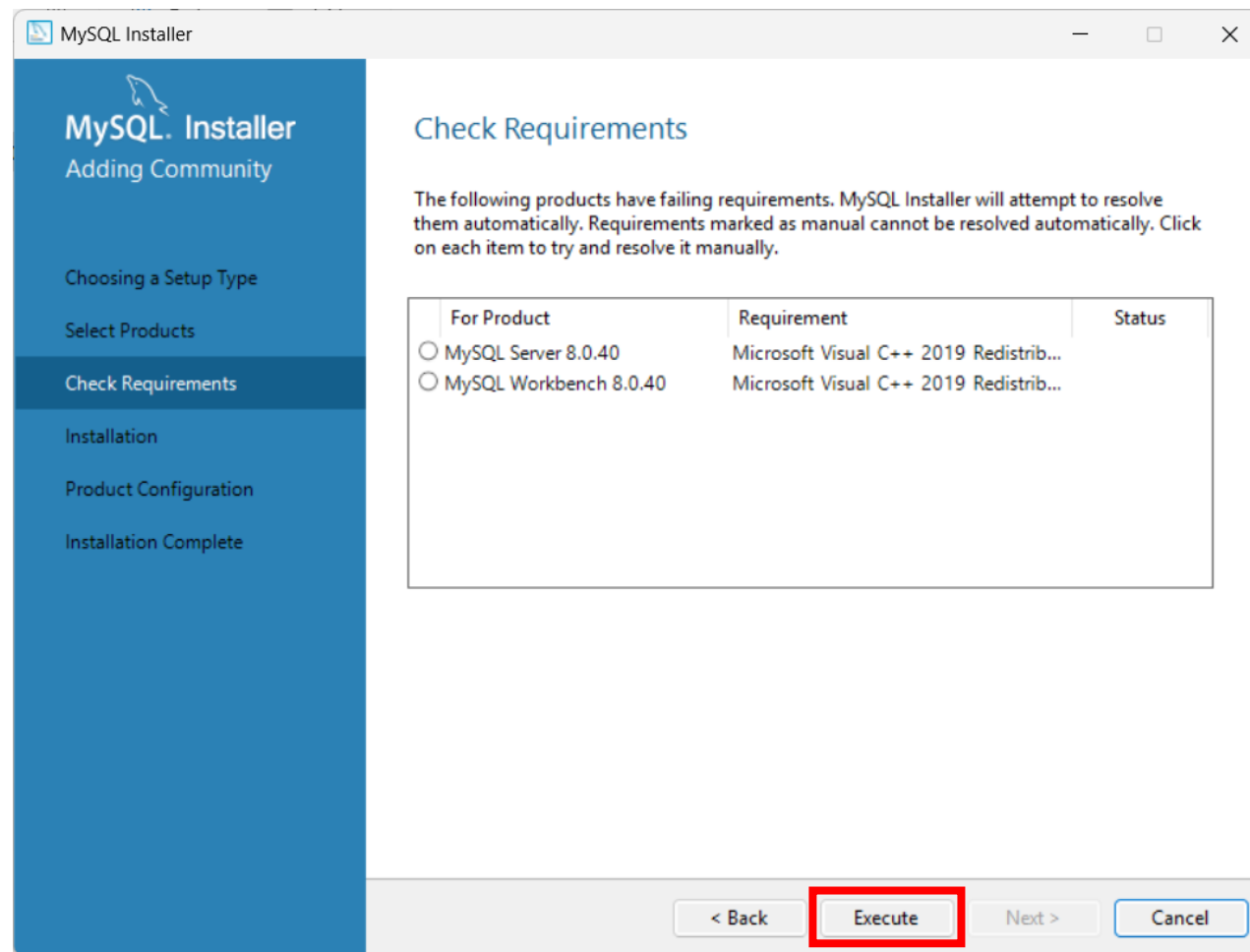
MySQL 설치

- 설치할 제품 선택 완료 후 Next >



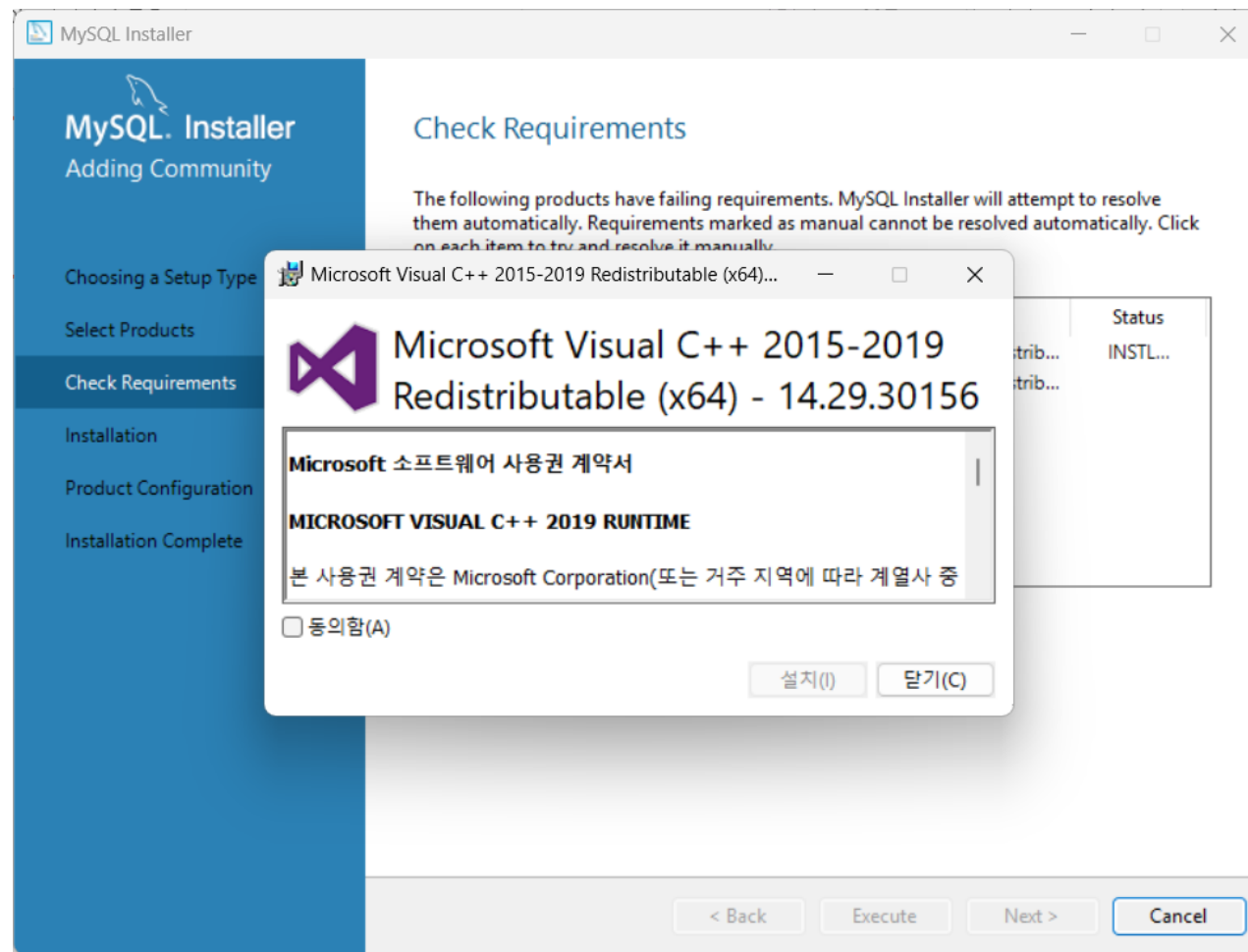
MySQL 설치

- MySQL 설치를 위해 필요한 구성요소가 설치되어 있는지 확인



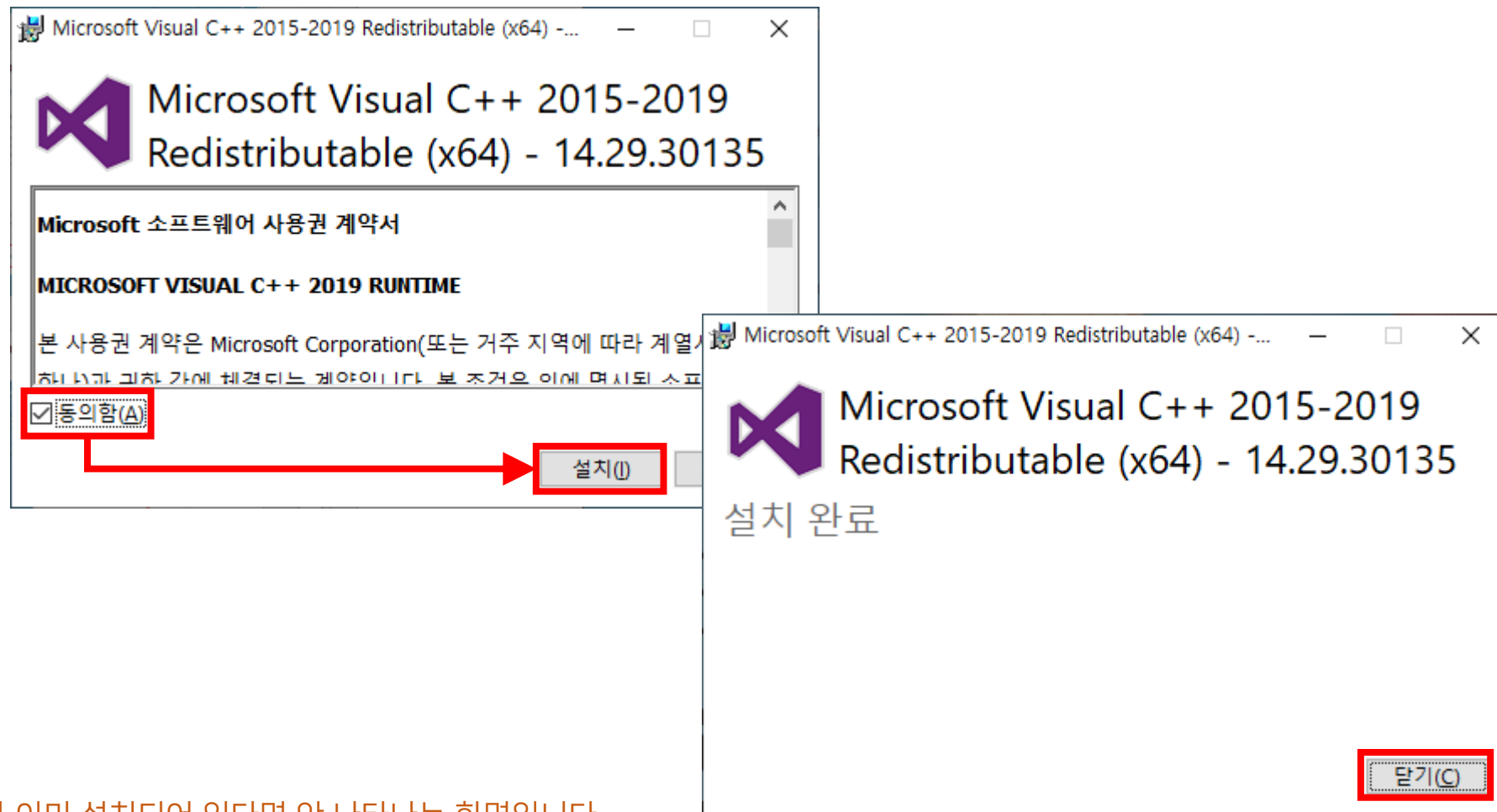
MySQL 설치

- MySQL 설치를 위해 필요한 패키지 설치 화면



MySQL 설치

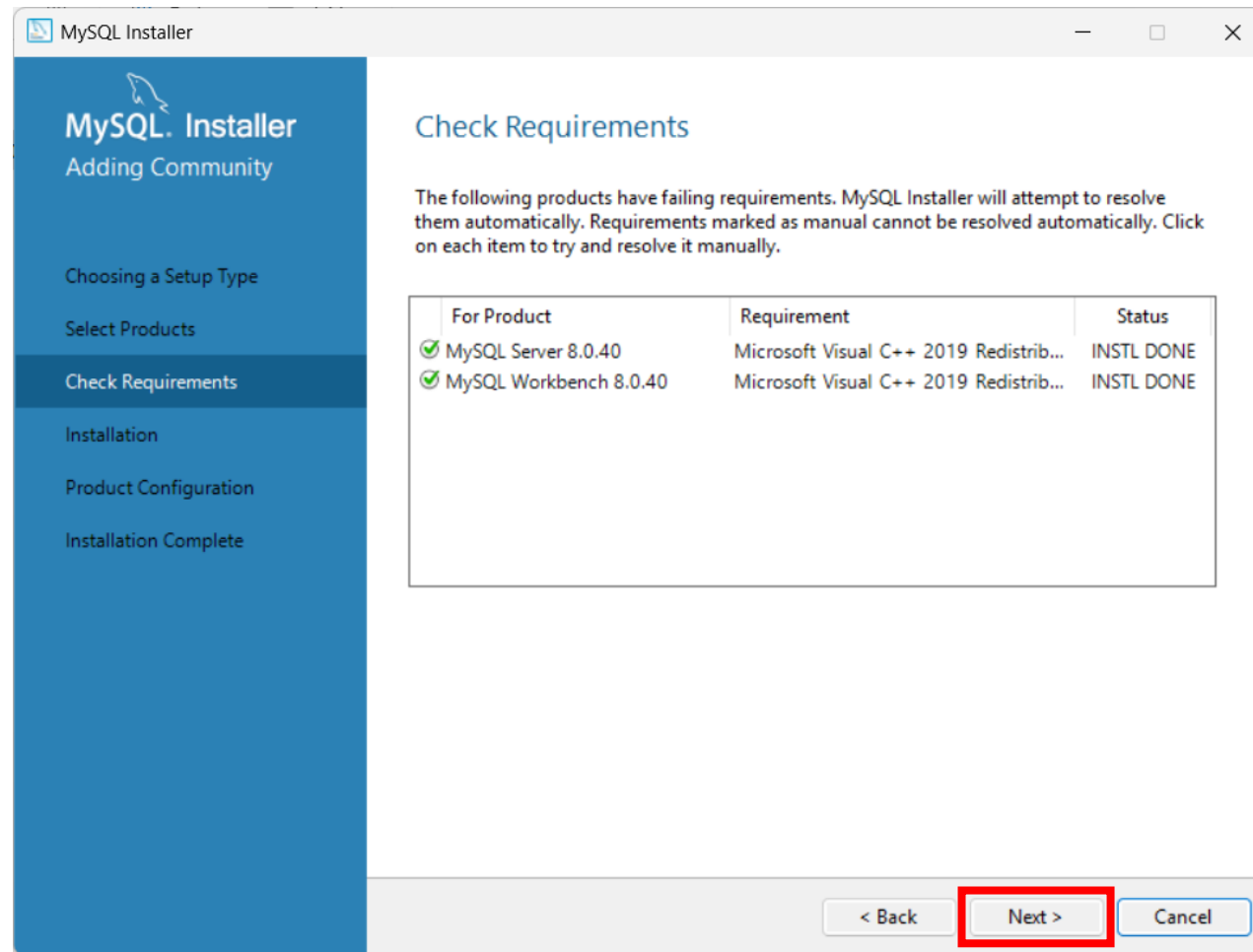
■ Microsoft Visual C++ Redistributable 패키지 설치



* 패키지가 이미 설치되어 있다면 안 나타나는 화면입니다.

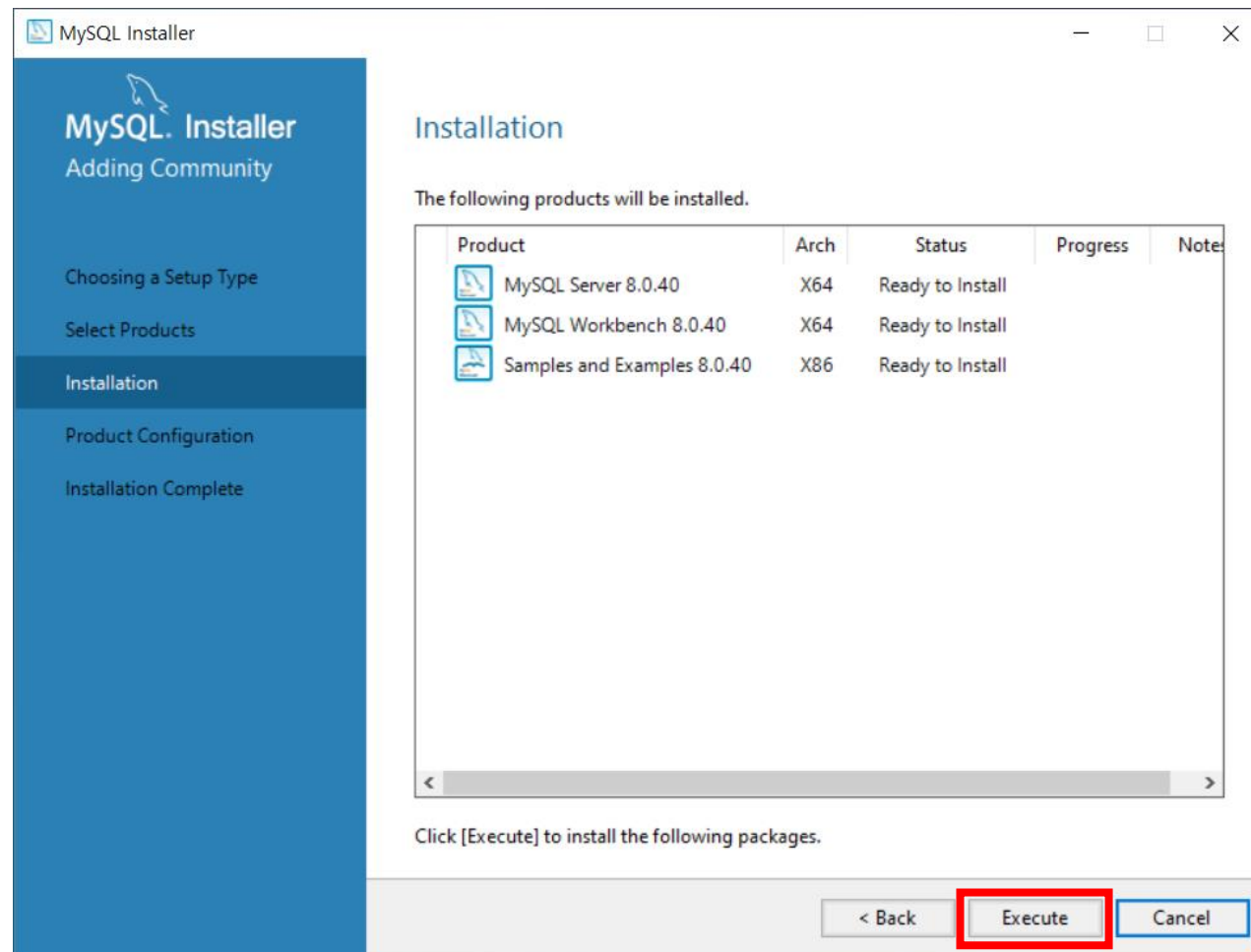
MySQL 설치

■ 패키지 설치 완료



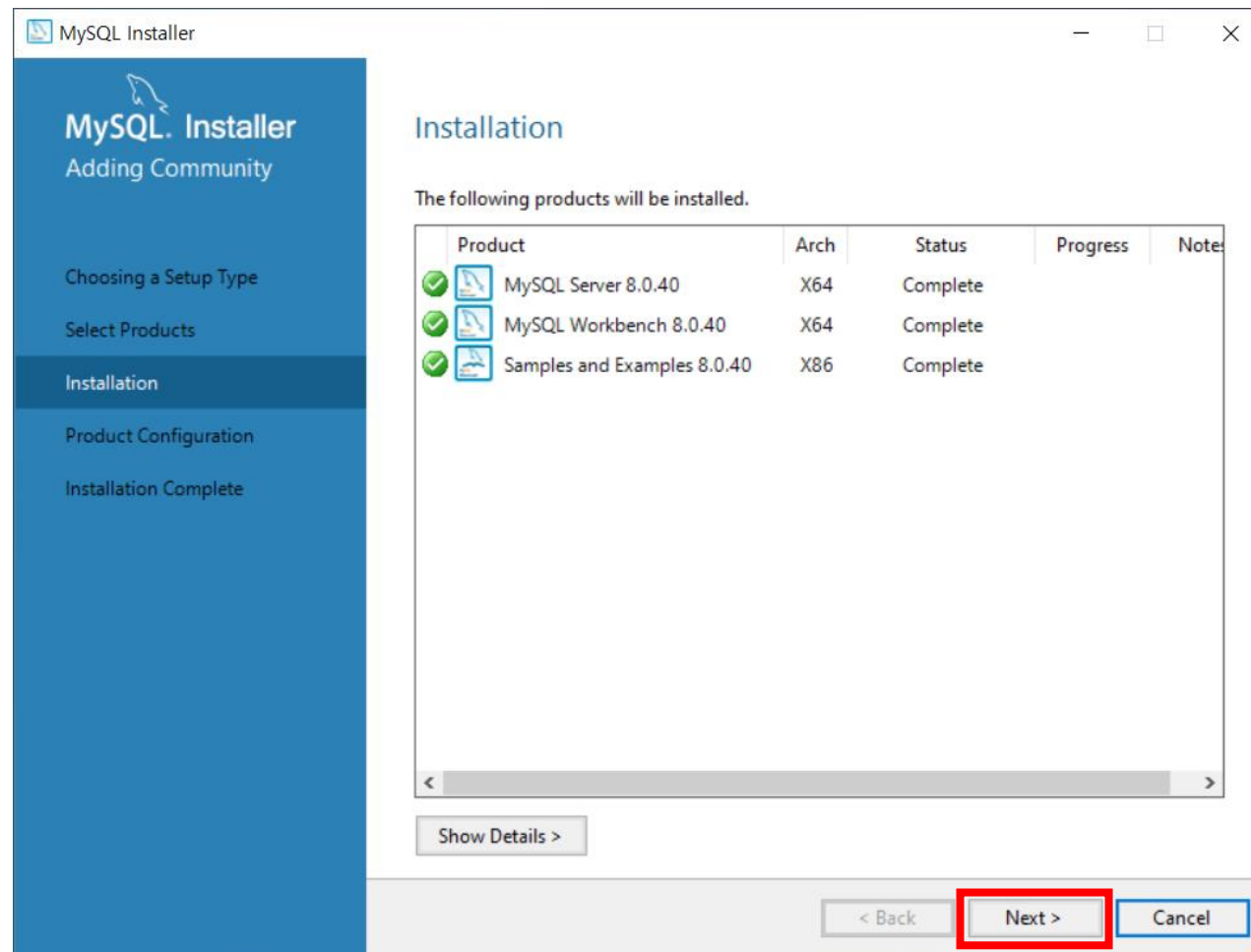
MySQL 설치

- MySQL 설치 목록 확인 후 설치 진행



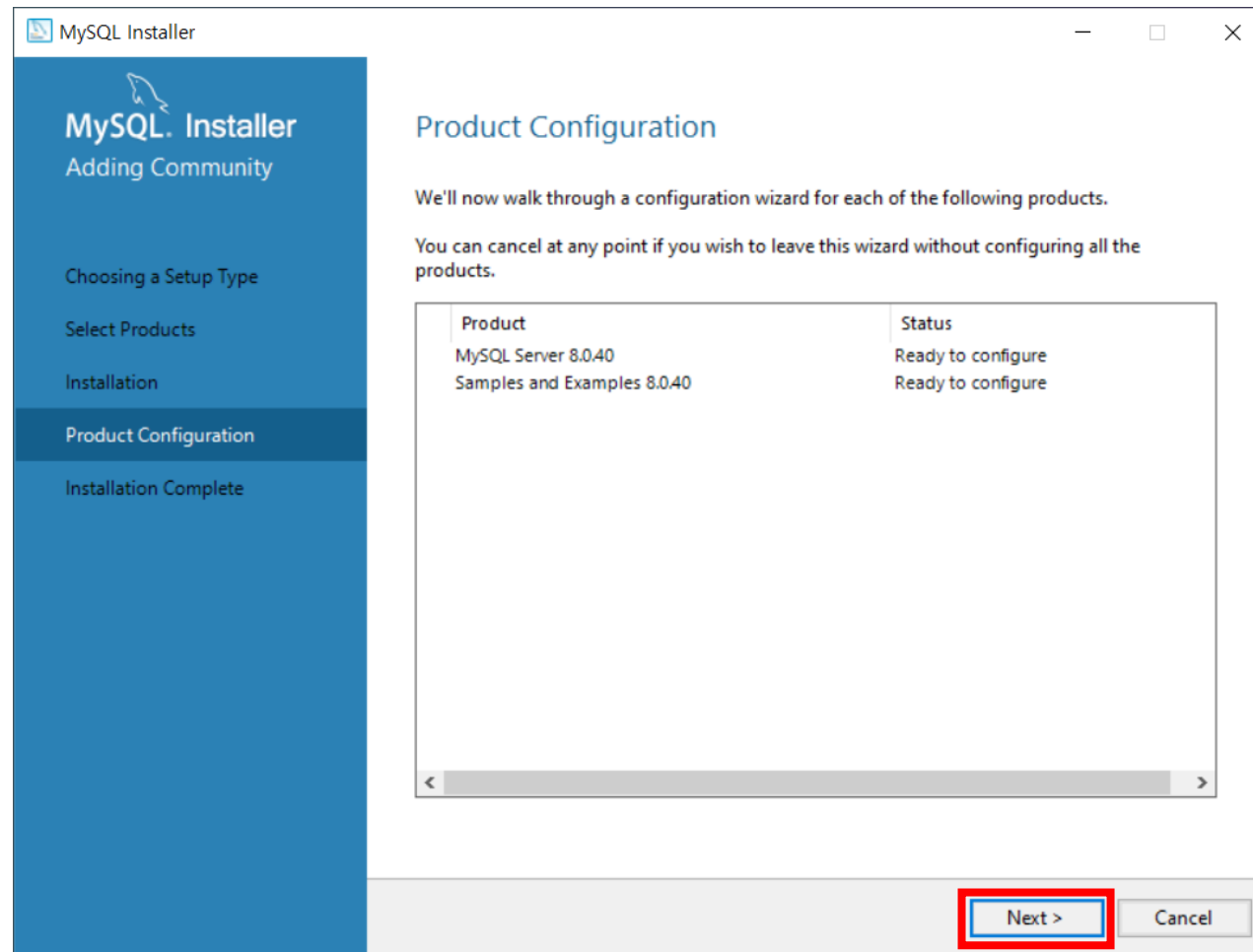
MySQL 설치

■ MySQL 설치 완료



MySQL 설치

■ MySQL Server 환경 설정 시작



MySQL 설치

■ 설치 타입과 접속 설정 (모두 기본 설정 유지)

MySQL Installer
MySQL Server 8.0.40

Type and Networking

Server Configuration Type
Choose the correct server configuration type for this MySQL Server installation. This setting will define how much system resources are assigned to the MySQL Server instance.

Config Type: Development Computer

Connectivity
Use the following controls to select how you would like to connect to this server.

☒ TCP/IP Port: 3306 X Protocol Port: 33060

☒ Open Windows Firewall ports for network access

☐ Named Pipe Pipe Name: MYSQL

☐ Shared Memory Memory Name: MYSQL

Advanced Configuration
Select the check box below to get additional configuration pages where you can set advanced and logging options for this server instance.

☐ Show Advanced and Logging Options

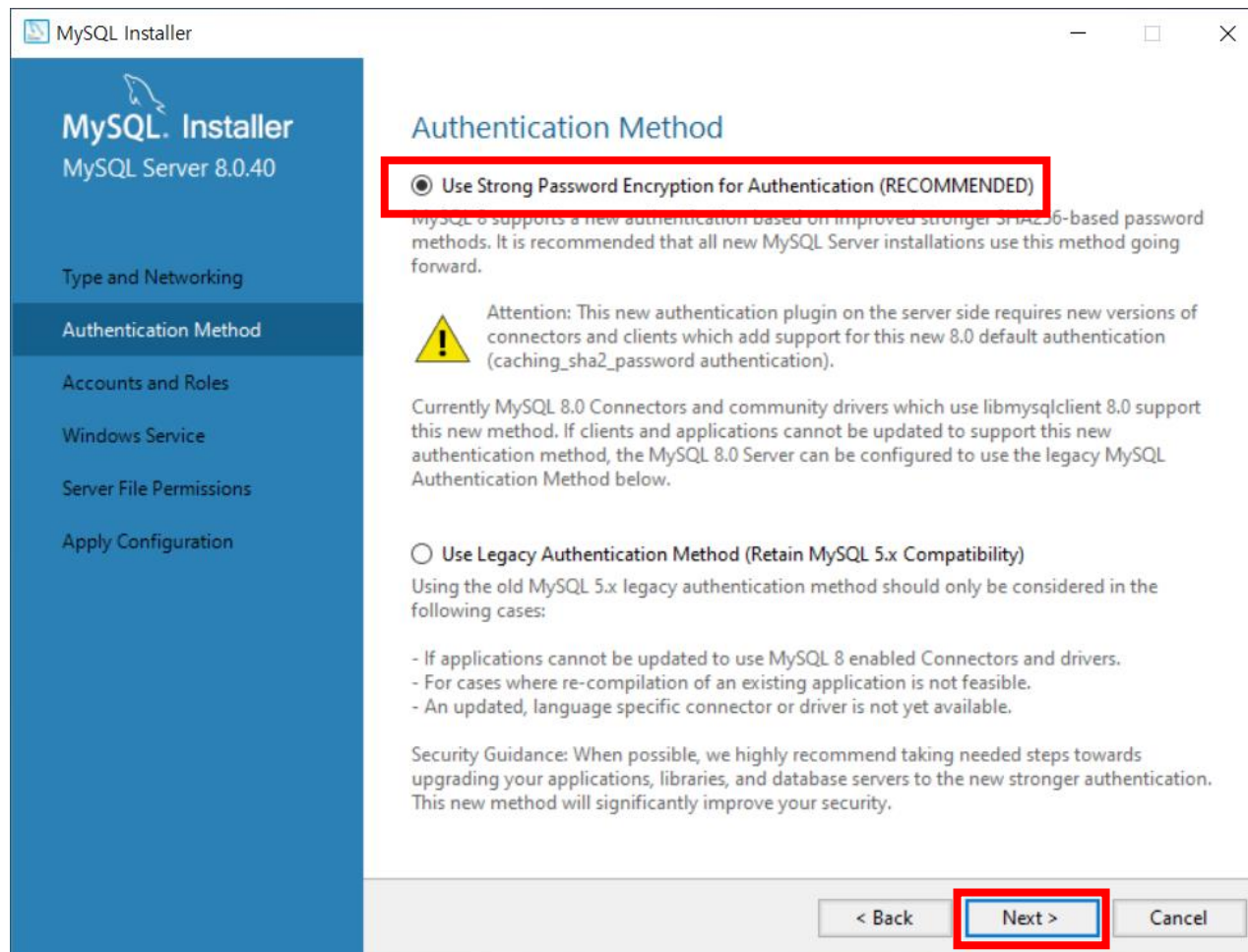
Next > Cancel

Config Type :
Development Computer

Port :
3306

MySQL 설치

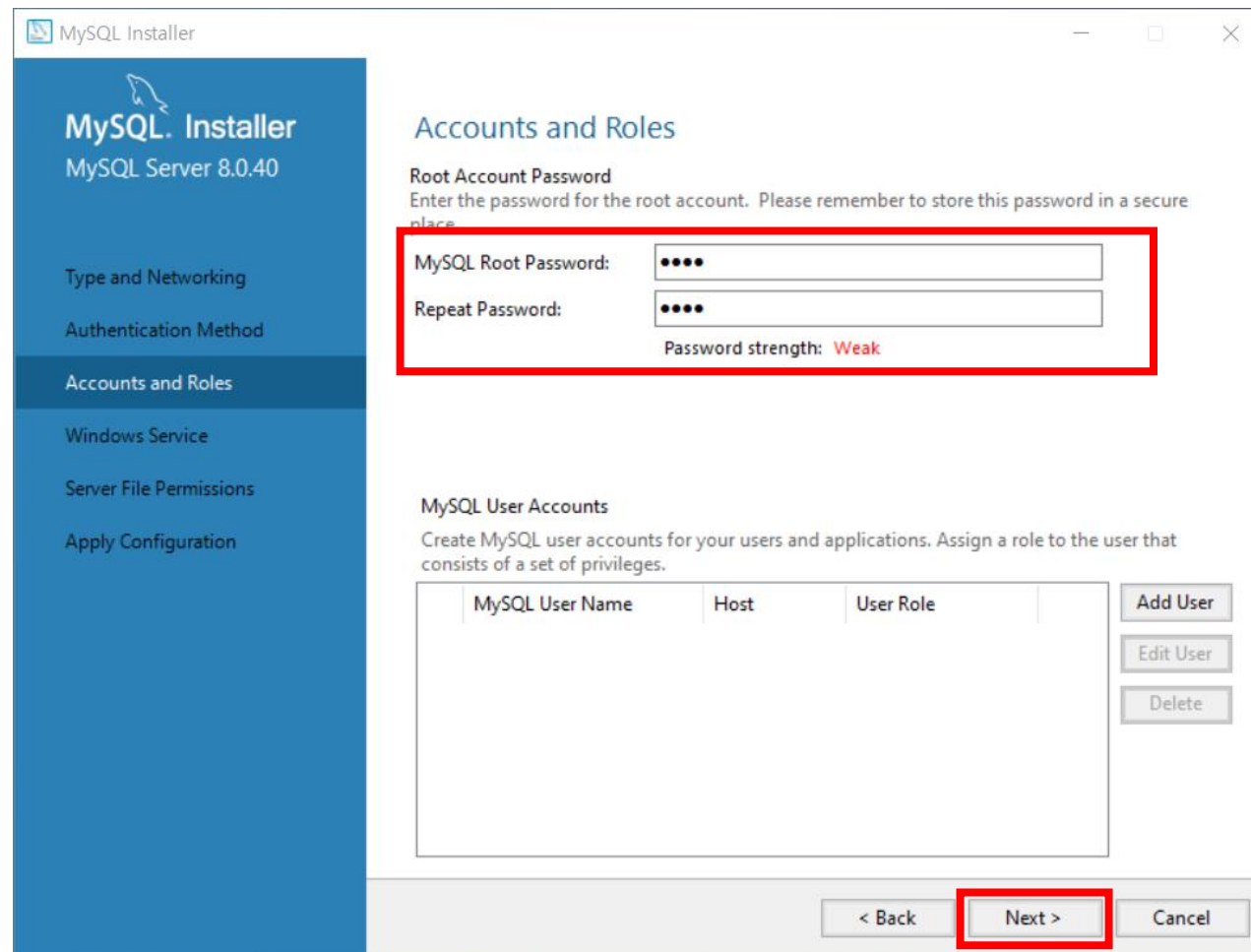
■ 사용자 인증 방식 : SHA-256 암호화 방식



권장 방식 사용

MySQL 설치

■ 관리자 계정 비밀번호 설정



The image shows the 'Accounts and Roles' step of the MySQL Installer for MySQL Server 8.0.40. The left sidebar lists the installation steps: Type and Networking, Authentication Method, Accounts and Roles (selected), Windows Service, Server File Permissions, and Apply Configuration. The main area is titled 'Accounts and Roles' and contains two sections. The first section, 'Root Account Password', prompts the user to enter a password for the root account. It includes two input fields: 'MySQL Root Password:' and 'Repeat Password:'. Both fields contain four dots. Below these fields, the password strength is indicated as 'Weak'. The second section, 'MySQL User Accounts', prompts the user to create MySQL user accounts. It includes a table with columns 'MySQL User Name', 'Host', and 'User Role'. To the right of the table are three buttons: 'Add User', 'Edit User', and 'Delete'. At the bottom of the window, there are three buttons: '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted with a red box.

MySQL Installer
MySQL Server 8.0.40

Type and Networking
Authentication Method
Accounts and Roles
Windows Service
Server File Permissions
Apply Configuration

Accounts and Roles

Root Account Password
Enter the password for the root account. Please remember to store this password in a secure place.

MySQL Root Password:

Repeat Password:

Password strength: Weak

MySQL User Accounts
Create MySQL user accounts for your users and applications. Assign a role to the user that consists of a set of privileges.

MySQL User Name	Host	User Role
-----------------	------	-----------

Add User
Edit User
Delete

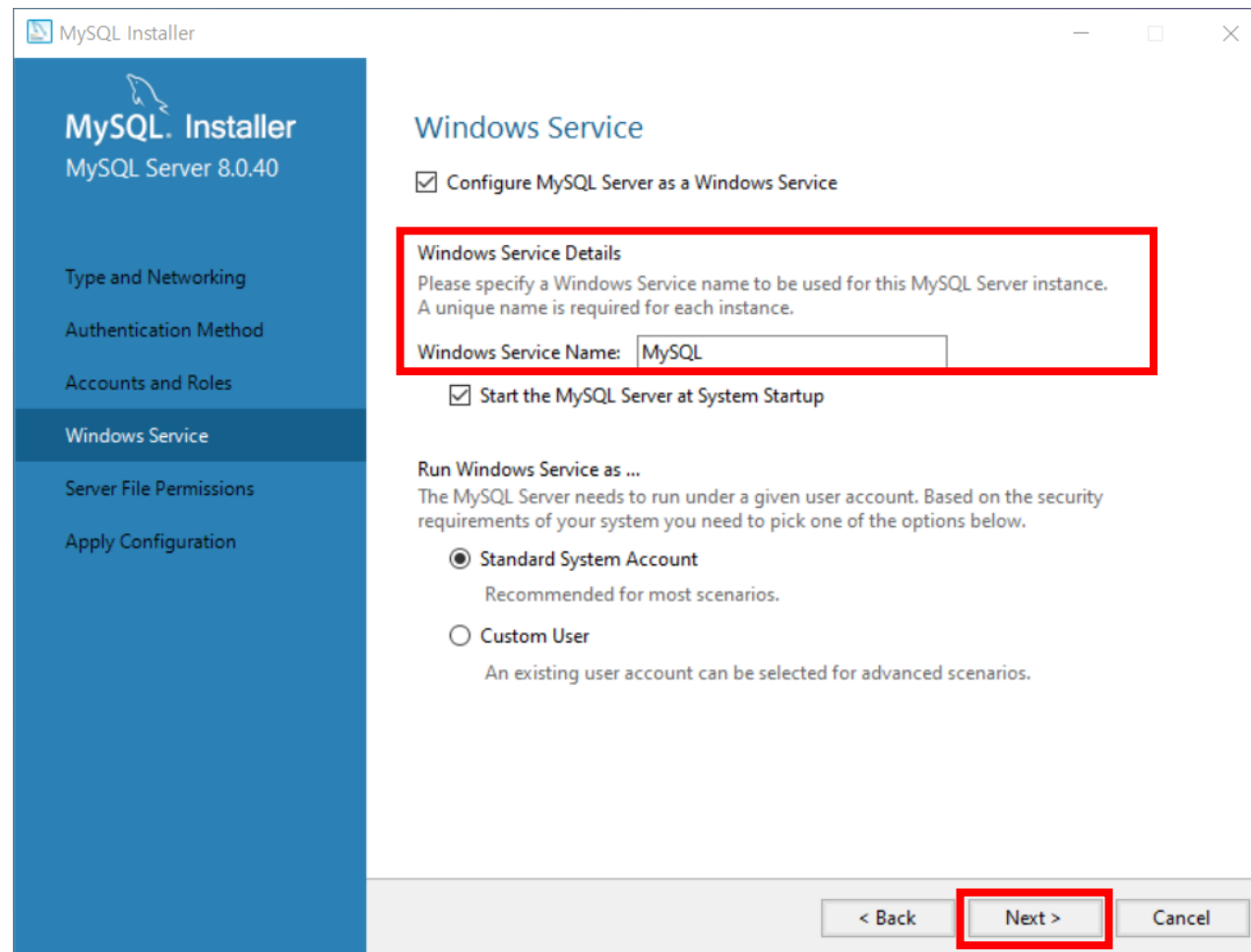
< Back Next > Cancel

MySQL 관리자 계정 :
root

비밀번호 잊지 않도록 주의
대소문자 구분 주의

MySQL 설치

- Windows Service로 등록할 이름 : MySQL

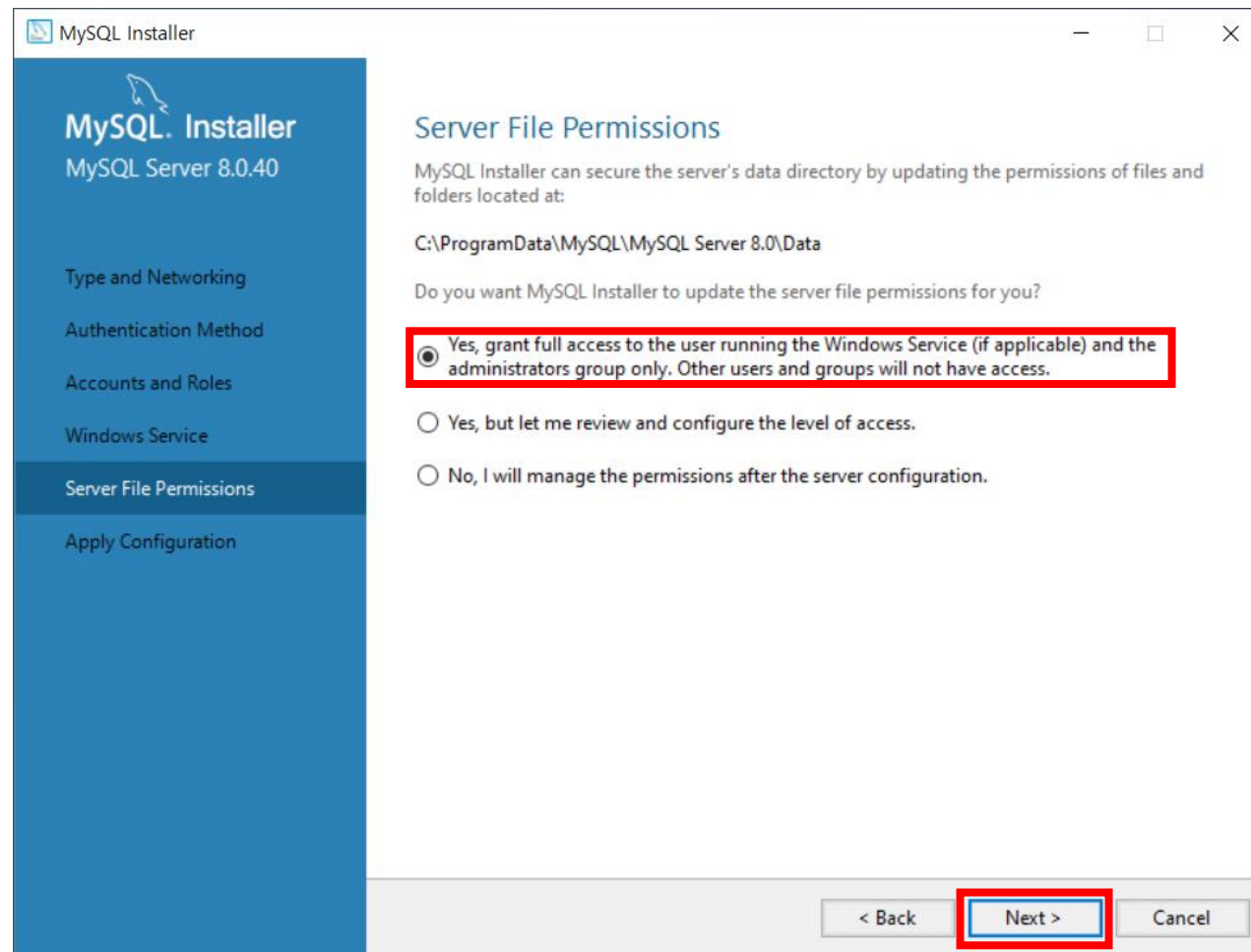


관례적으로 사용하는 이름은
"MySQL" 이다.

혹시 다른 이름을 지정하더라도
문제는 없다.

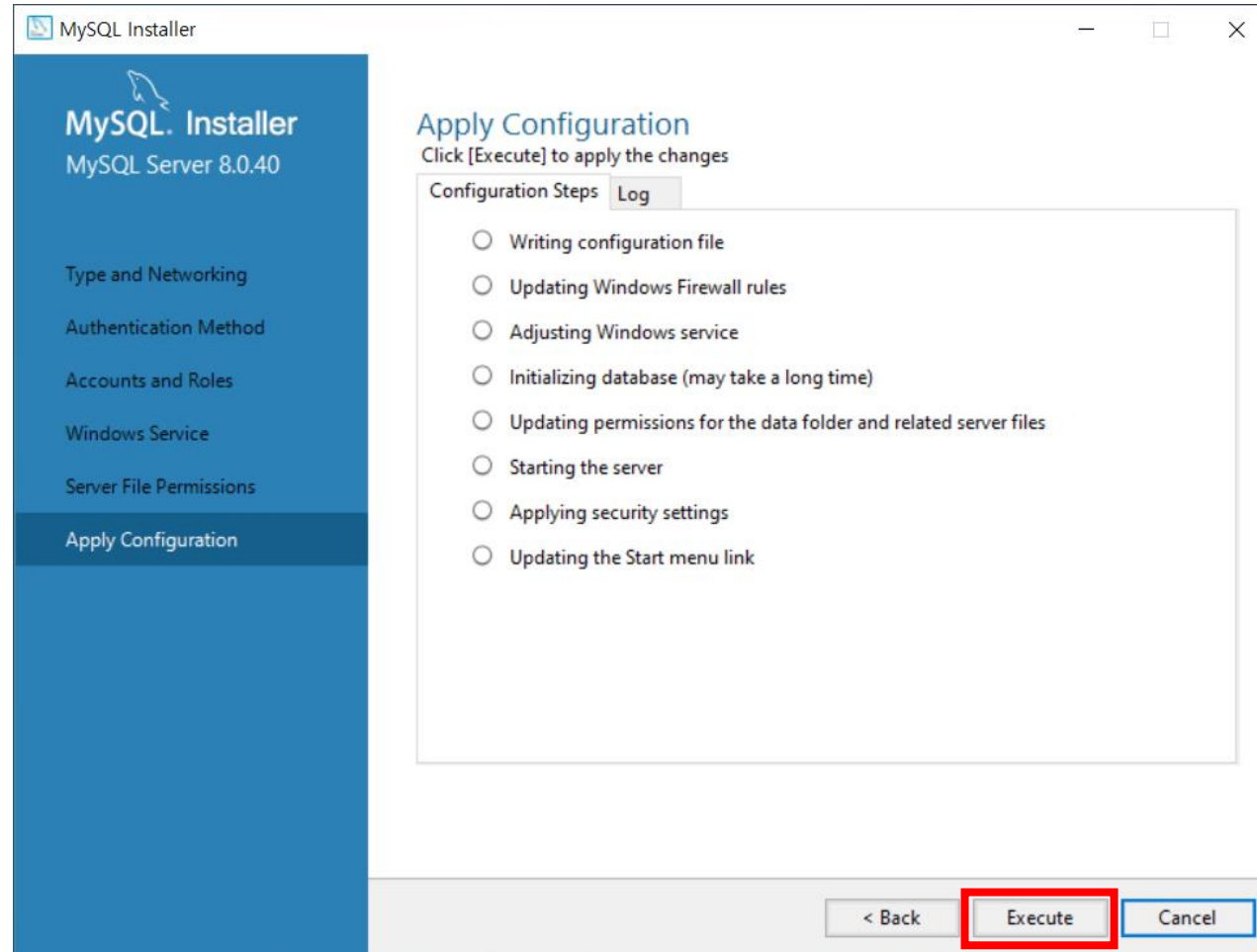
MySQL 설치

- Server File 에 대한 권한 부여 : Yes



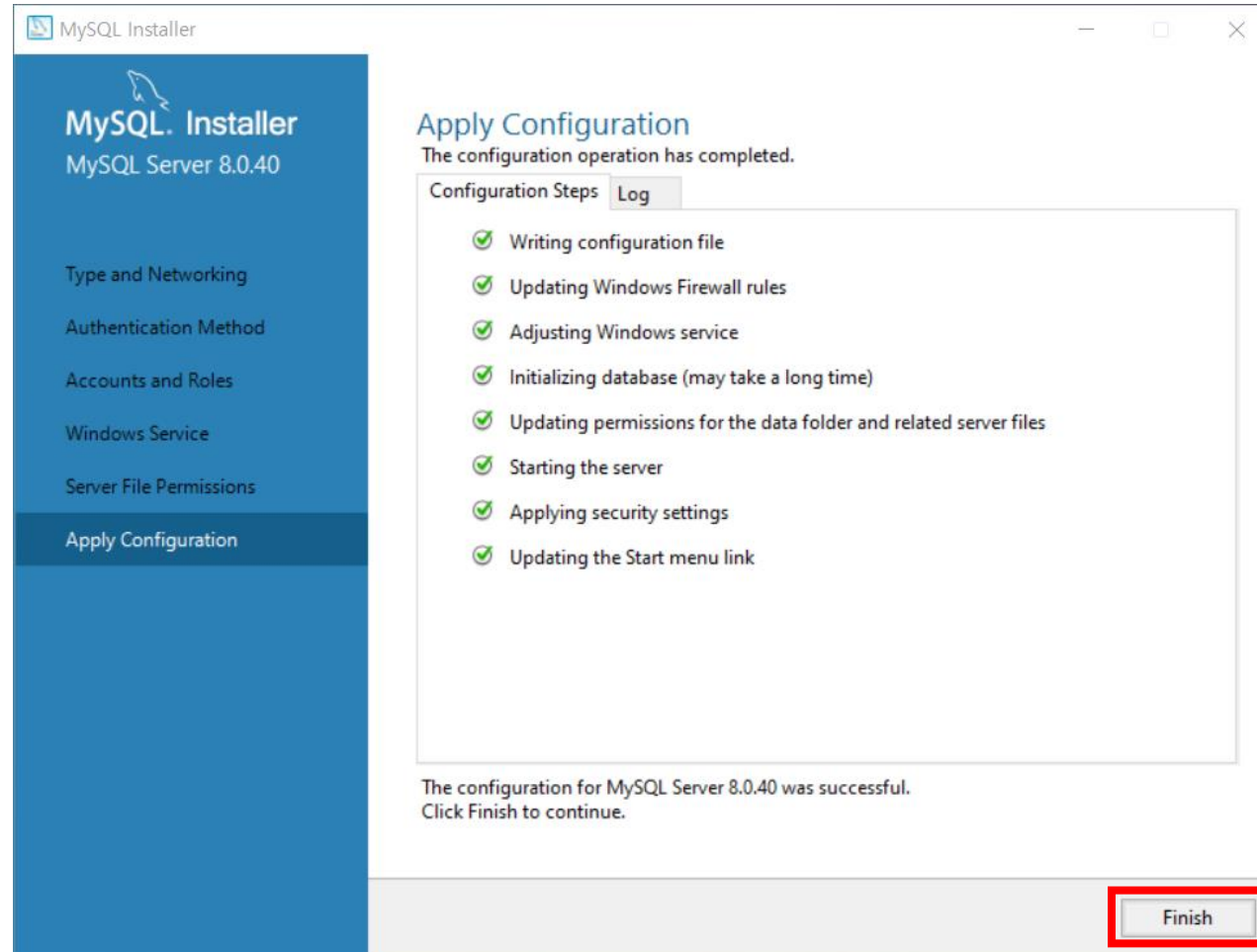
MySQL 설치

- 순차적으로 적용될 MySQL Server 환경 설정 목록 확인



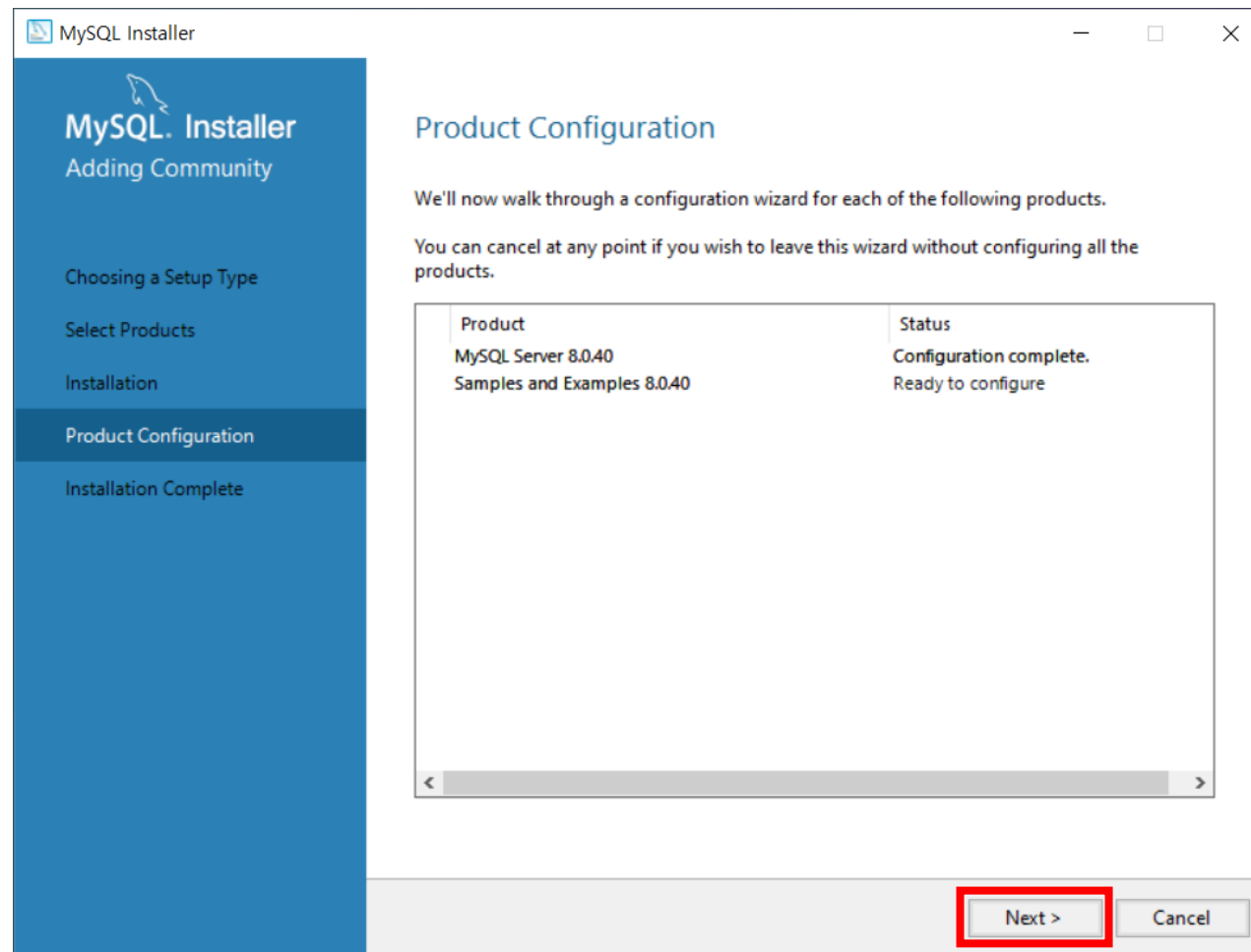
MySQL 설치

■ 적용이 완료된 MySQL Server 환경 설정 목록 확인



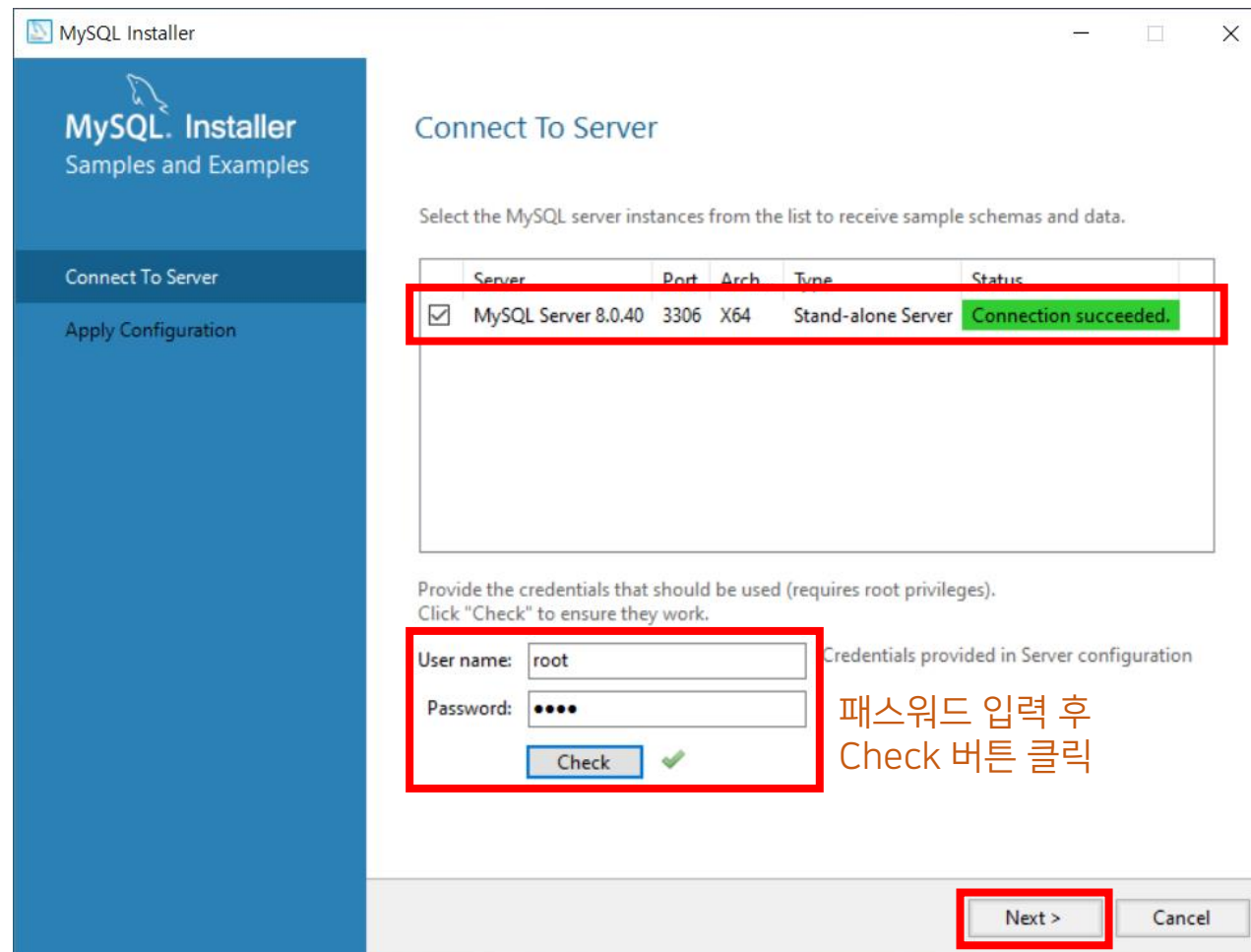
MySQL 설치

■ Samples and Examples 환경 설정 시작



MySQL 설치

■ root 계정 접속 테스트

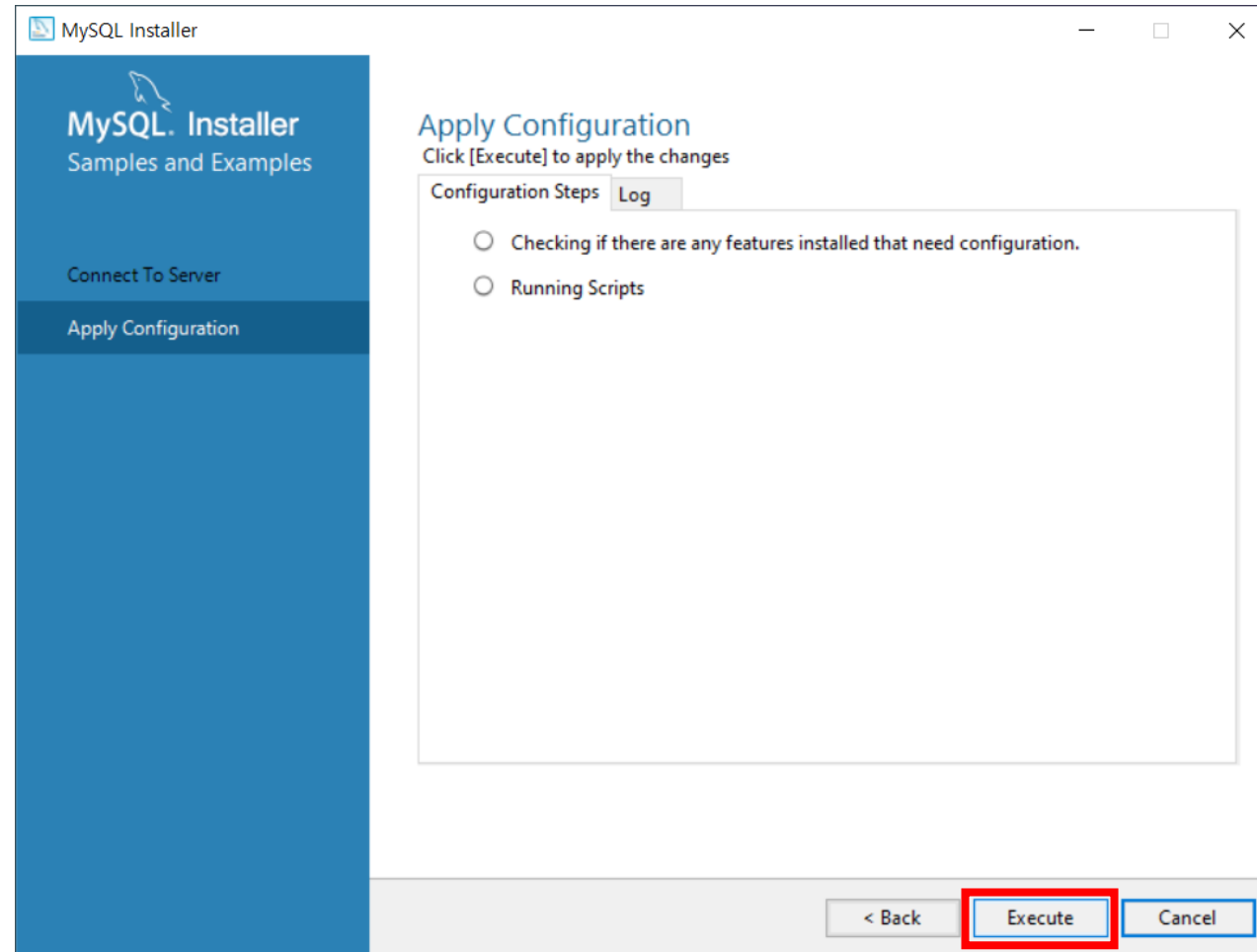


성공 여부 확인

패스워드 입력 후
Check 버튼 클릭

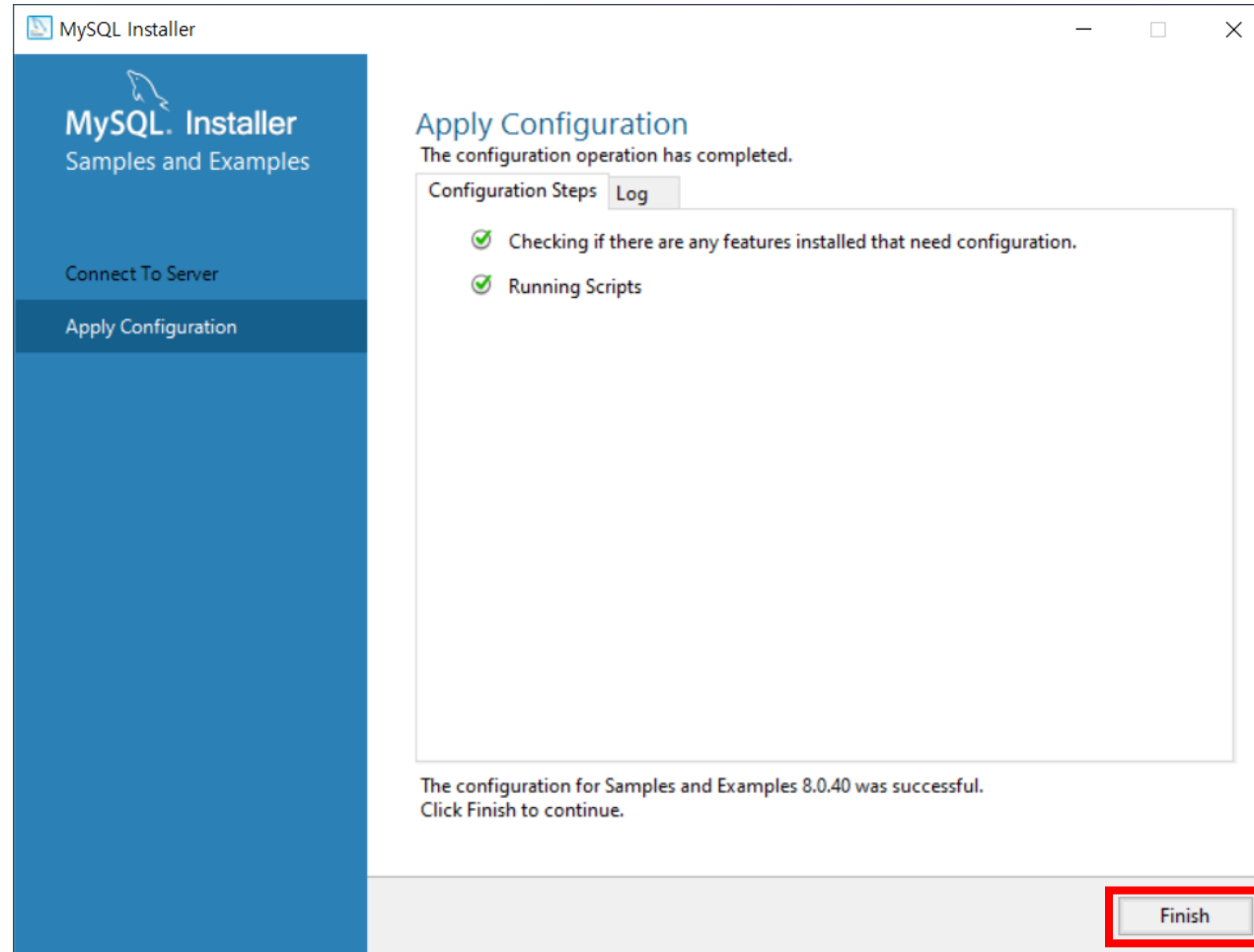
MySQL 설치

- 순차적으로 적용될 Samples and Examples 환경 설정 목록 확인



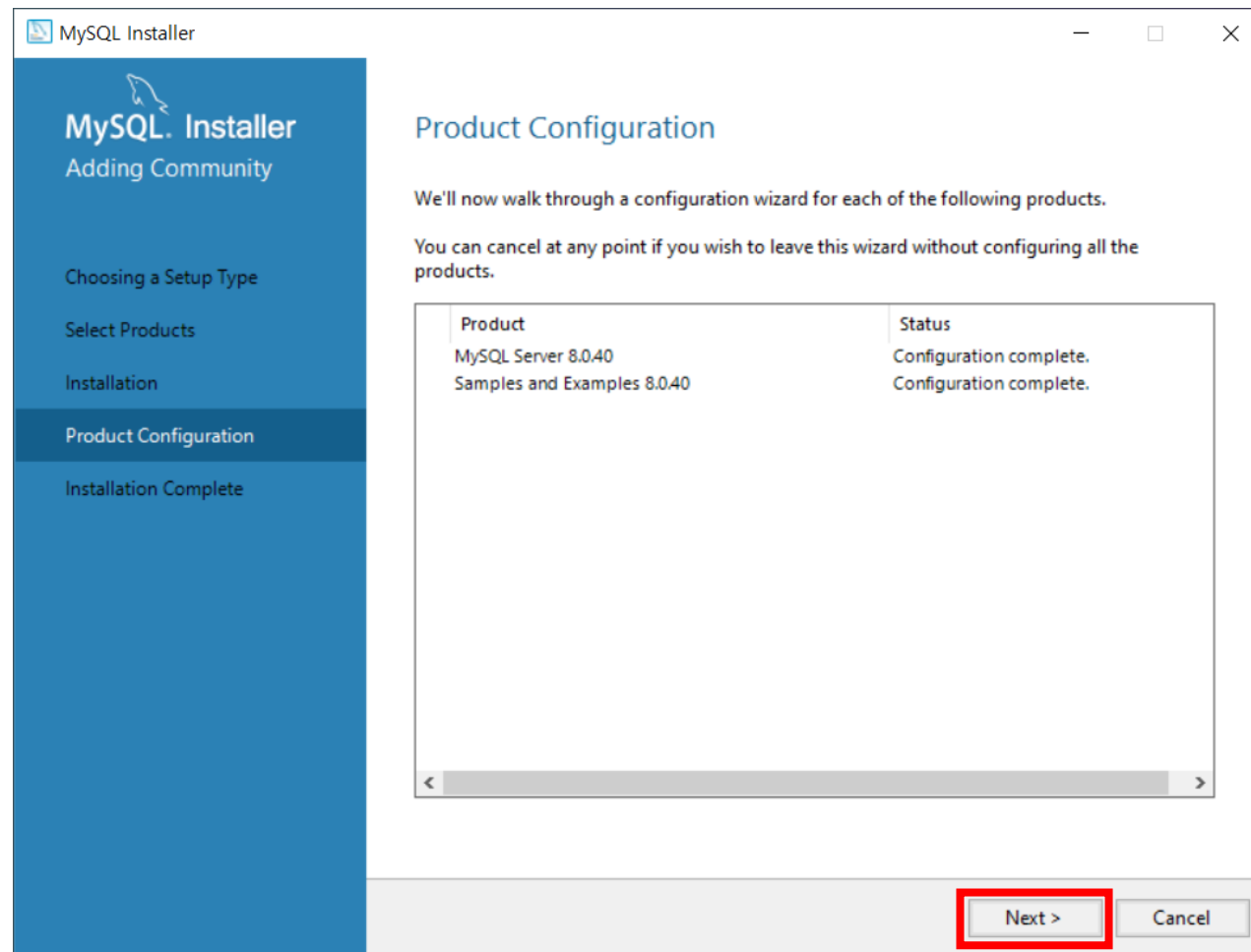
MySQL 설치

- 적용이 완료된 Samples and Examples 환경 설정 목록 확인



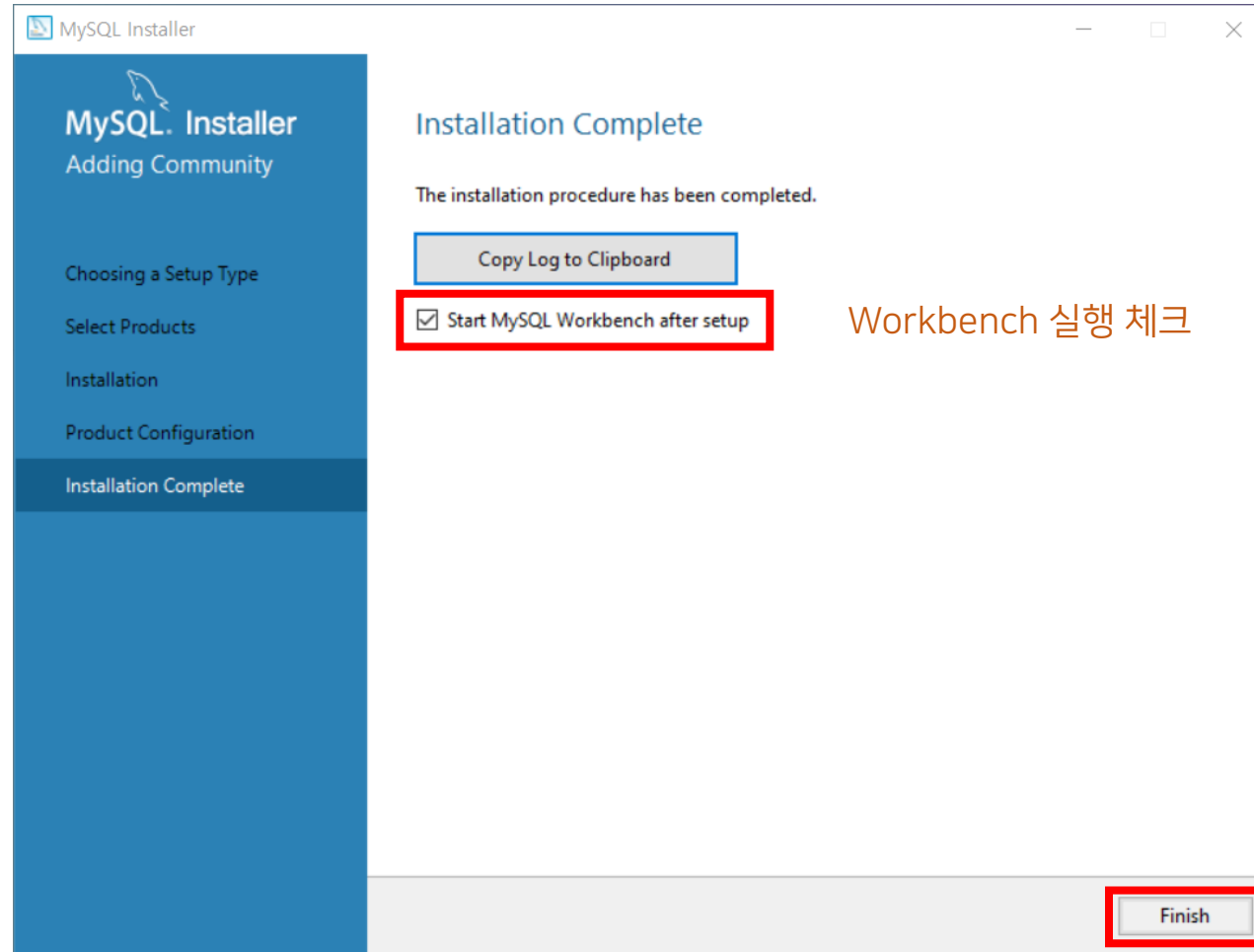
MySQL 설치

- 적용이 완료된 전체 환경 설정 목록 확인



MySQL 설치

- MySQL 설치 모든 과정 완료



인코딩 설정

- C:\WProgramData\MySQL\MySQL Server 8.0\my.ini 파일을 열고 마지막 라인에 다음 내용을 추가함
 - C:\WProgramData 디렉터리는 숨김 항목 표시를 해 줘야 나타남
- 내용을 추가한 뒤 재부팅

```
[client]
default-character-set=utf8mb4

[mysql]
default-character-set=utf8mb4

[mysqld]
collation-server=utf8mb4_0900_ai_ci
init-connect='SET NAMES utf8mb4'
character-set-server=utf8mb4
```

```

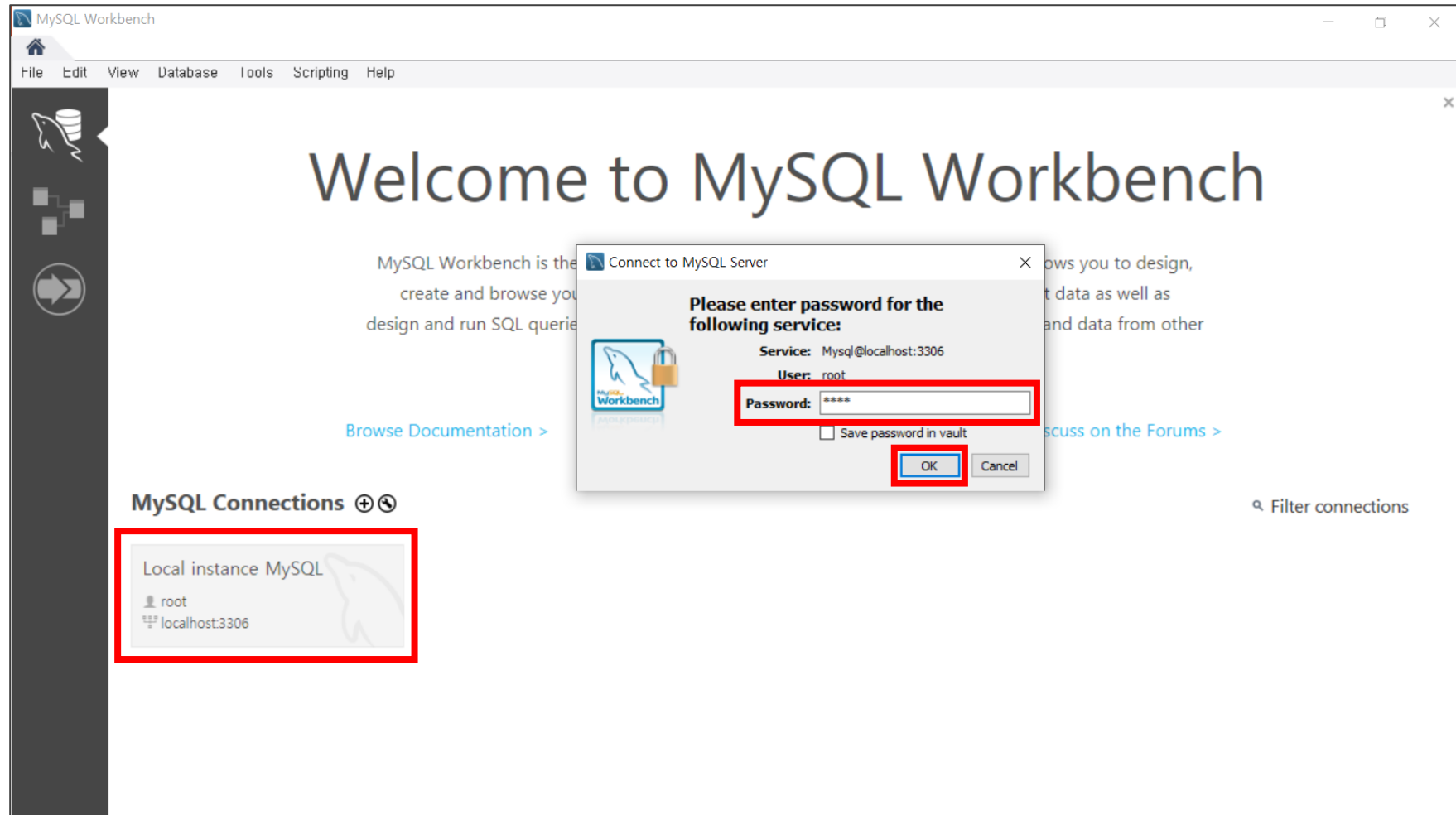
each: function(e, t, n) {
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      a = M(e);
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        if (r = t.apply(e[i], n), r === !1) break;
    } else
      for (i in e)
        if (r = t.apply(e[i], n), r === !1) break;
  } else if (a) {
    for (; o > i; i++)
      if (r = t.call(e[i], e[i]), r === !1) break;
  } else
    for (i in e)
      if (r = t.call(e[i], e[i]), r === !1) break;
  return e;
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trim: b && !b.call("\uffff\u00a0") ? function(e) {
  return null == e ? "" : b.call(e);
} : function(e) {
  return null == e ? "" : (e + "").replace(C, "");
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),
isArray: function(e, t, n) {
  var r;
  if (t) {
    if (n) return m.call(t, e, n);
    for (r = t.length, r = r ? 0 > n ? Math.max(0, r + n) : n : 0; r < n; r++)
      if (n in t && t[r] === e) return r;
  }
}

```

3. Workbench 설정 및 Path 등록

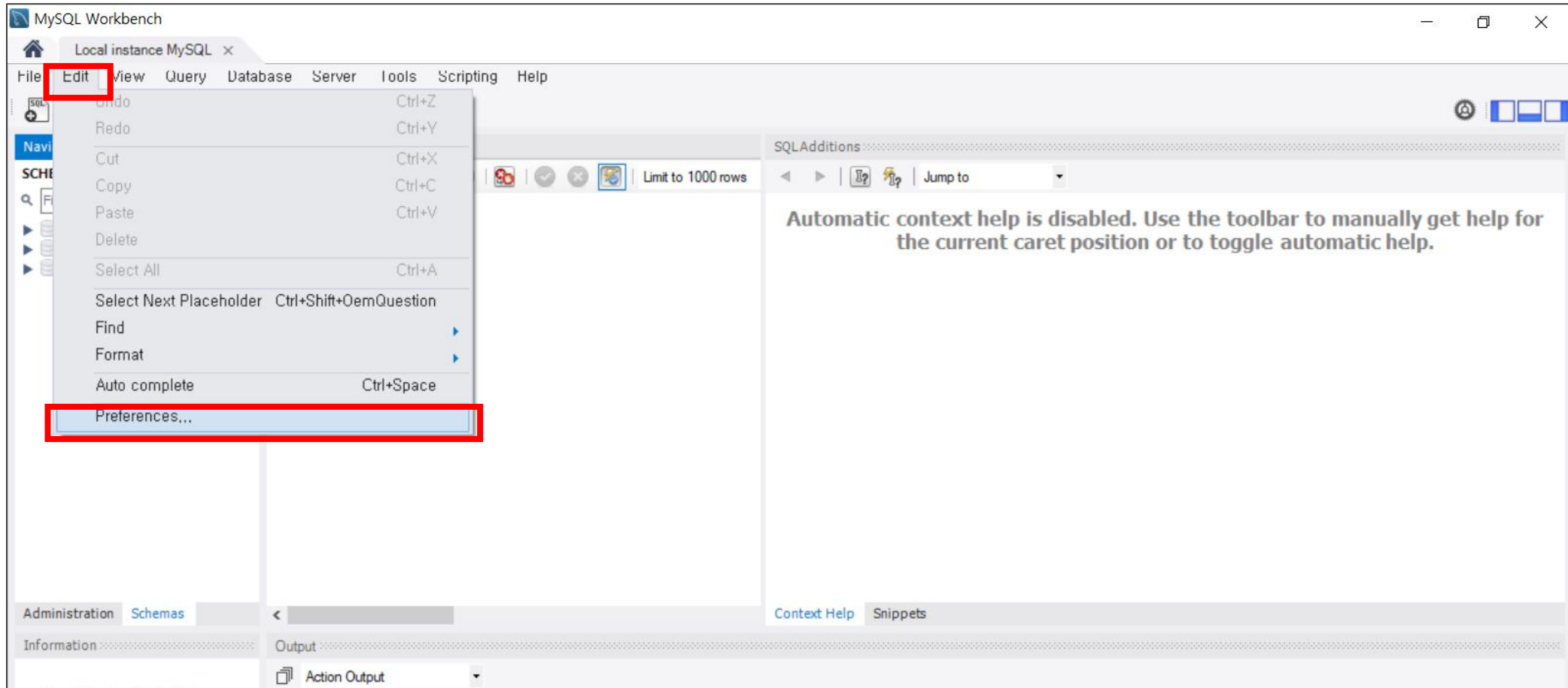
Workbench 설정

- root 계정으로 접속



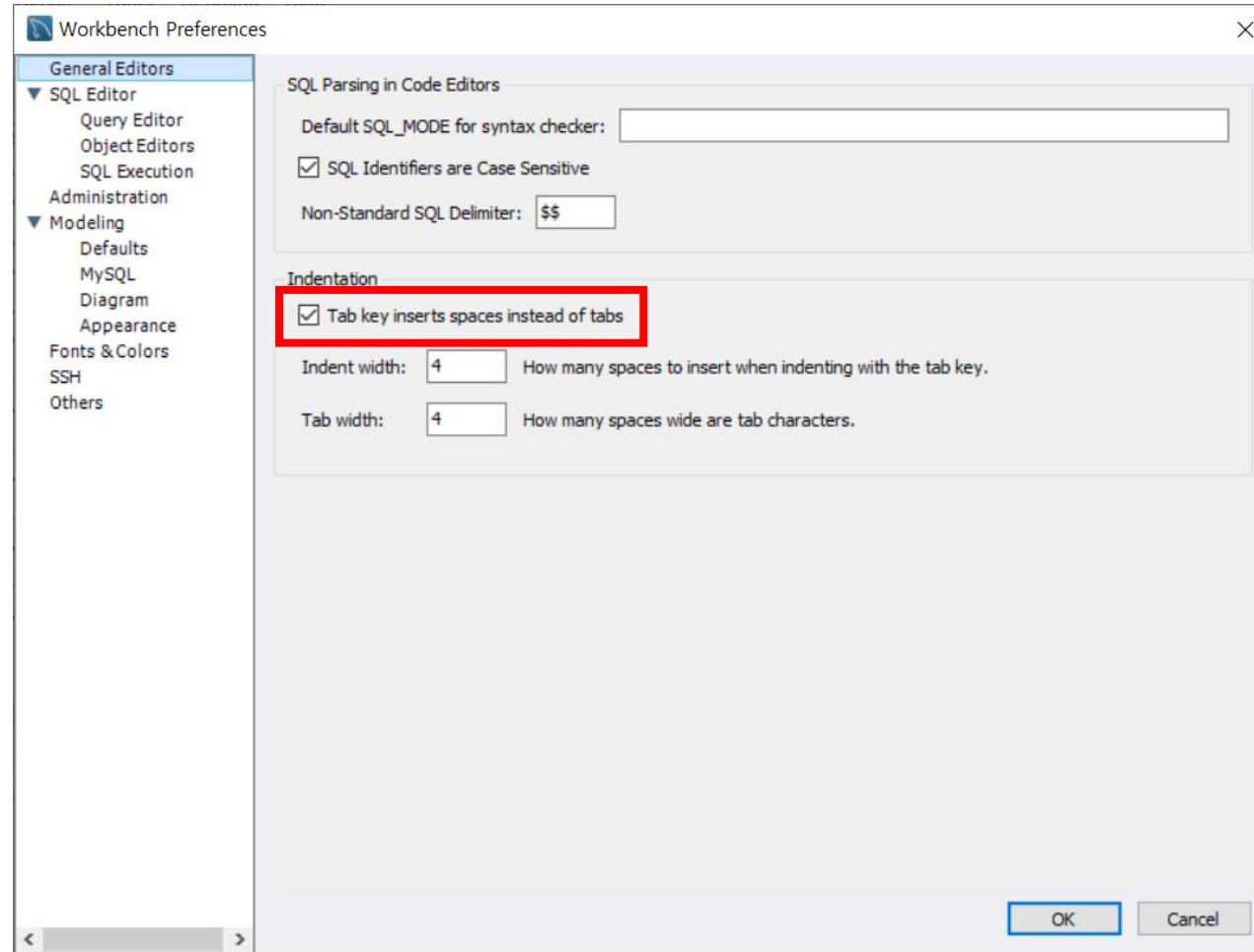
Workbench 설정

■ Edit - Preferences



Workbench 설정

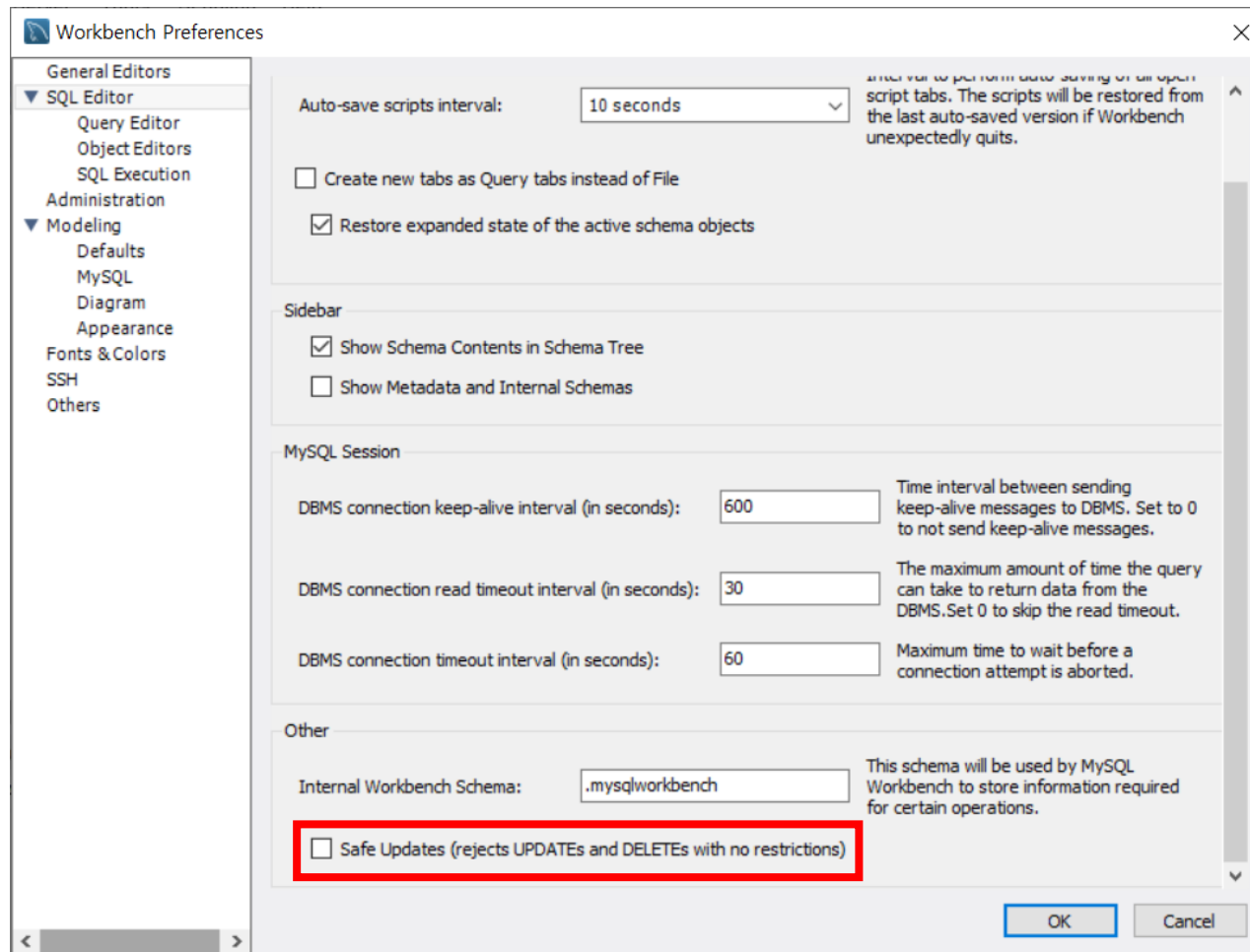
- General Editors - Tab key inserts spaces instead of tabs 체크



Tab 을 입력하면 Space 로 바꿈

Workbench 설정

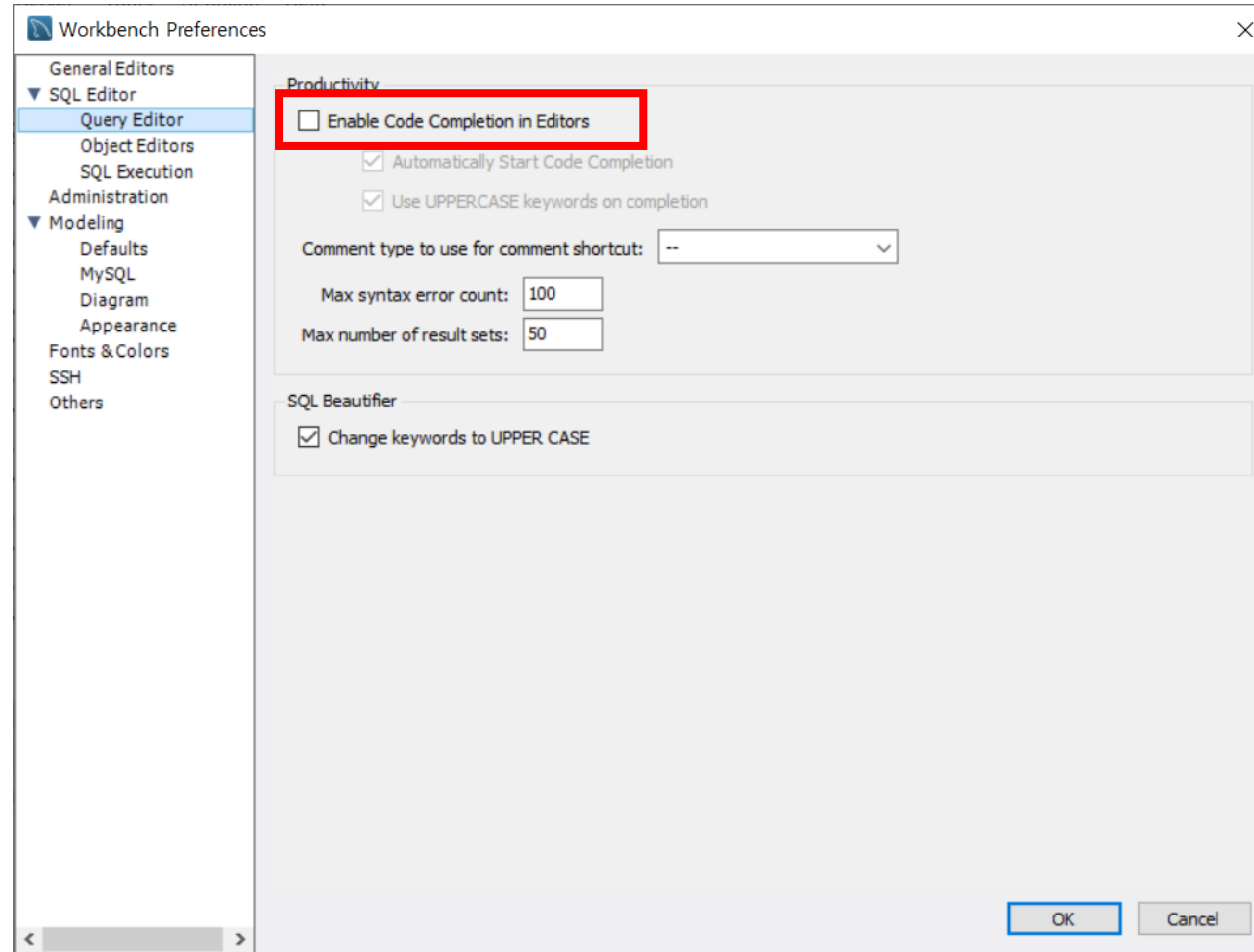
■ SQL Editor - Safe Updates 체크 해제



Primary Key 를 이용하지 않아도
UPDATE 와 DELETE 가 가능하도록
설정하는 작업

Workbench 설정

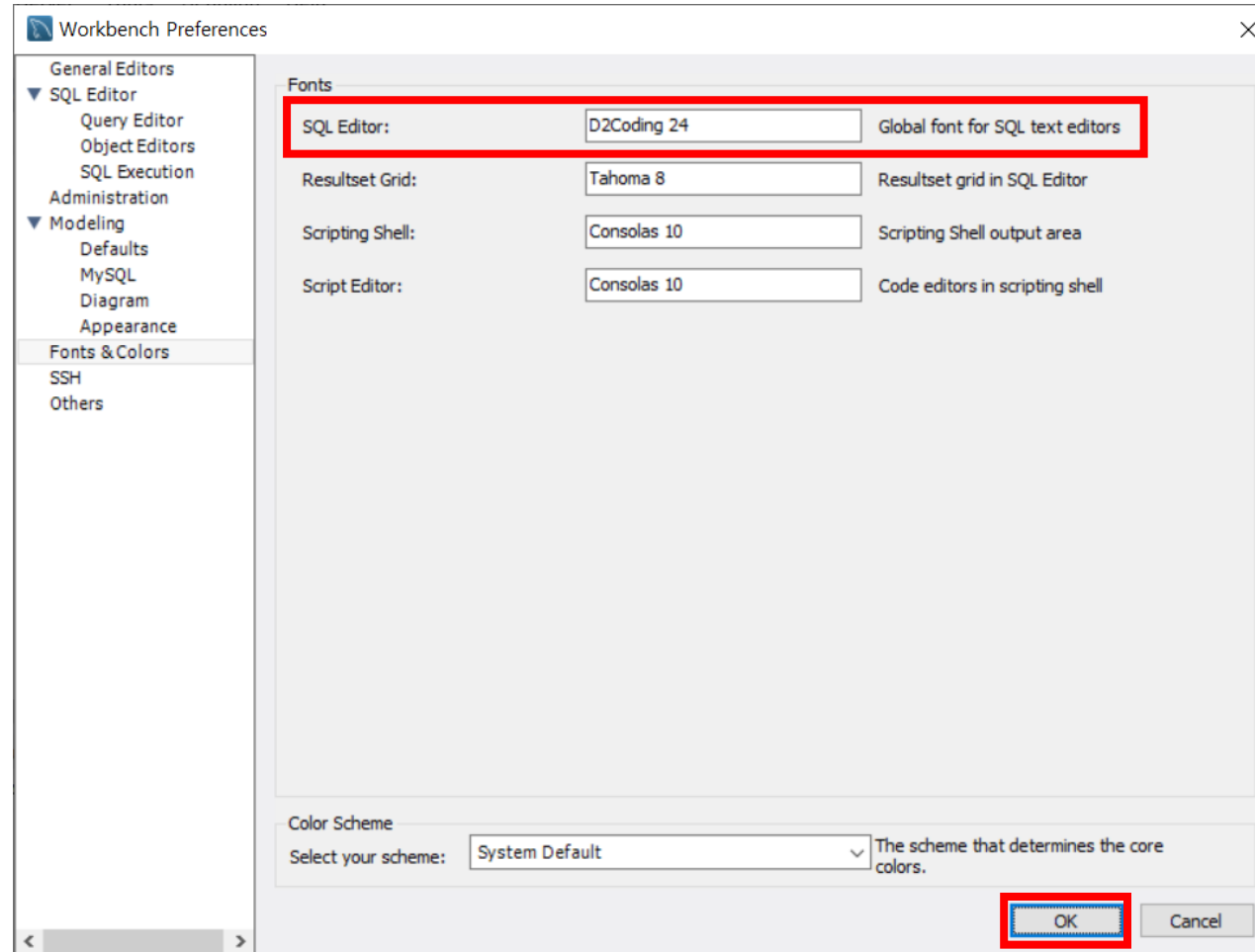
- Query Editor - Enable Code Completion in Editors 체크 해제



코드 자동 완성 기능 해제

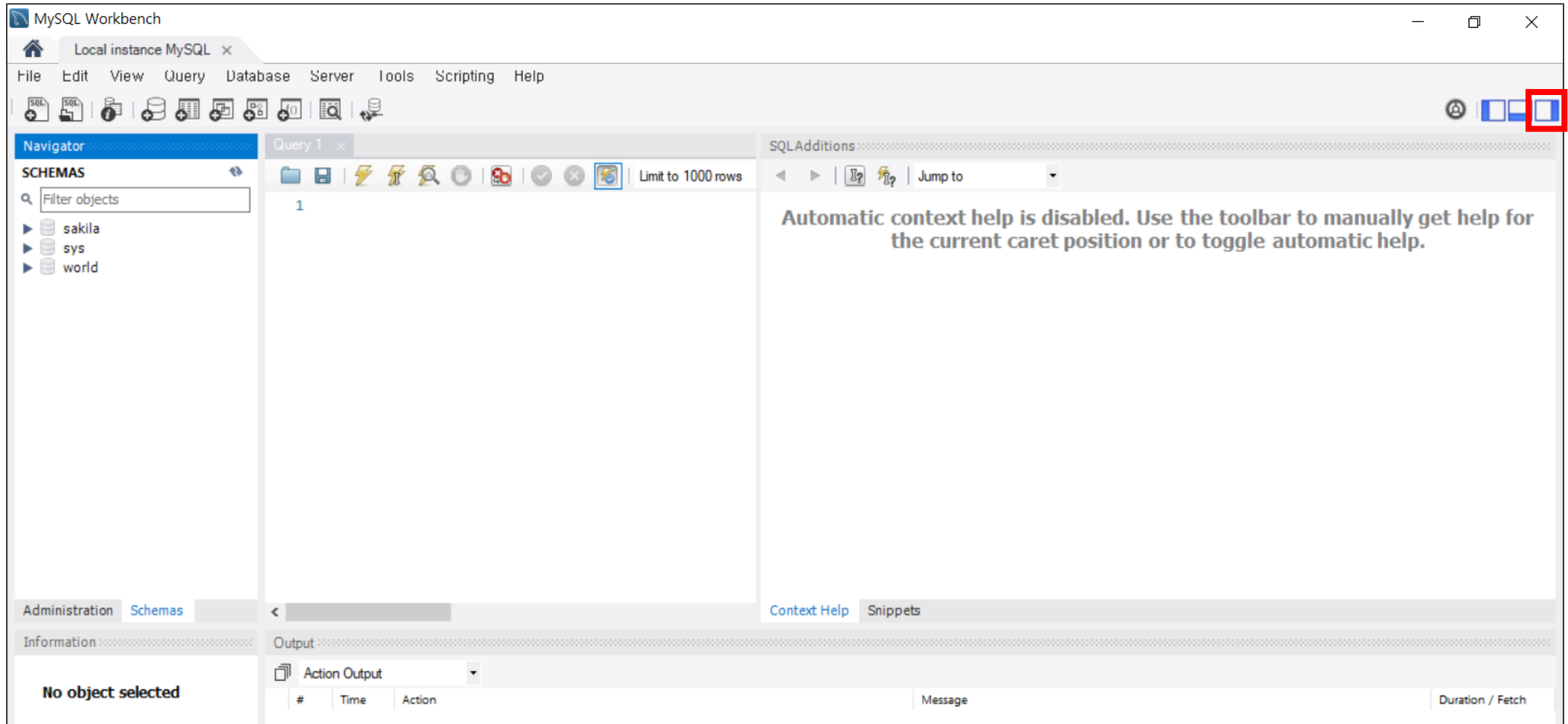
Workbench 설정

■ Fonts & Colors - SQL Editor 폰트 설정



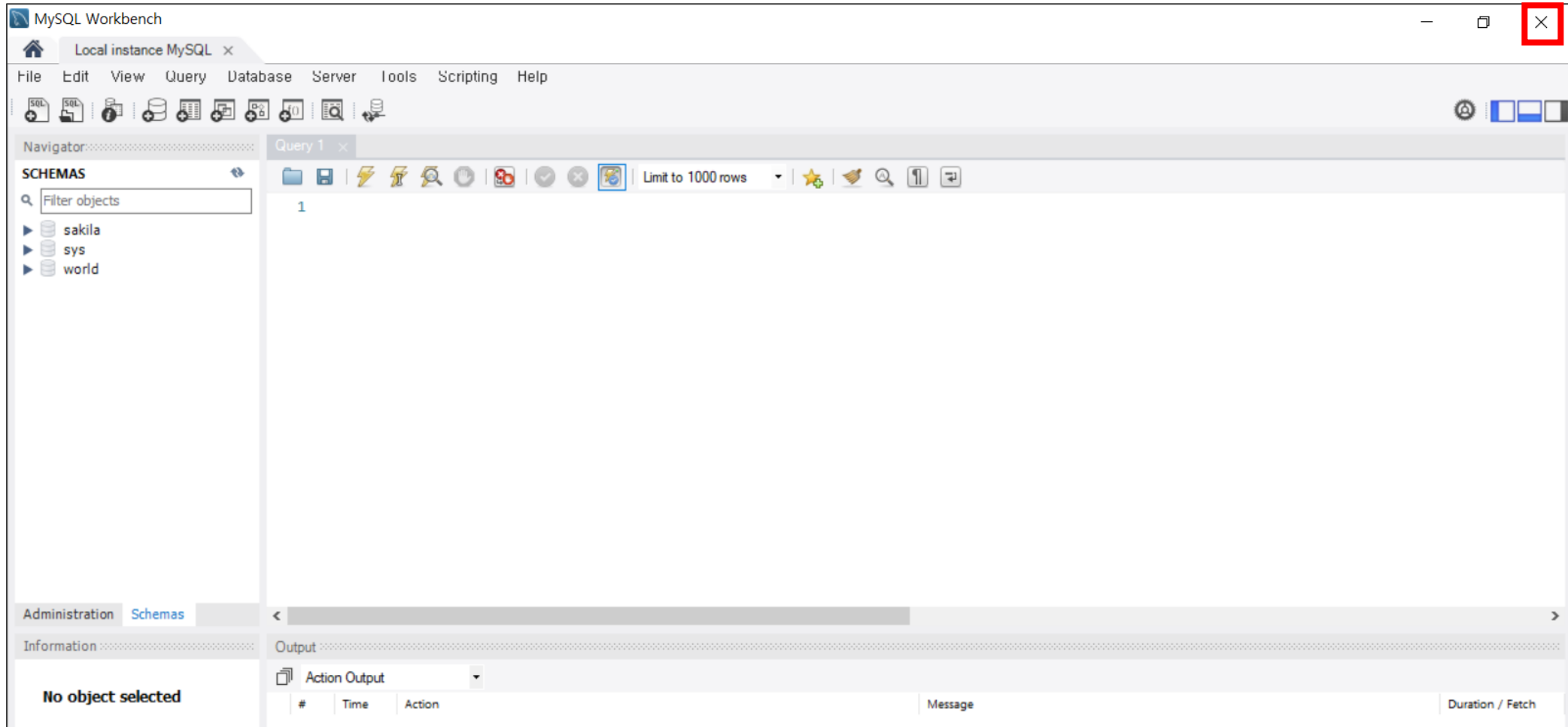
Workbench 설정

■ SQL Additions 탭 제거



Workbench 설정

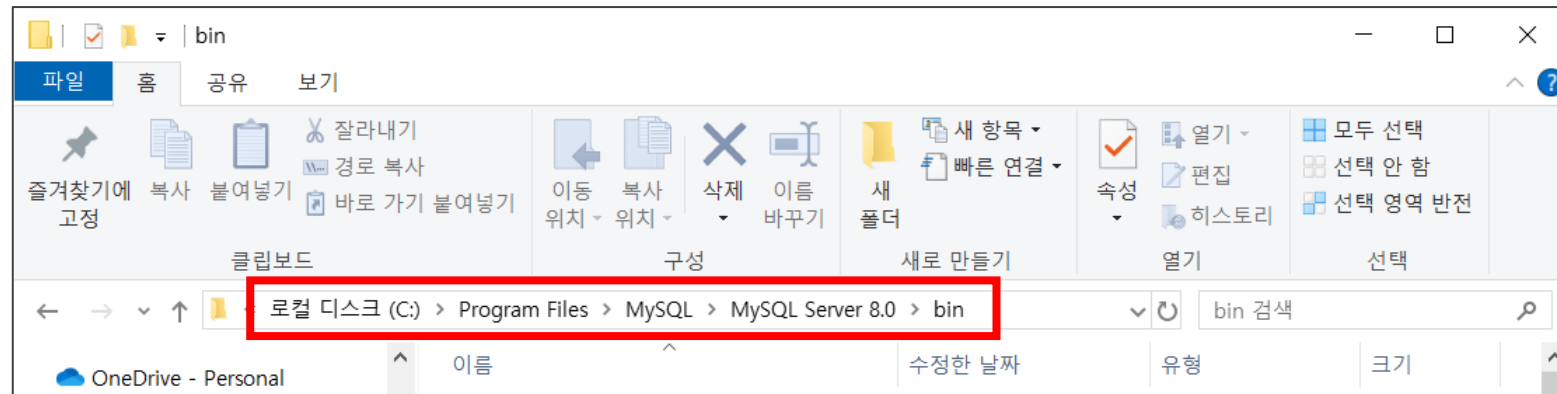
■ Workbench 종료



Path 등록

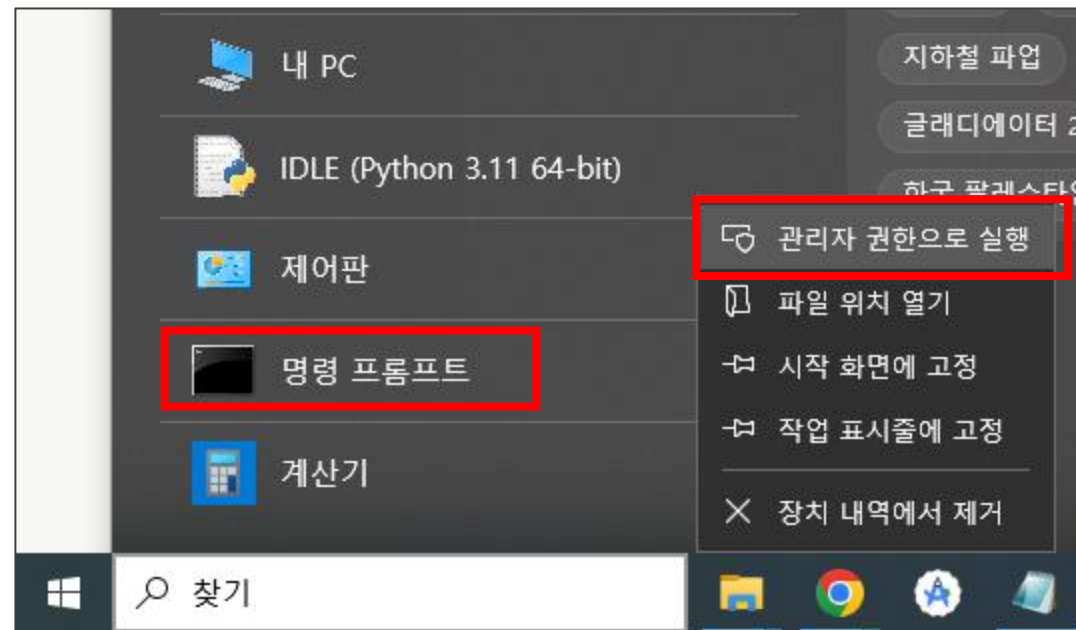
■ Path 등록할 주소 복사

- C:\Program Files\MySQL\MySQL Server 8.0\bin



Path 등록

- 1. 커맨드로 환경 변수 관리
 - 관리자 권한으로 명령 프롬프트 실행



Path 등록

■ Path 등록 명령 입력

- SETX PATH "C:\Program Files\MySQL\MySQL Server 8.0\bin;%PATH%"

관리자: 명령 프롬프트

```
Microsoft Windows [Version 10.0.19045.5131]  
(c) Microsoft Corporation. All rights reserved.
```

```
C:\Users\Administrator>SETX PATH "C:\Program Files\MySQL\MySQL Server 8.0\bin;%PATH%"
```

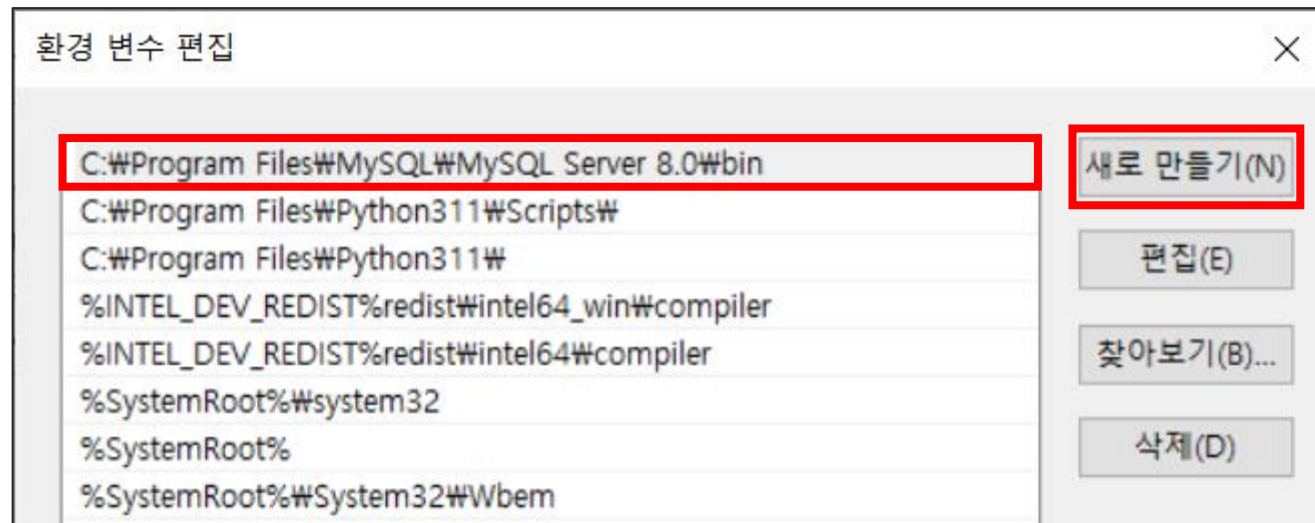
```
성공: 지정한 값을 저장했습니다.
```

```
C:\Users\Administrator>
```

Path 등록

■ 2. GUI로 환경 변수 관리

- [제어판] - [시스템] - [시스템 속성] - [환경 변수] - [시스템 변수] - [Path] 편집



* 권장하는 방식 : 커맨드 방식은 간혹 잘못하면 기존 Path 정보가 전부 삭제되는 경우도 있다.

Path 등록

- 컴퓨터 다시 시작
 - shutdown -r -t 0

```
C:\Users\Administrator>shutdown -r -t 0
```