

〈1주차 실습〉

MySQL 설치 및 실습

Database Programming



MySQL 설치



MySQL 실행



데이터베이스 생성 및 사용



MySQL 기타 명령어

- 1) “https://dev.mysql.com/” 사이트에 접속
- 2) “MySQL Download” 클릭

The screenshot shows the MySQL Developer Zone website. The top navigation bar includes links to MySQL.COM, DOWNLOADS, DOCUMENTATION, and DEVELOPER ZONE. Below the navigation bar, there are four promotional cards for MySQL 8.0 and MySQL Database Service. On the left, a sidebar contains links to MySQL Database Service, MySQL Documentation, MySQL Downloads (highlighted with a red box and the word 'click'), MySQL Forums, MySQL Enterprise Edition, and MySQL Cluster CGE. The main content area displays 'MySQL Engineering Blogs' with several articles, including 'Setup Disaster Recovery for OCI MySQL Database Service', 'How to import data from Microsoft SQL Server to MySQL Database Service', 'How to import data from Amazon Redshift to MySQL Database Service', and 'How to import data from PostgreSQL to MySQL Database Service'.

3) “MySQL Community Server” 클릭

MySQL Community Downloads

- MySQL Yum Repository
- MySQL APT Repository
- MySQL SUSE Repository
- **MySQL Community Server** **click**
- MySQL Cluster
- MySQL Router
- MySQL Shell
- MySQL Workbench
- MySQL Installer for Windows
- MySQL for Visual Studio
- 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

4) “Go to Download Page” 클릭

MySQL Community Downloads

MySQL Community Server

General Availability (GA) ReleasesArchives

MySQL Community Server 8.0.26

Select Operating System:
Microsoft Windows


Looking for previous GA versions?

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 >](#) **click**

Other Downloads:

Windows (x86, 64-bit), ZIP Archive (mysql-8.0.26-winx64.zip)	8.0.26	208.2M	Download
		MD5: db32c0669cc809abb465bb56e76c77a1 Signature	
Windows (x86, 64-bit), ZIP Archive Debug Binaries & Test Suite (mysql-8.0.26-winx64-debug-test.zip)	8.0.26	500.2M	Download
		MD5: 9226e8c02fec0671ca40a31bfef7ff11 Signature	

i We suggest that you use the MD5 checksums and GnuPG signatures to verify the integrity of the packages you download.

5) Community 버전 “Download” 클릭 (web-community 버전 아님)

MySQL Community Downloads

MySQL Installer

General Availability (GA) Releases

Archives



MySQL Installer 8.0.26

Select Operating System:

Microsoft Windows

Looking for previous GA versions?

Windows (x86, 32-bit), MSI Installer

8.0.26

2.4M

Download

(mysql-installer-web-community-8.0.26.0.msi)

MD5: eaddc383a742775a5b33a3783a4890fb | [Signature](#)

Windows (x86, 32-bit), MSI Installer

8.0.26

450.7M

Download

click

(mysql-installer-community-8.0.26.0.msi)

MD5: b5b8e6bc39f2b163b817264ae206b815 | [Signature](#)



We suggest that you use the [MD5 checksums](#) and [GnuPG signatures](#) to verify the integrity of the packages you download.

- 6) “No thanks, just start my download” 클릭
- 7) 다운로드 완료 후, 설치 파일 실행

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

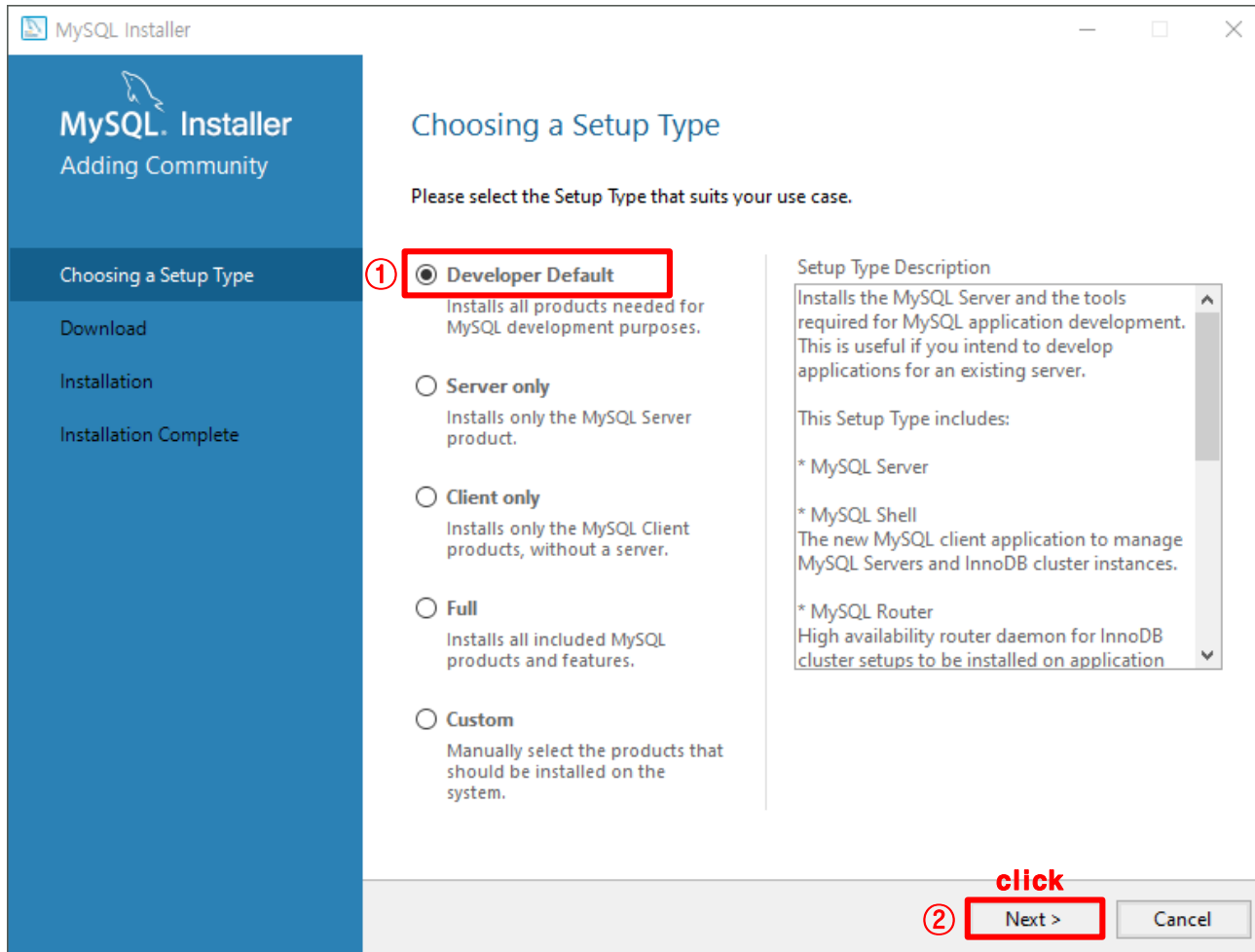
Sign Up »

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 sign up for a free account by clicking the Sign Up link and following the instructions.

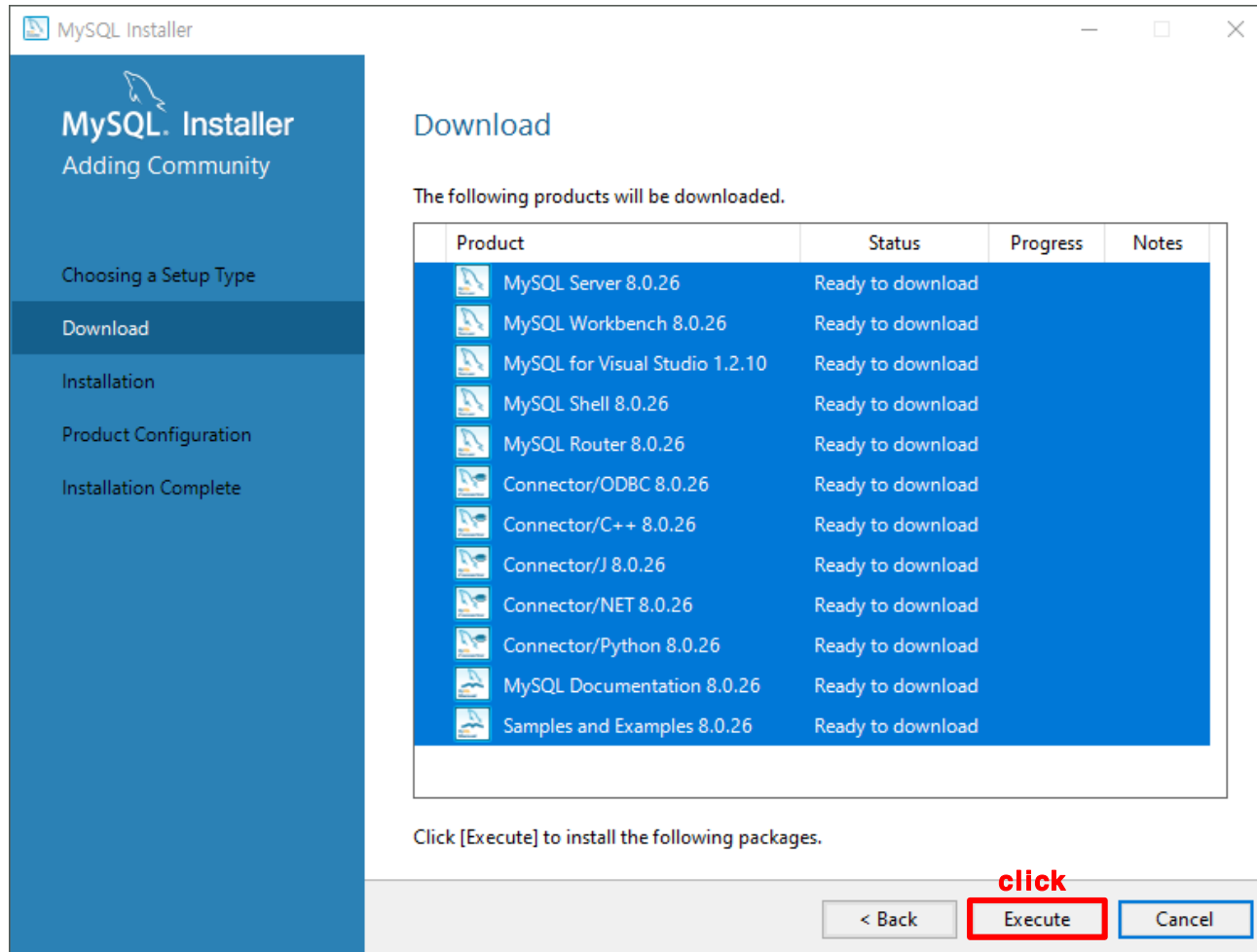
No thanks, just start my download. click

8) “Developer Default” 체크 → “Next” 클릭

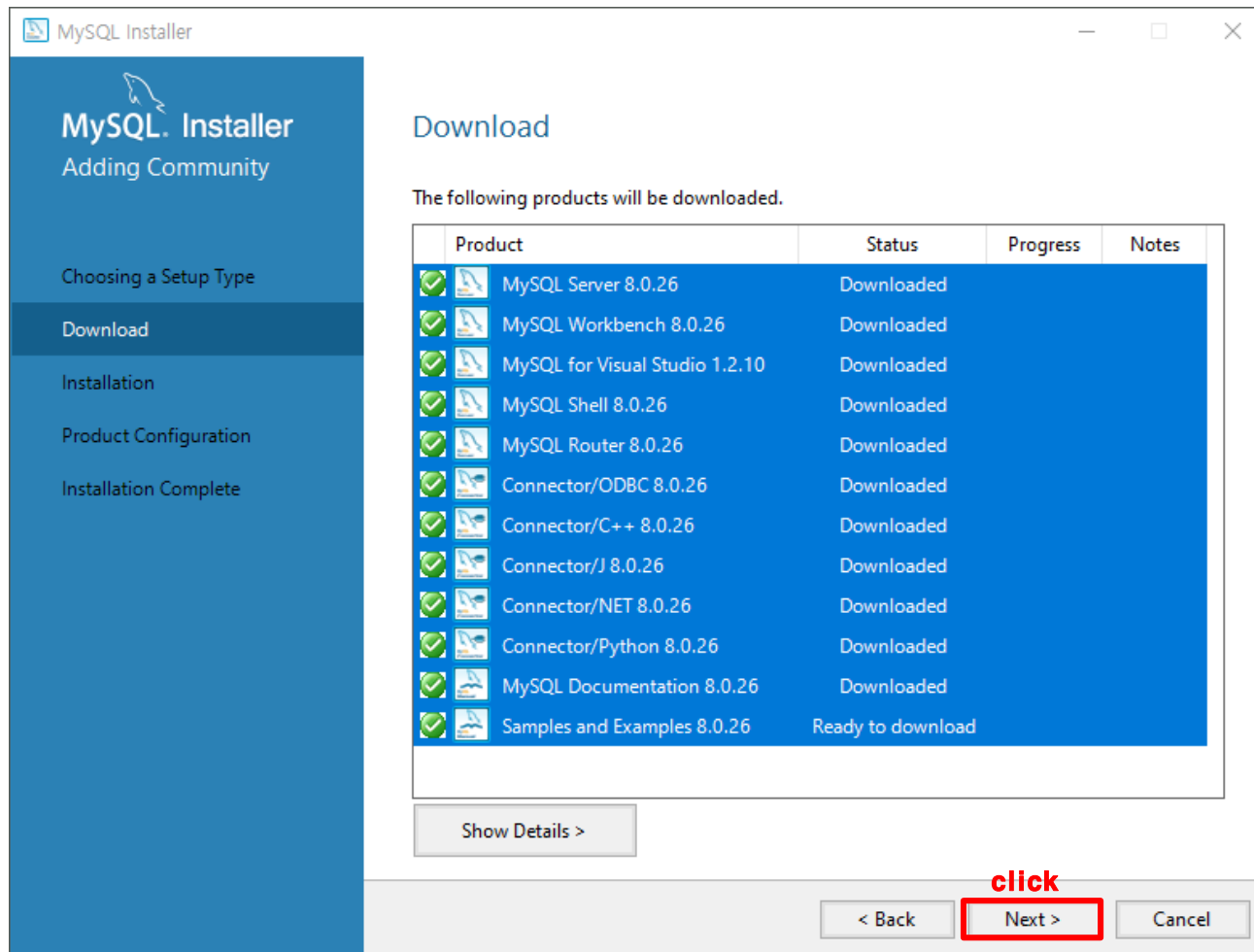


9) “Execute” 클릭

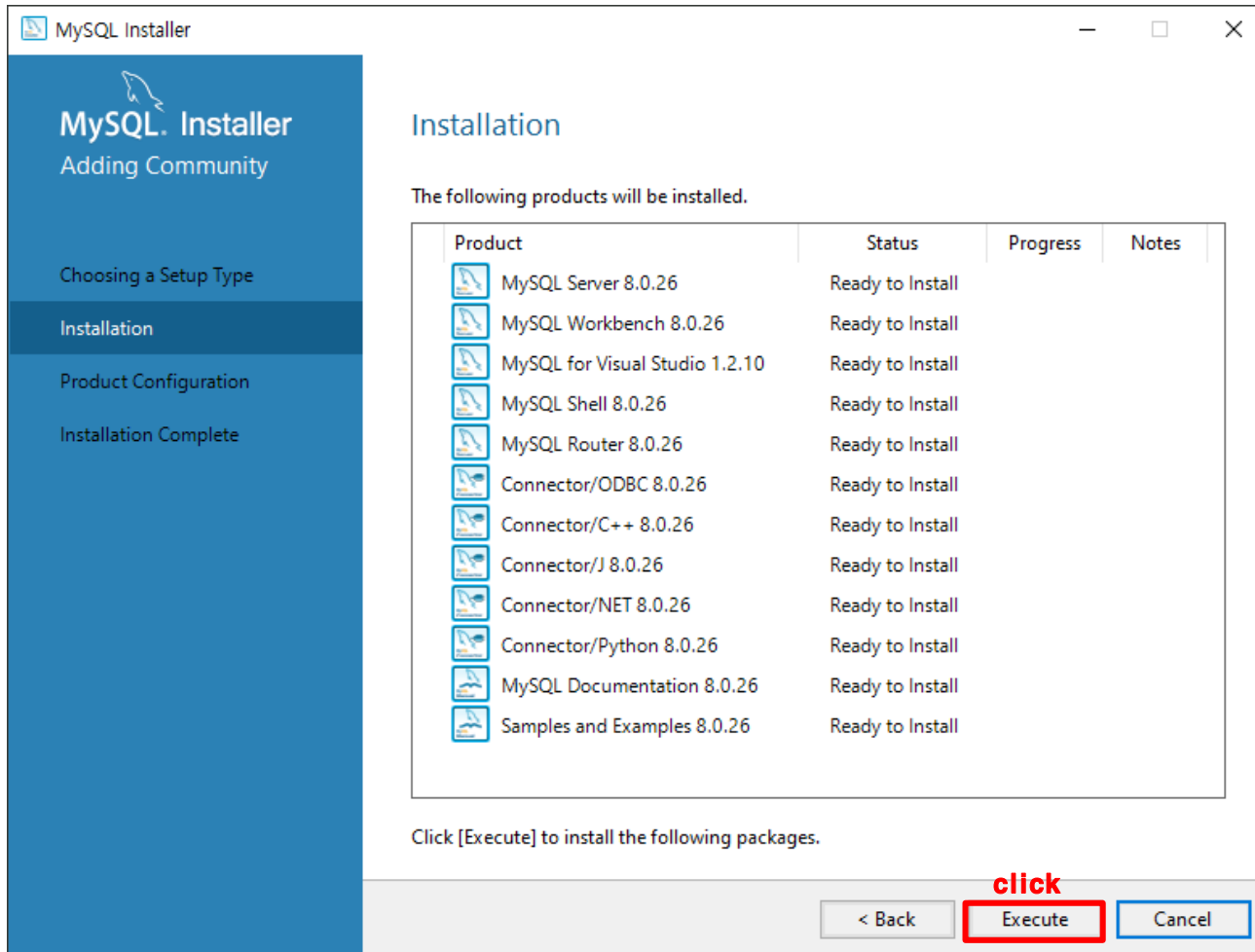
(설치 중 Error가 발생한 경우 Notes→Try again 클릭)



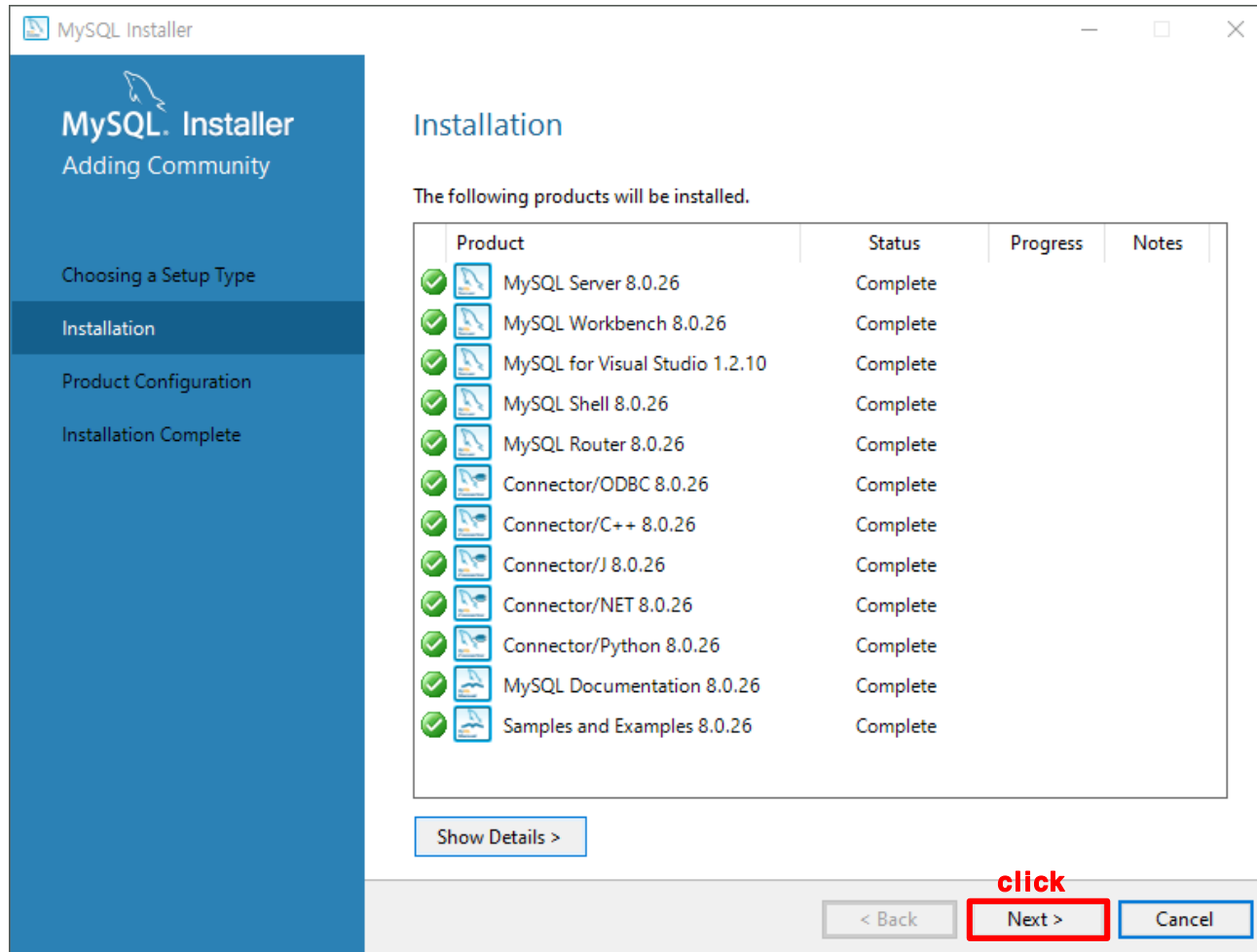
10) 설치 완료 후 “Next” 클릭



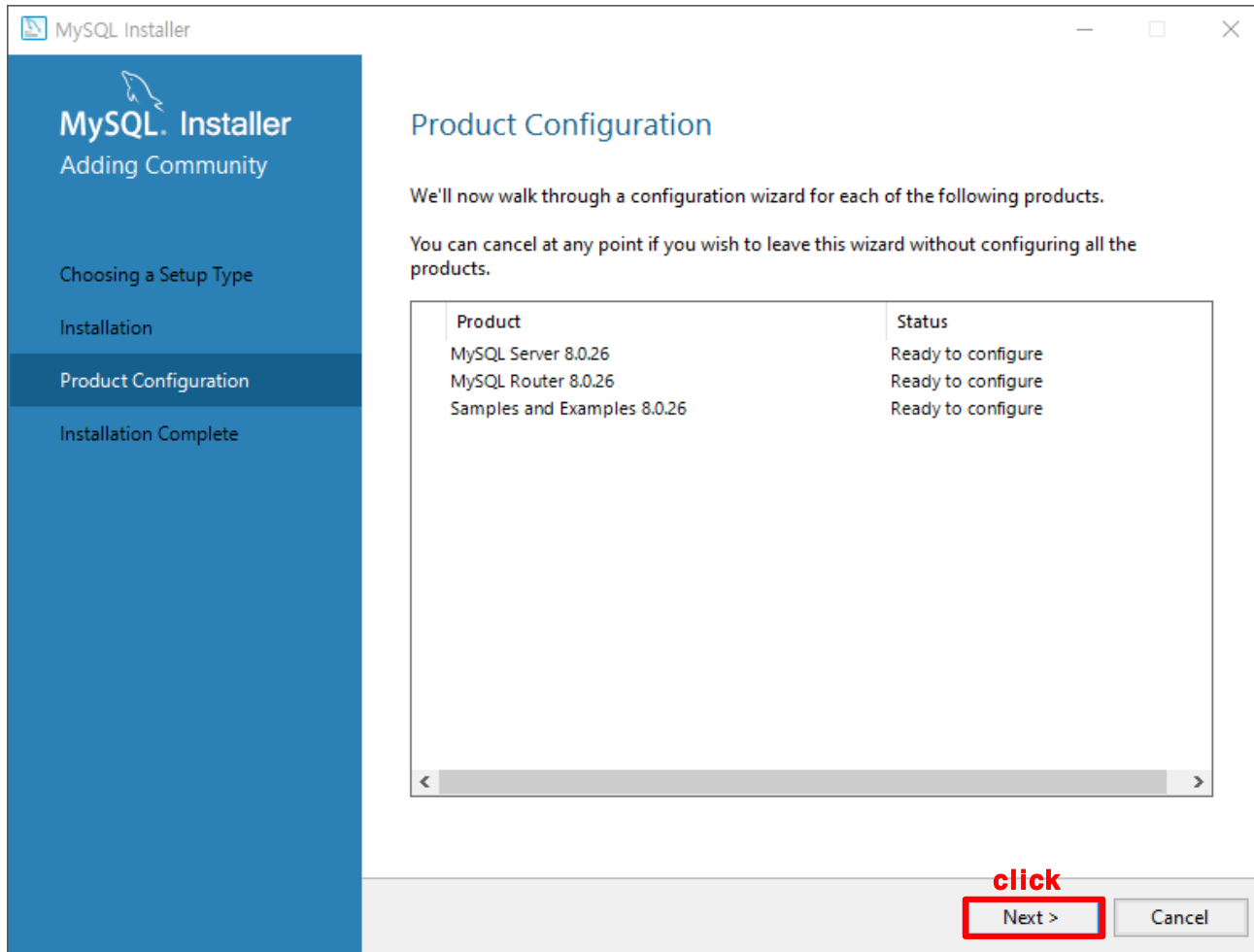
11) “Execute” 클릭



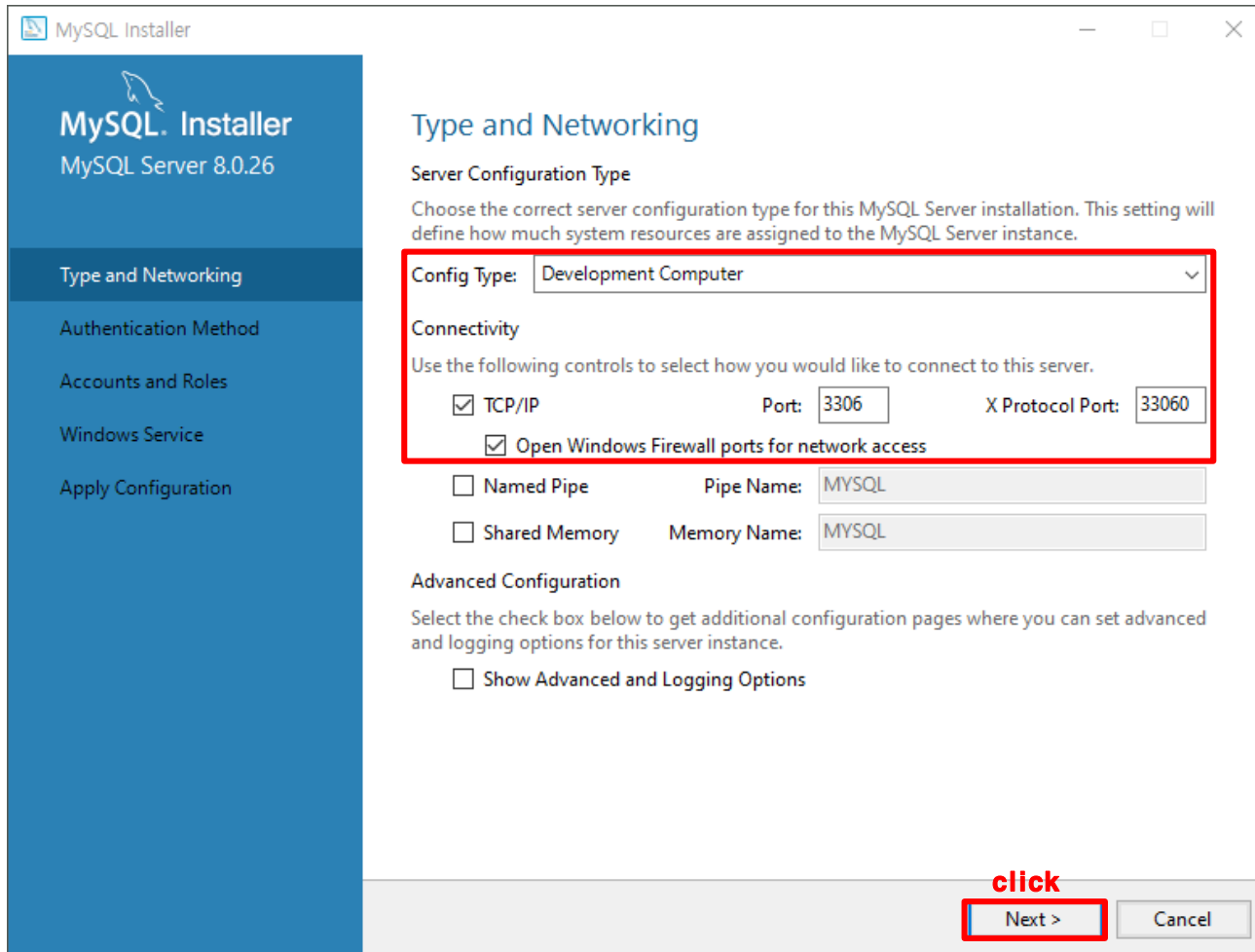
12) “Next” 클릭



13) “Next” 클릭



14) 접속 기본 설정 확인 후 “Next” 클릭



MySQL Installer

MySQL Server 8.0.26

Type and Networking

Authentication Method

Accounts and Roles

Windows Service

Apply Configuration

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

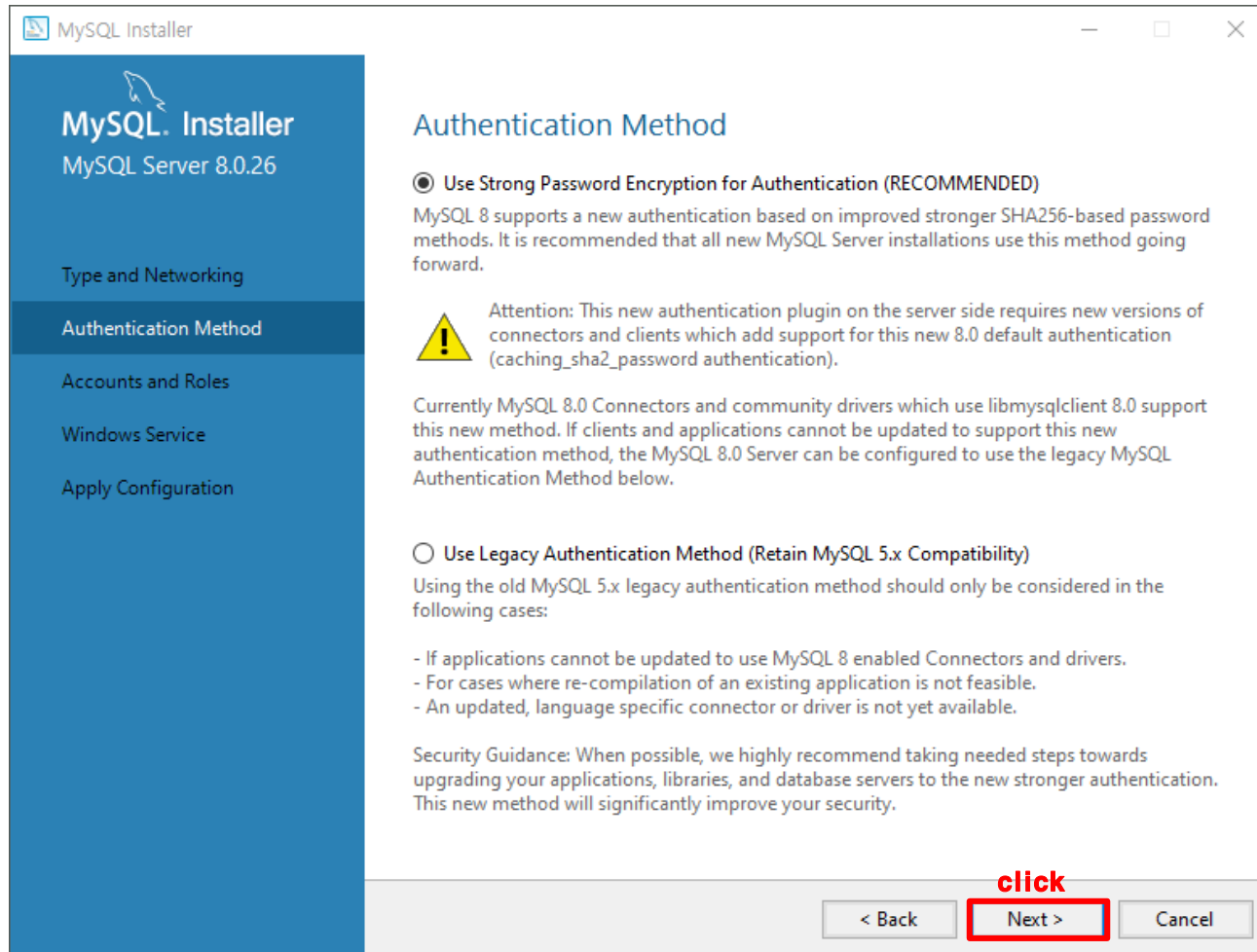
Select the check box below to get additional configuration pages where you can set advanced and logging options for this server instance.

☐ Show Advanced and Logging Options

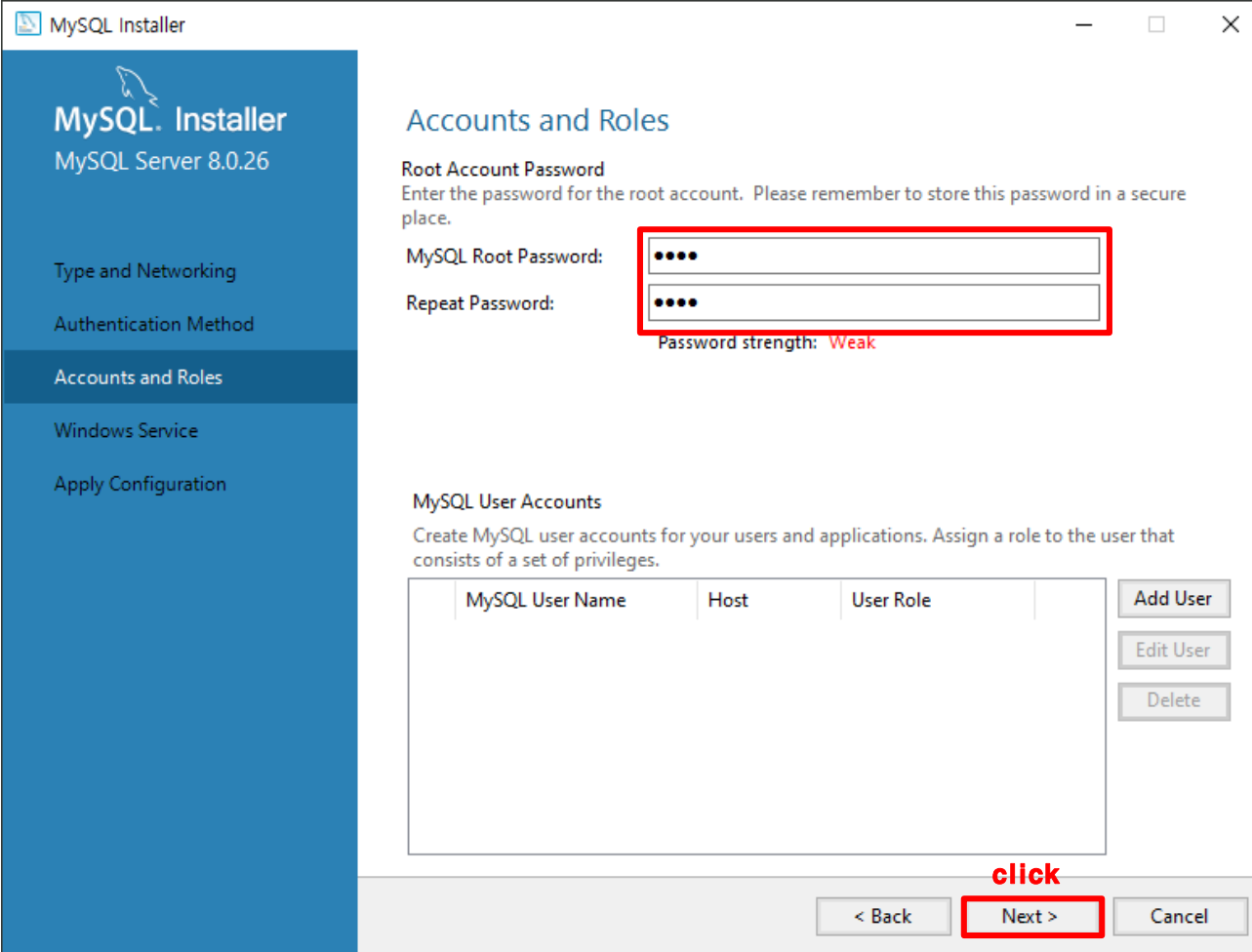
click

Next > Cancel

15) “Next” 클릭



16) Password 입력 → “Next” 클릭 (Password를 반드시 기억해야 함)



The screenshot shows the MySQL Installer window for MySQL Server 8.0.26. The left sidebar contains navigation options: Type and Networking, Authentication Method, Accounts and Roles (selected), Windows Service, and Apply Configuration. The main area is titled 'Accounts and Roles' and includes instructions for setting the Root Account Password. Two password input fields are shown, both containing four dots. A red box highlights these fields. Below them, the text 'Password strength: Weak' is displayed in red. At the bottom, there is a table for 'MySQL User Accounts' with columns for MySQL User Name, Host, and User Role. To the right of the table are buttons for 'Add User', 'Edit User', and 'Delete'. At the bottom right, there are three buttons: '< Back', 'Next >', and 'Cancel'. A red box highlights the 'Next >' button, and the word 'click' is written in red above it.

MySQL Installer

MySQL Server 8.0.26

Type and Networking

Authentication Method

Accounts and Roles

Windows Service

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

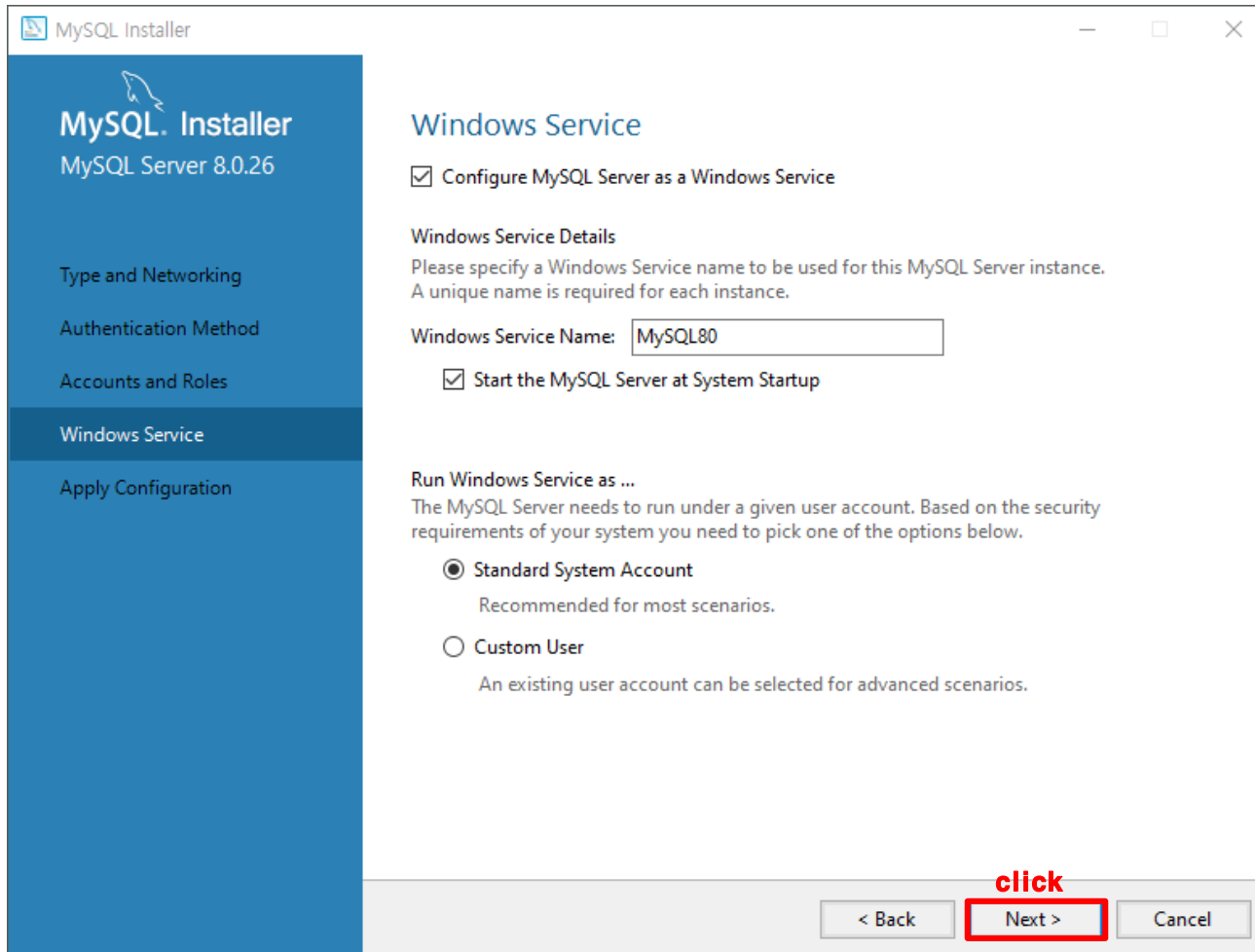
Delete

< Back

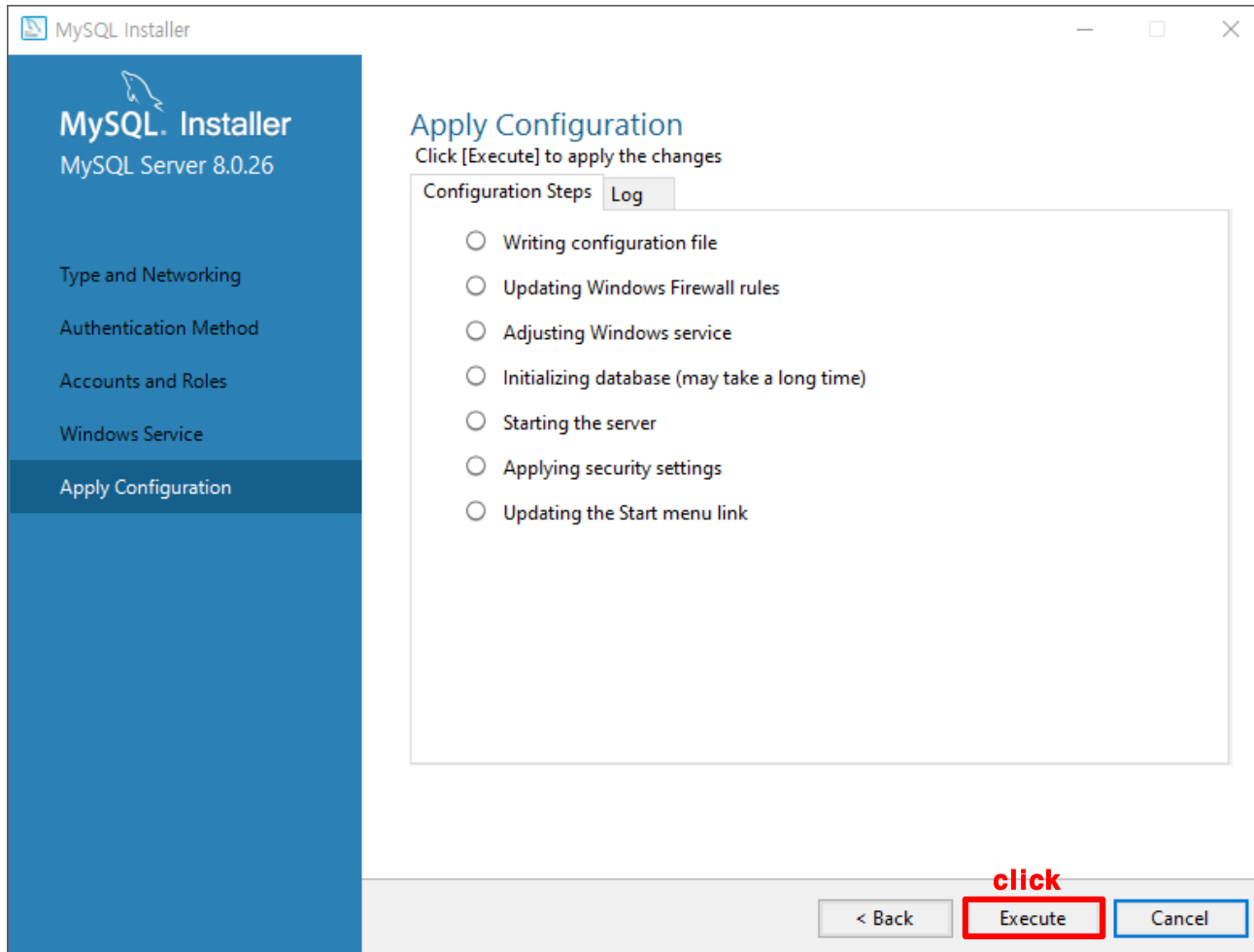
Next >

Cancel

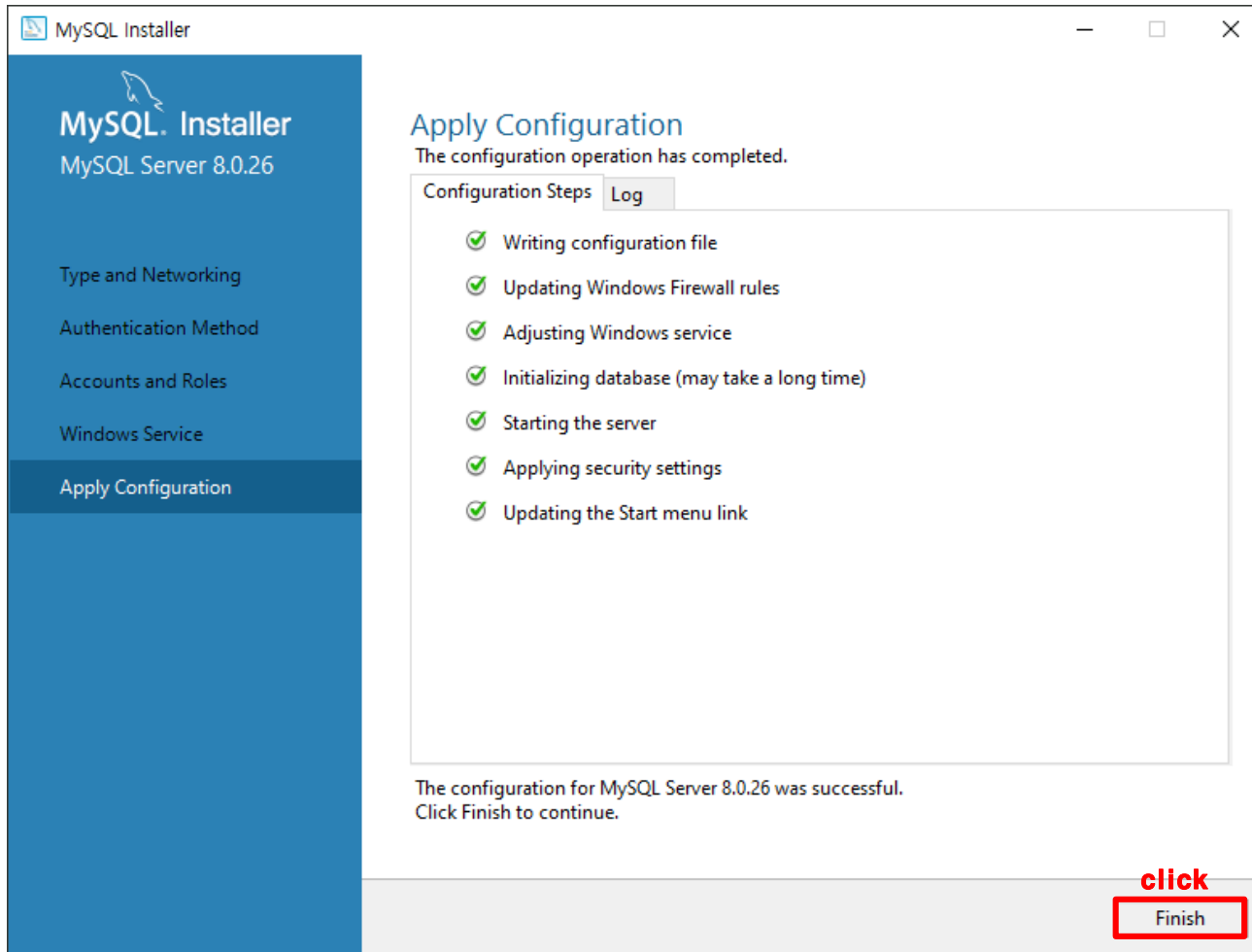
17) “Next” 클릭



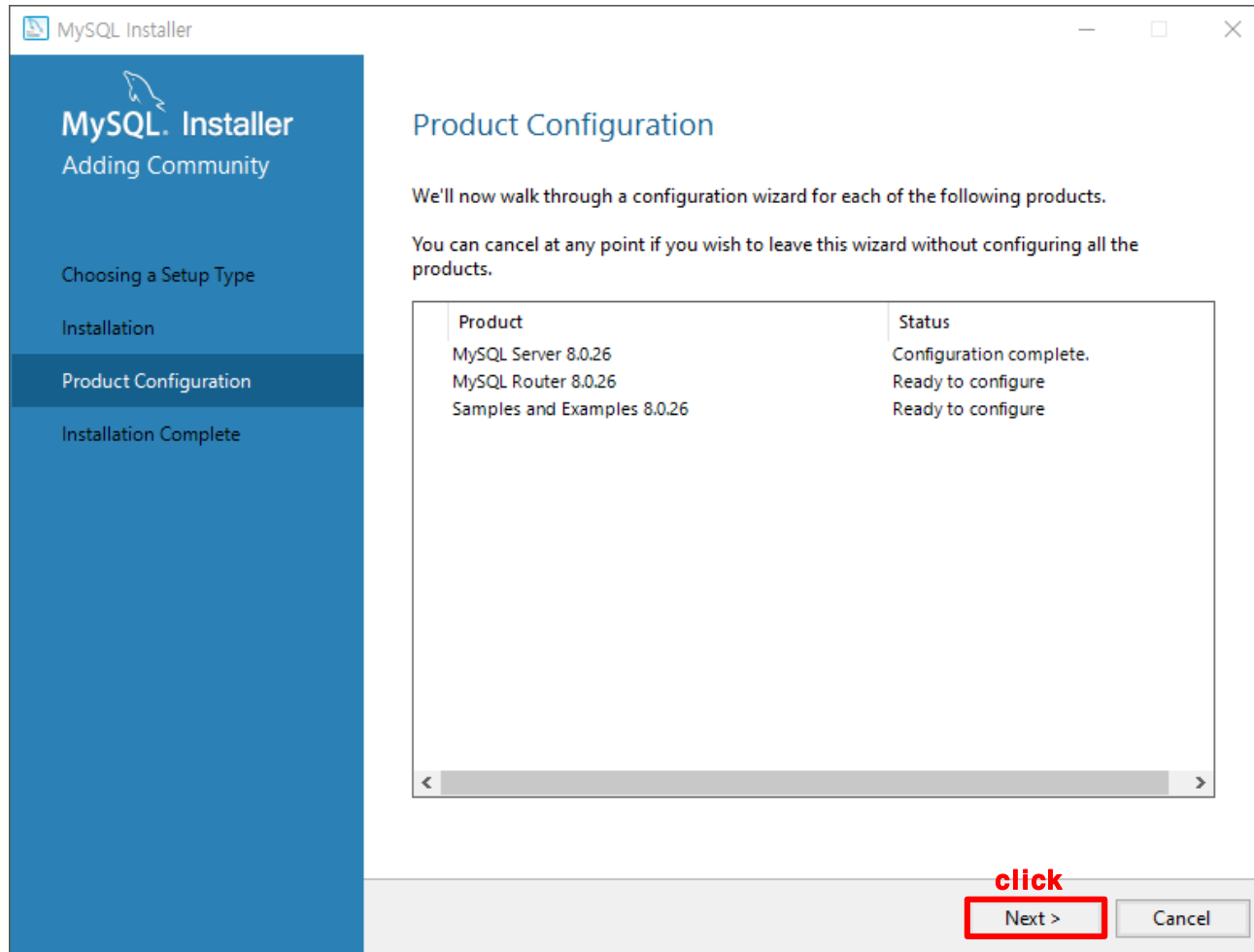
18) “Execute” 클릭



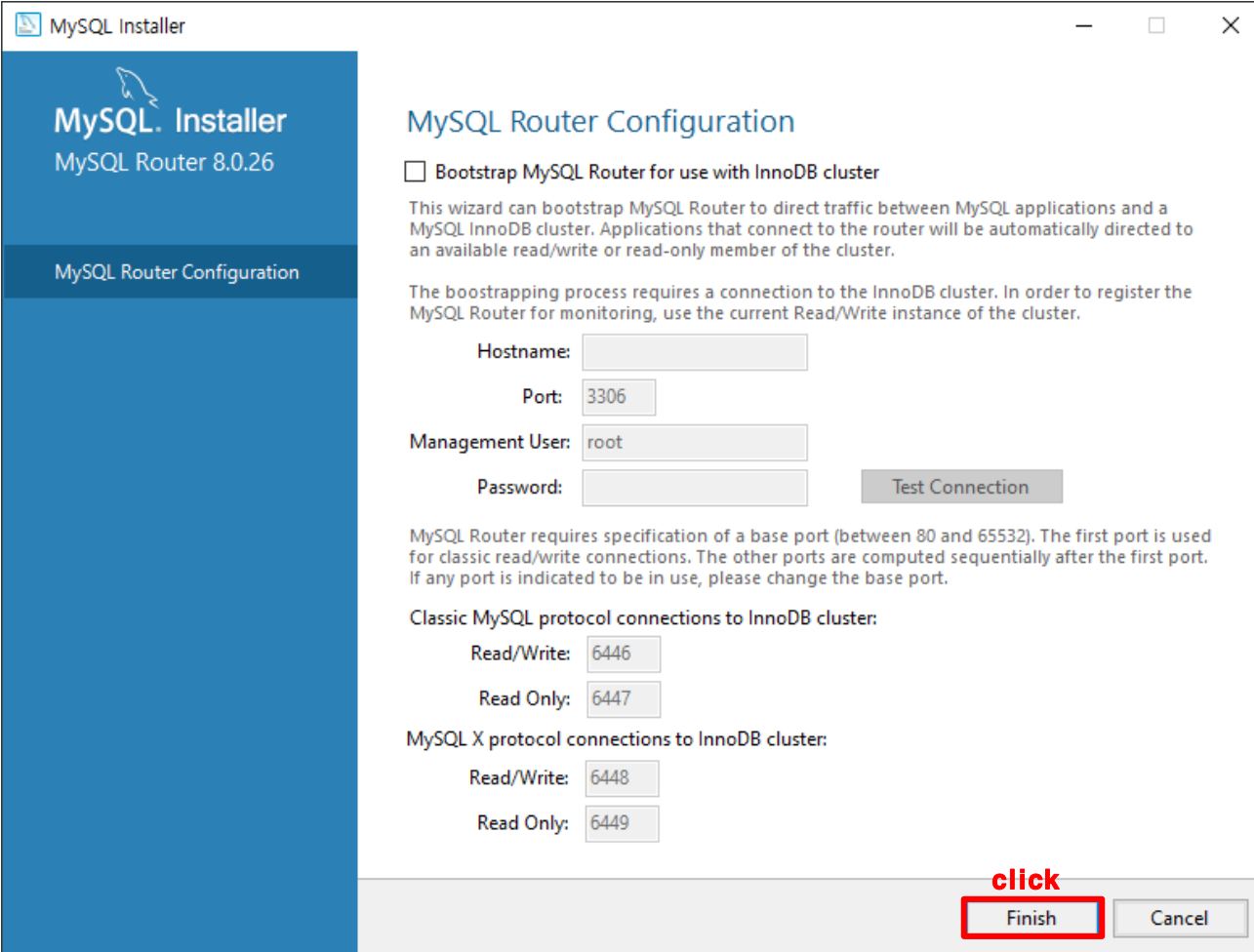
19) “Finish” 클릭



20) “Next” 클릭



21) “Finish” 클릭



The image shows the 'MySQL Router Configuration' window of the MySQL Installer. The window has a blue sidebar on the left with the MySQL logo and the text 'MySQL. Installer' and 'MySQL Router 8.0.26'. The main area is white and contains the following content:

MySQL Router Configuration

☐ Bootstrap MySQL Router for use with InnoDB cluster

This wizard can bootstrap MySQL Router to direct traffic between MySQL applications and a MySQL InnoDB cluster. Applications that connect to the router will be automatically directed to an available read/write or read-only member of the cluster.

The bootstrapping process requires a connection to the InnoDB cluster. In order to register the MySQL Router for monitoring, use the current Read/Write instance of the cluster.

Hostname:

Port:

Management User:

Password:

MySQL Router requires specification of a base port (between 80 and 65532). The first port is used for classic read/write connections. The other ports are computed sequentially after the first port. If any port is indicated to be in use, please change the base port.

Classic MySQL protocol connections to InnoDB cluster:

Read/Write:

Read Only:

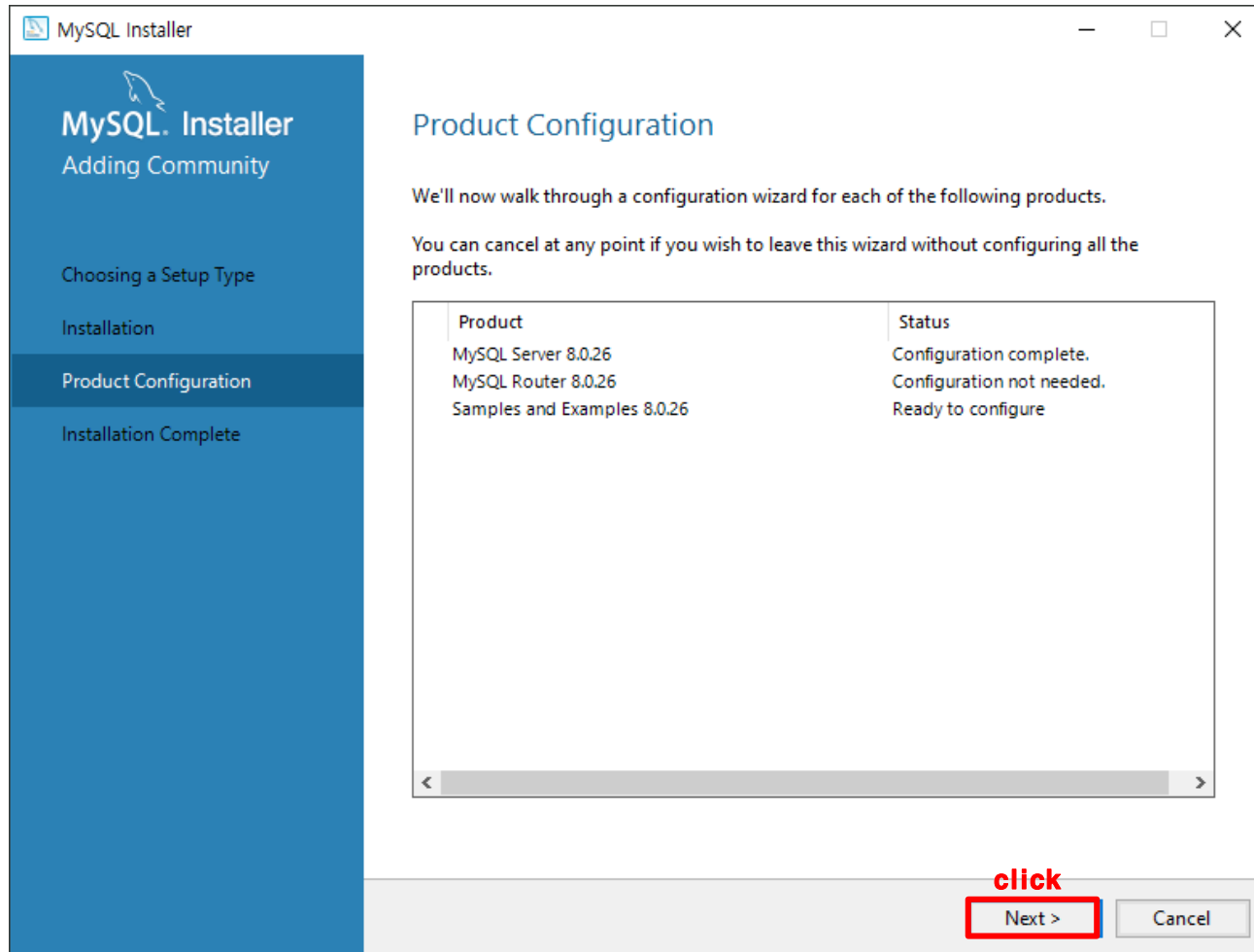
MySQL X protocol connections to InnoDB cluster:

Read/Write:

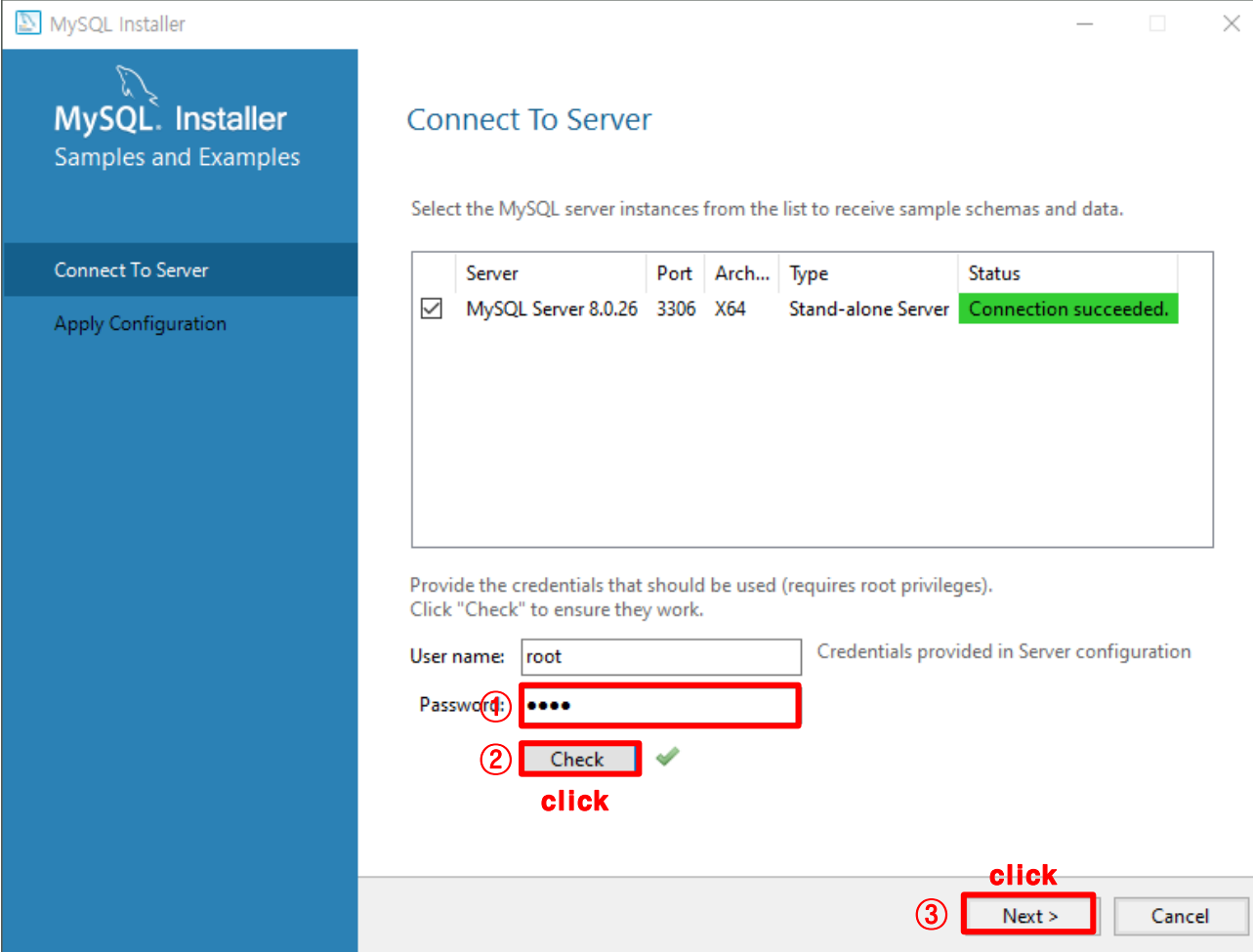
Read Only:

At the bottom right, there are two buttons: 'Finish' and 'Cancel'. The 'Finish' button is highlighted with a red rectangle and the word 'click' in red text above it.

22) “Next” 클릭



23) Password 입력 후 “Check” 클릭 → “Next” 클릭 (Password는 16번 단계에서 설정한 Password)



The screenshot shows the 'Connect To Server' window in the MySQL Installer. The left sidebar has 'Connect To Server' selected. The main area shows a table with one server instance, 'MySQL Server 8.0.26', which is checked and has a status of 'Connection succeeded.'. Below the table, there are fields for 'User name' (root) and 'Password' (masked with dots). A red box highlights the 'Password' field. Below the password field, a red circle with the number '2' is next to the 'Check' button, which has a green checkmark next to it. The text 'click' is written in red below the 'Check' button. At the bottom right, a red circle with the number '3' is next to the 'Next >' button, which has a red box around it. The text 'click' is written in red above the 'Next >' button. The 'Cancel' button is also visible.

MySQL Installer

MySQL. Installer
Samples and Examples

Connect To Server

Apply Configuration

Connect To Server

Select the MySQL server instances from the list to receive sample schemas and data.

Server	Port	Arch...	Type	Status
<input checked="" type="checkbox"/> MySQL Server 8.0.26	3306	X64	Stand-alone Server	Connection succeeded.

Provide the credentials that should be used (requires root privileges).
Click "Check" to ensure they work.

User name: Credentials provided in Server configuration

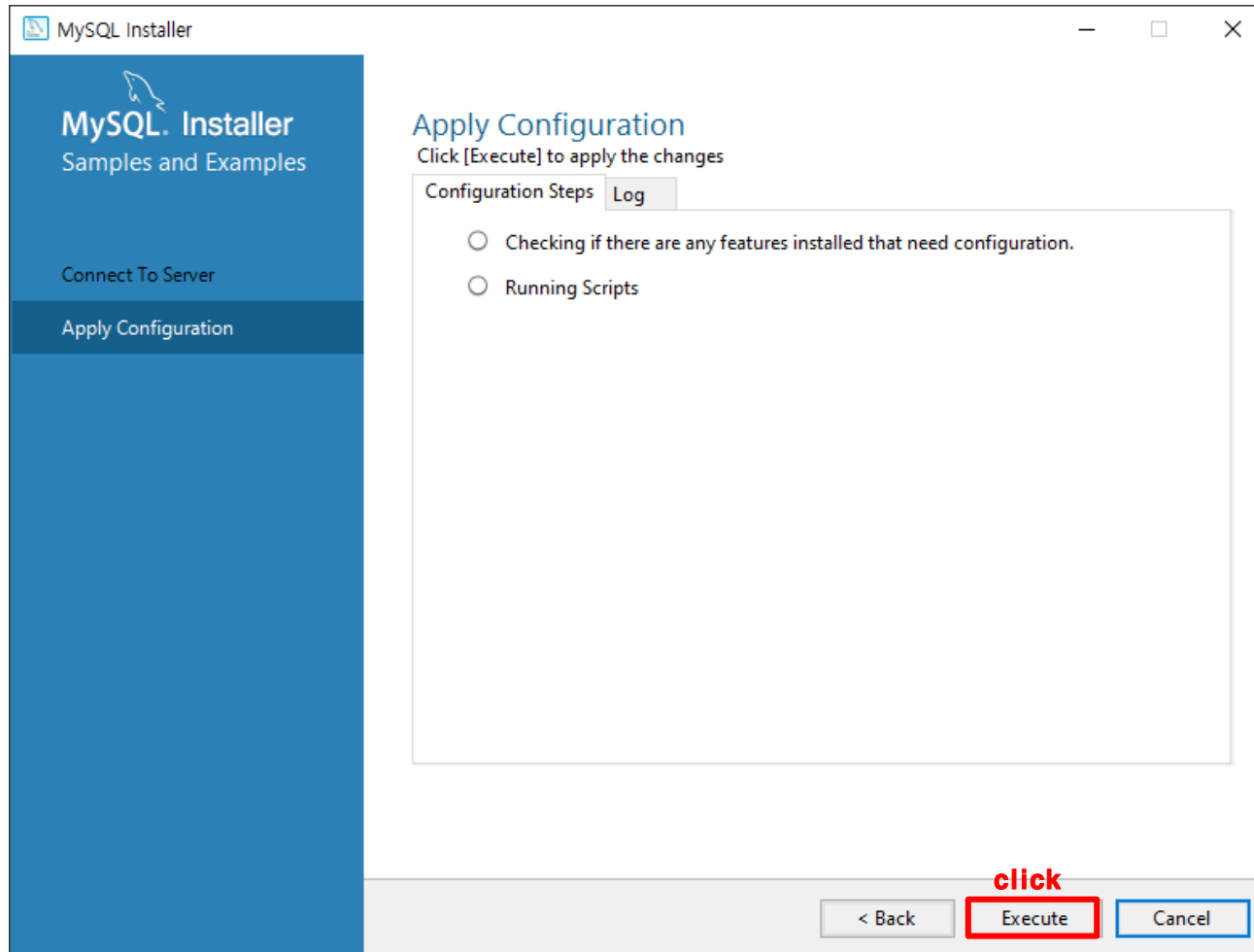
Password:

② ✓

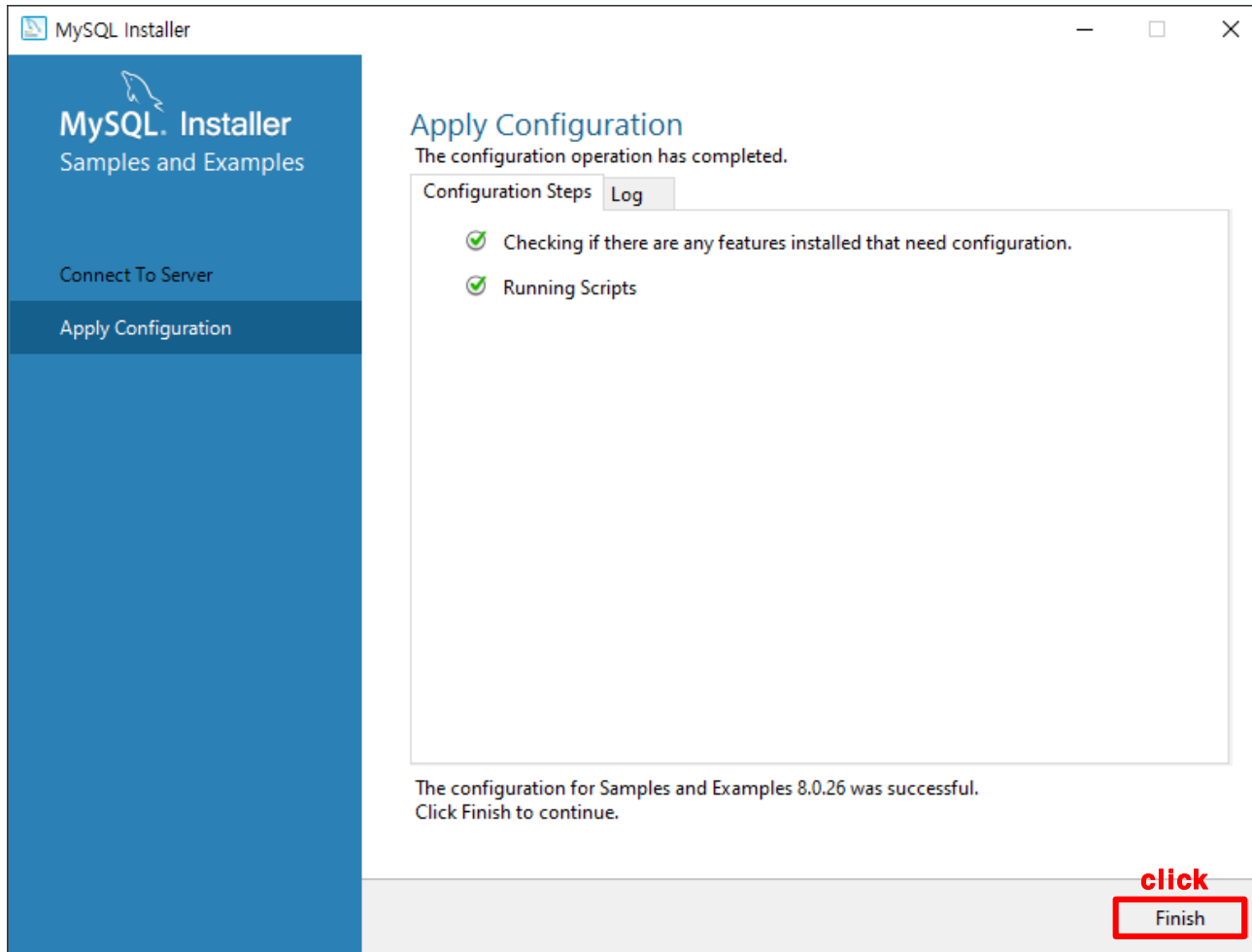
click

③ click

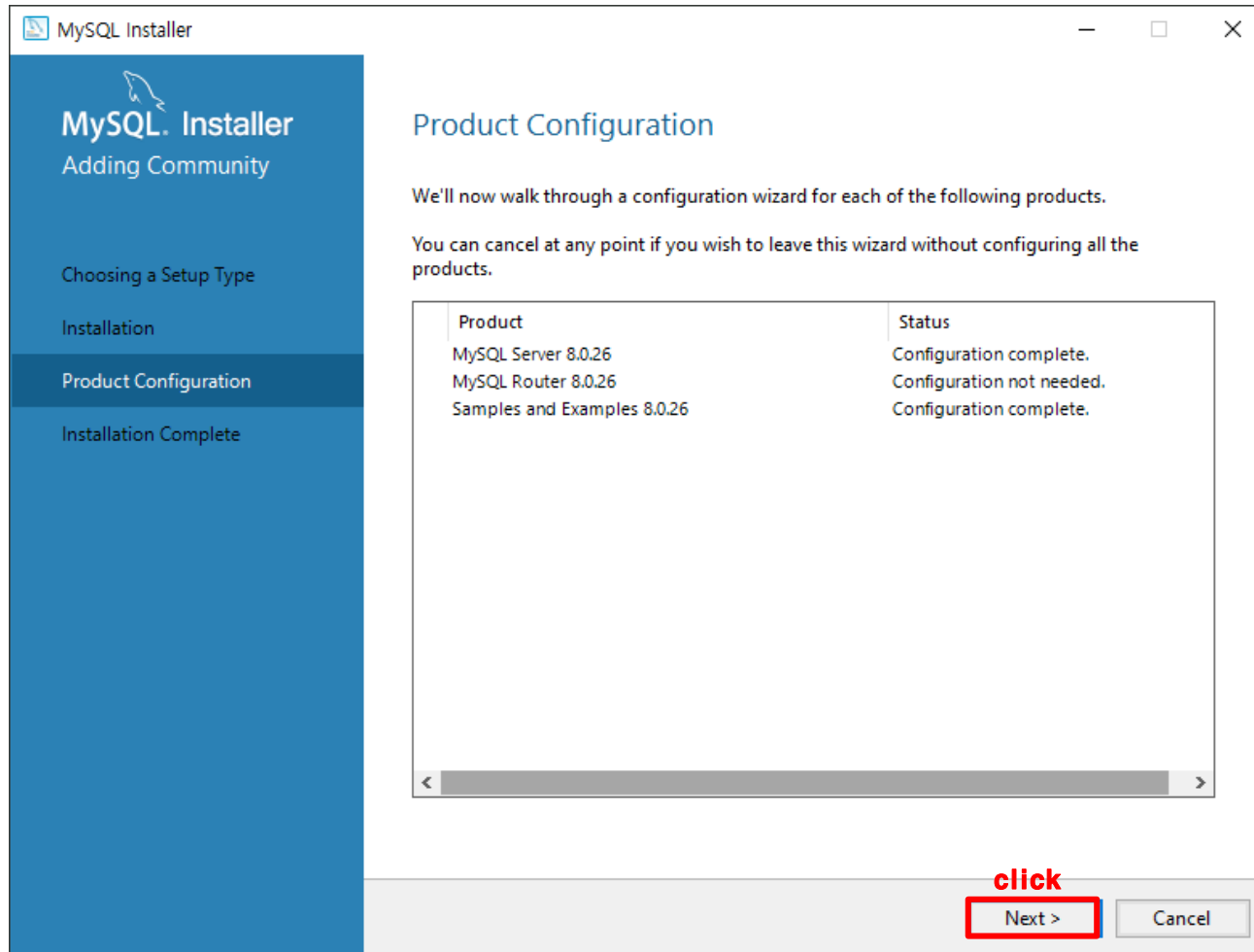
24) “Execute” 클릭



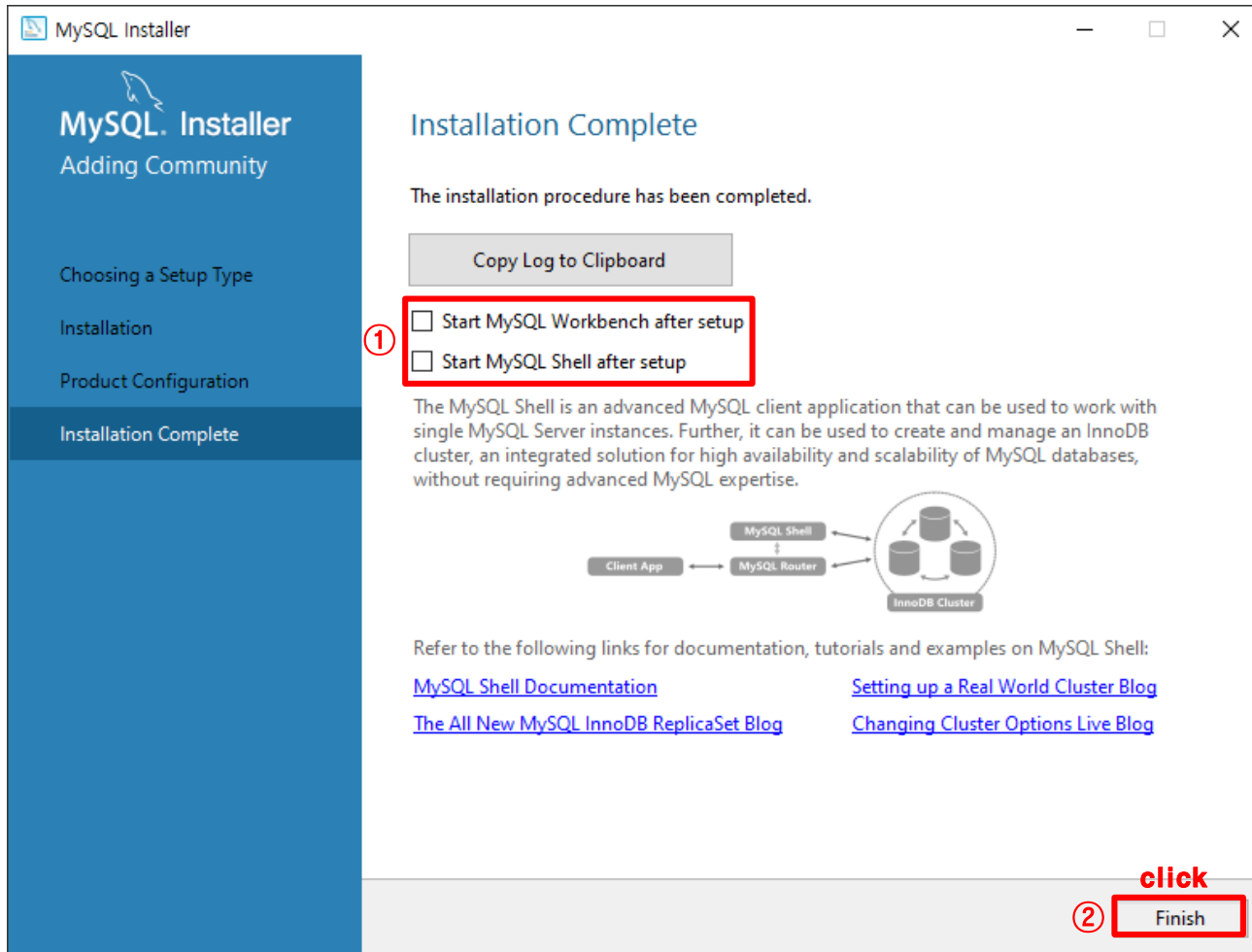
25) “Finish” 클릭



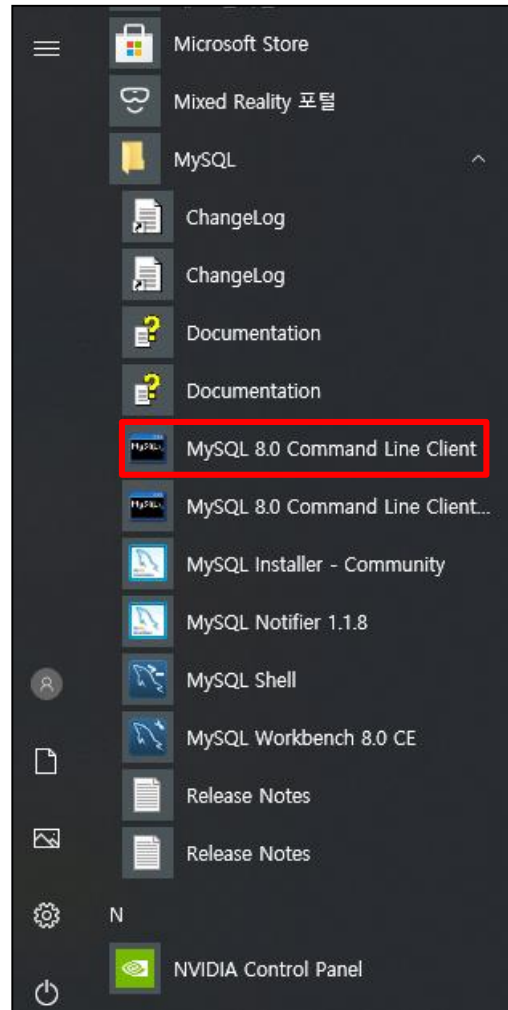
26) “Next” 클릭



27) 체크박스 해제 → “Finish” 클릭



- 1) 시작 → “MySQL 8.0 Command Line Client” 클릭
(MySQL 8.0 Command Line Client – Unicode 아님)

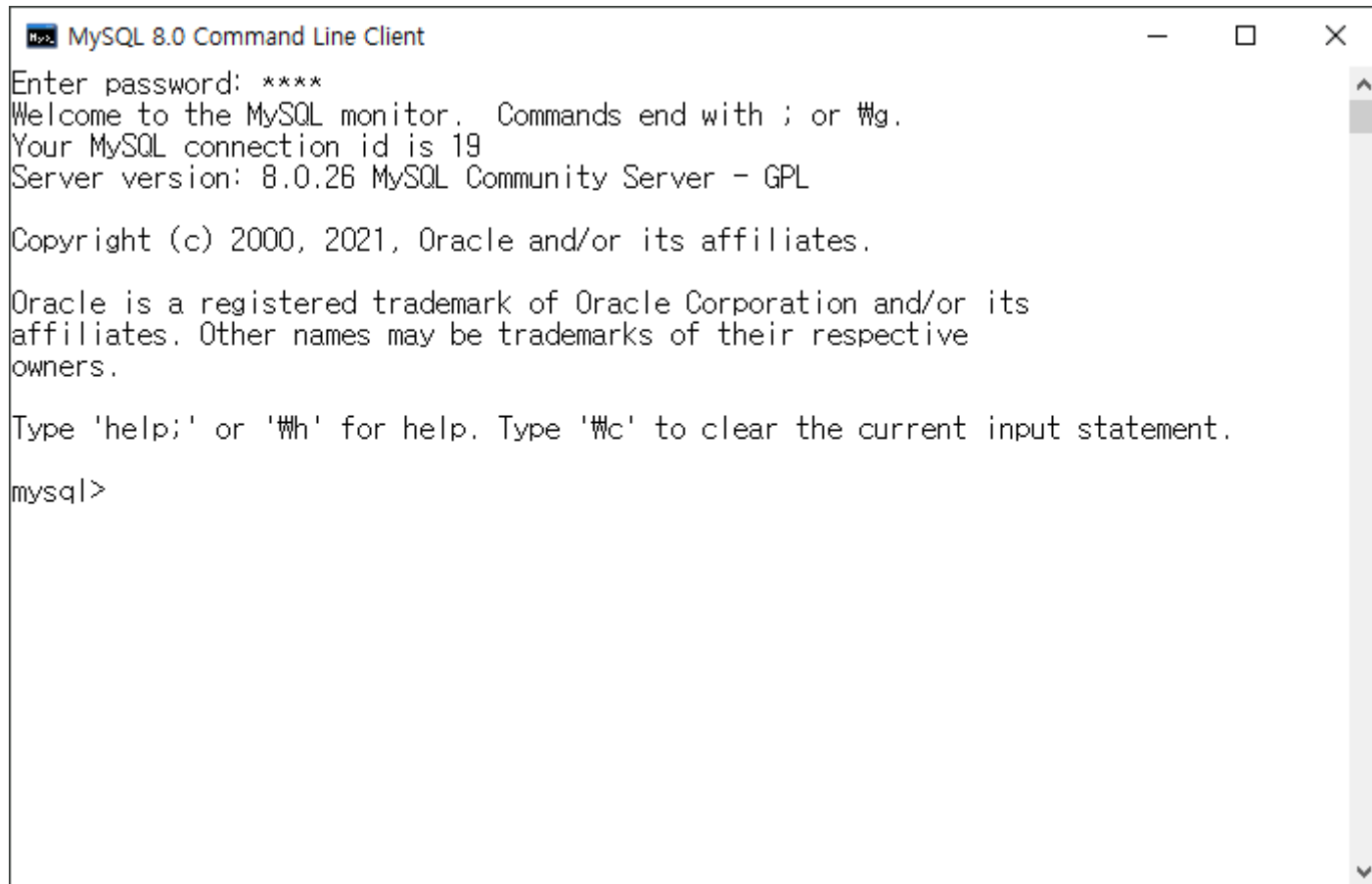


2) 비밀번호 입력

(Password는 설치 16번 단계에서 설정한 Password)



3) 접속 성공 시 화면



```
MySQL 8.0 Command Line Client
Enter password: ****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 19
Server version: 8.0.26 MySQL Community Server - GPL

Copyright (c) 2000, 2021, Oracle and/or its affiliates.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

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

mysql>
```

- 데이터베이스 생성

```
CREATE DATABASE database_name;
```

- 데이터베이스 사용

- 사용할 데이터베이스 지정

```
USE database_name;
```

- 전체 데이터베이스 조회

```
SHOW DATABASES;
```

- 데이터베이스 삭제

```
DROP DATABASE database_name;
```

■ 데이터베이스 생성 예시

```
mysql> CREATE DATABASE dbpdb;  
Query OK, 1 row affected (0.01 sec)
```

■ 데이터베이스 사용 예시

- 사용할 데이터베이스 지정

```
mysql> USE dbpdb;  
Database changed
```

■ 전체 데이터베이스 조회 예시

```
mysql> SHOW DATABASES;  
+-----+  
| Database |  
+-----+  
| dbpdb   |  
| final   |  
+-----+  
2 rows in set (0.00 sec)
```

■ 데이터베이스 삭제 예시

```
mysql> DROP DATABASE dbpdb;  
Query OK, 0 rows affected (0.01 sec)
```


- 전체 테이블 조회

```
SHOW TABLE STATUS;    // 테이블 전체 정보 조회
```

```
SHOW TABLES;         // 테이블 이름만 조회
```

- 테이블 스키마 구조 확인

```
DESC table_name;
```

- 데이터 조회

```
SELECT * FROM table_name;
```

■ 전체 테이블 조회 예시

• 테이블이 없는 경우

```
mysql> SHOW TABLE STATUS;  
Empty set (0.00 sec)
```

```
mysql> SHOW TABLES;  
Empty set (0.00 sec)
```

• 테이블이 있는 경우

```
mysql> SHOW TABLE STATUS;  
+-----+-----+-----+-----+-----+-----+-----+-----+  
| Name      | Engine | Version | Row_format | Rows | Avg_row_length | Data_length | Max  
+-----+-----+-----+-----+-----+-----+-----+-----+  
| employee  | InnoDB | 10      | Dynamic    | 0    | 0              | 16384       |  
+-----+-----+-----+-----+-----+-----+-----+-----+  
1 row in set (0.01 sec)
```

```
mysql> SHOW TABLES;  
+-----+  
| Tables_in_dbpdb |  
+-----+  
| employee         |  
+-----+  
1 row in set (0.00 sec)
```

■ 테이블 스키마 확인 예시

```
mysql> DESC EMPLOYEE;
```

Field	Type	Null	Key	Default	Extra
Fname	varchar(15)	NO		NULL	
Minit	char(1)	YES		NULL	
Lname	varchar(15)	NO		NULL	
Ssn	char(9)	NO	PRI	NULL	
Bdate	date	YES		NULL	
Address	varchar(30)	YES		NULL	
Sex	char(1)	YES		NULL	
Salary	decimal(10,2)	YES		NULL	
Super_ssn	char(9)	YES		NULL	
Dno	int	NO		NULL	

10 rows in set (0.00 sec)

■ 데이터 조회 예시

• 데이터가 없는 경우

```
mysql> SELECT * FROM EMPLOYEE;
```

Empty set (0.01 sec)

• 데이터가 있는 경우

```
mysql> SELECT * FROM EMPLOYEE;
```

Fname	Minit	Lname	Ssn	Bdate	Address	Sex	Salary	Super_ssn	Dno
John	B	Smith	123456789	1965-01-09	731 Fondren, Houston, TX	M	30000.00	333445555	5
Franklin	T	Wong	333445555	1955-12-08	683 Voss, Houston, TX	M	40000.00	888665555	5
Joyce	A	English	453453453	1972-07-31	5631 Rice, Houston, TX	F	25000.00	333445555	5
Ramesh	K	Narayan	666884444	1962-09-15	975 Fire Oak, Humble, TX	M	38000.00	333445555	5
James	E	Borg	888665555	1937-11-10	450 Stone, Houston, TX	M	55000.00	NULL	1
Jennifer	S	Wallace	987654321	1941-06-20	291 Berry, Bellaire, TX	F	43000.00	888665555	4
Ahmad	V	Jabbar	987987987	1969-03-29	980 Dallas, Houston, TX	M	25000.00	987654321	4
Alicia	J	Zelaya	999887777	1968-01-19	3321 Castle, Spring, TX	F	25000.00	987654321	4

8 rows in set (0.00 sec)

- 실행 결과 저장

- SPOOL 시작

TEE 또는 WT 경로₩파일명.txt

- SPOOL 종료

NOTEE 또는 Wt

- 쿼리 파일 실행

SOURCE 또는 W. 경로₩파일명.txt

- MySQL 종료

QUIT 또는 Wq