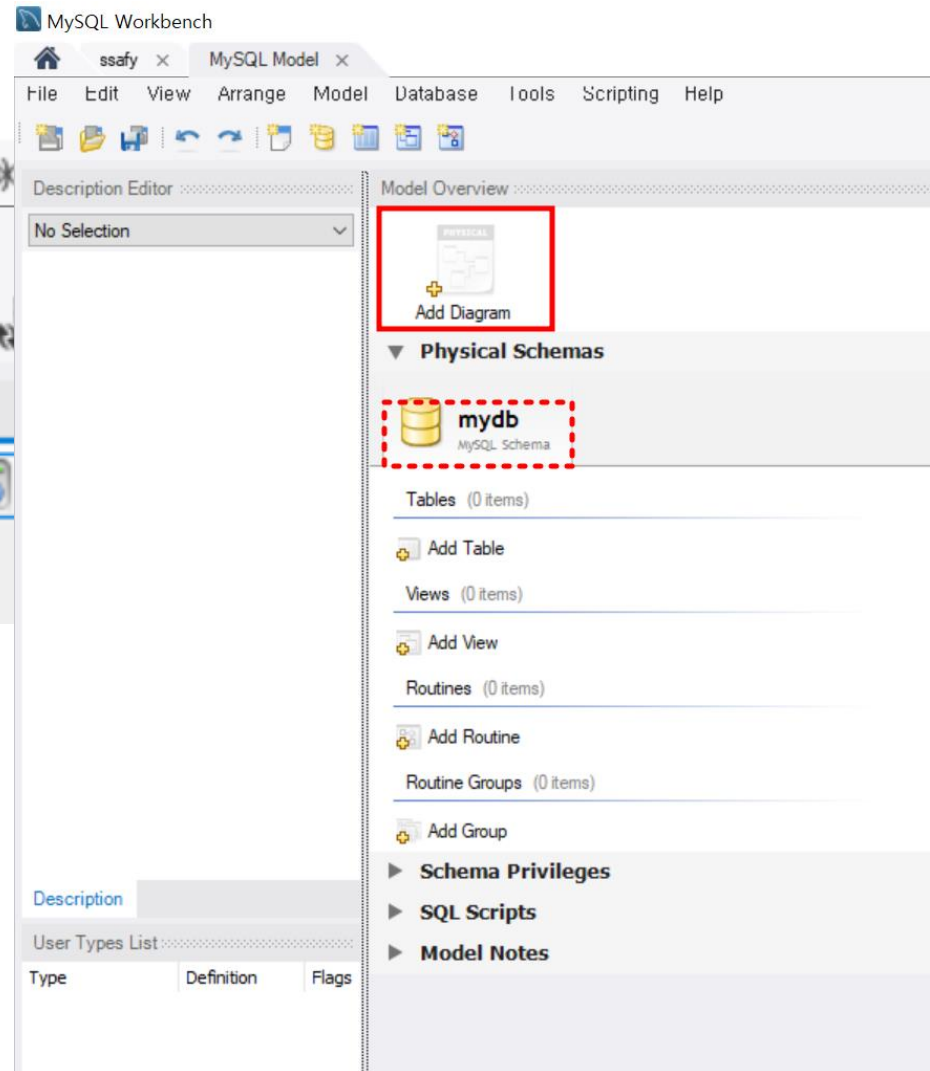
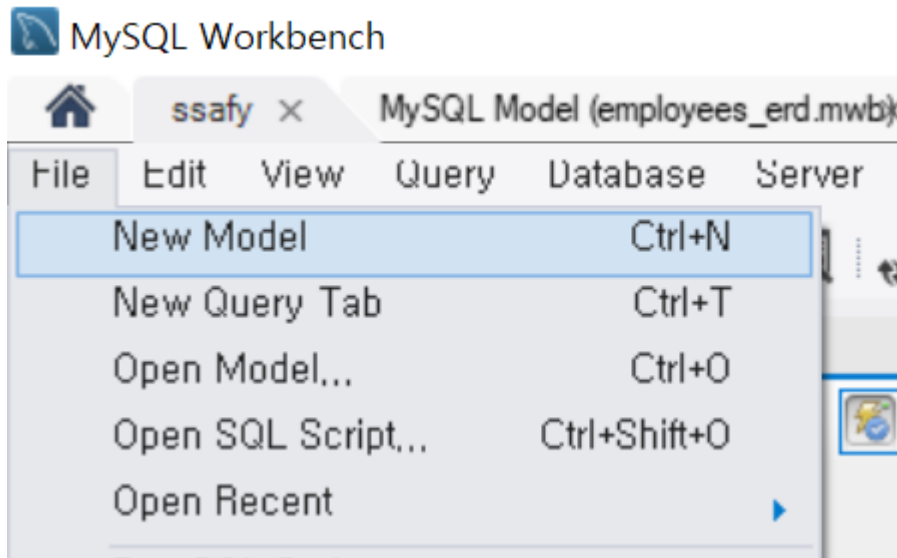


Workbench DB Modeling

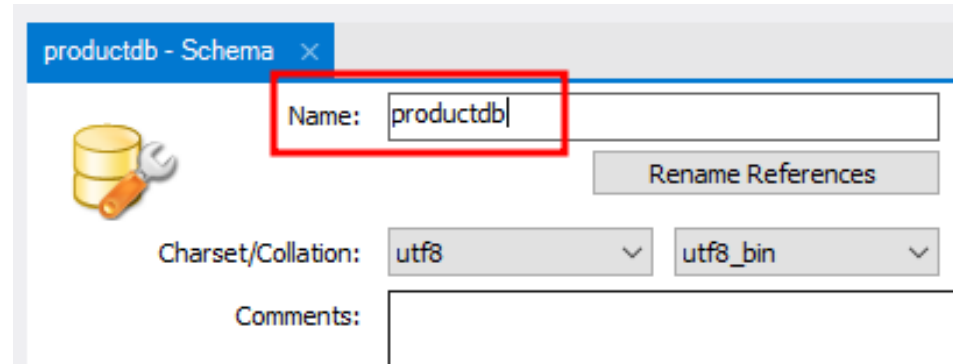
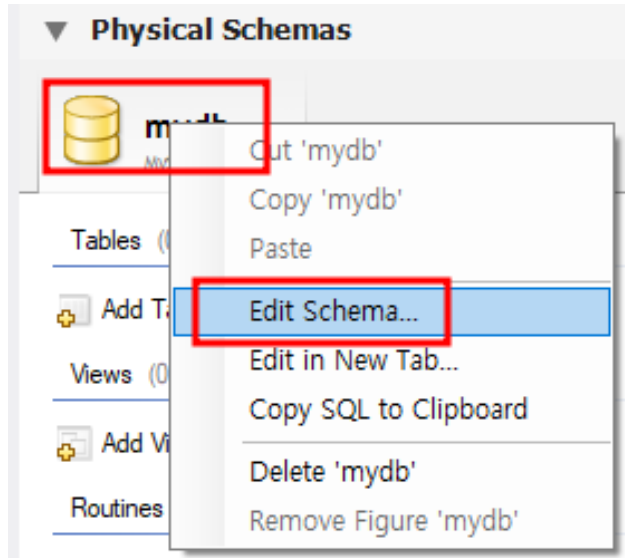
DataBase Modeling

- File >> New Model >> MySQL Model Tab Menu



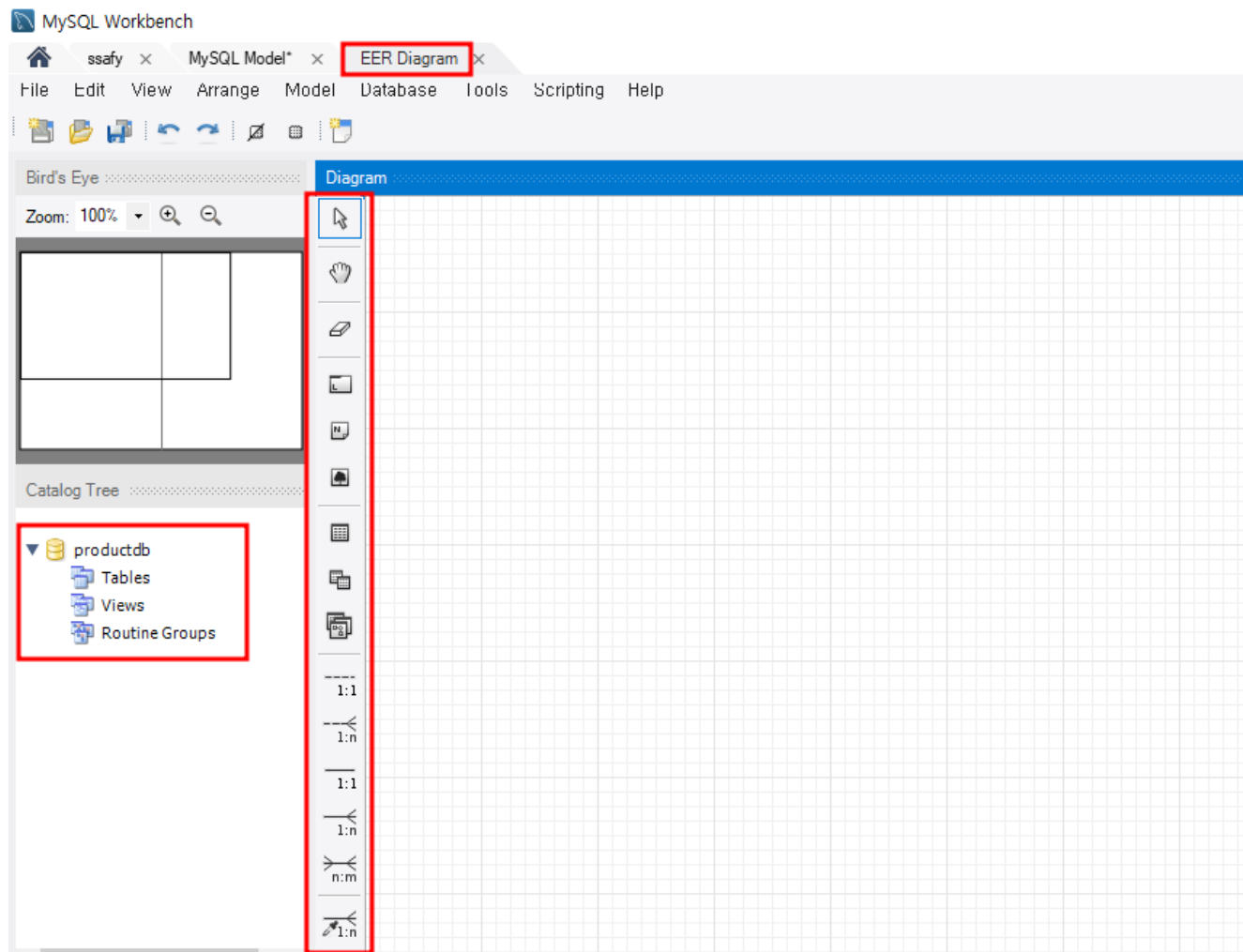
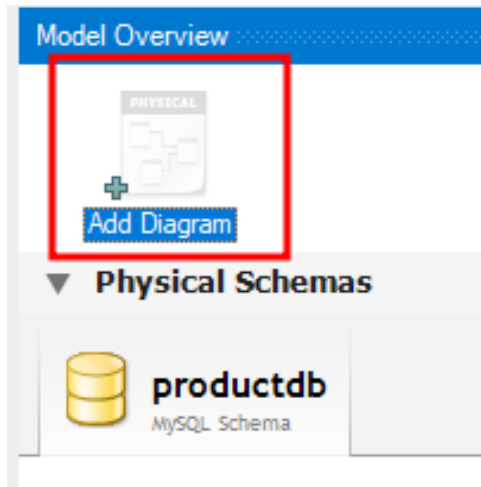
DataBase Modeling

- mydb >> 우클릭 >> Edit Schema >> Name: productdb



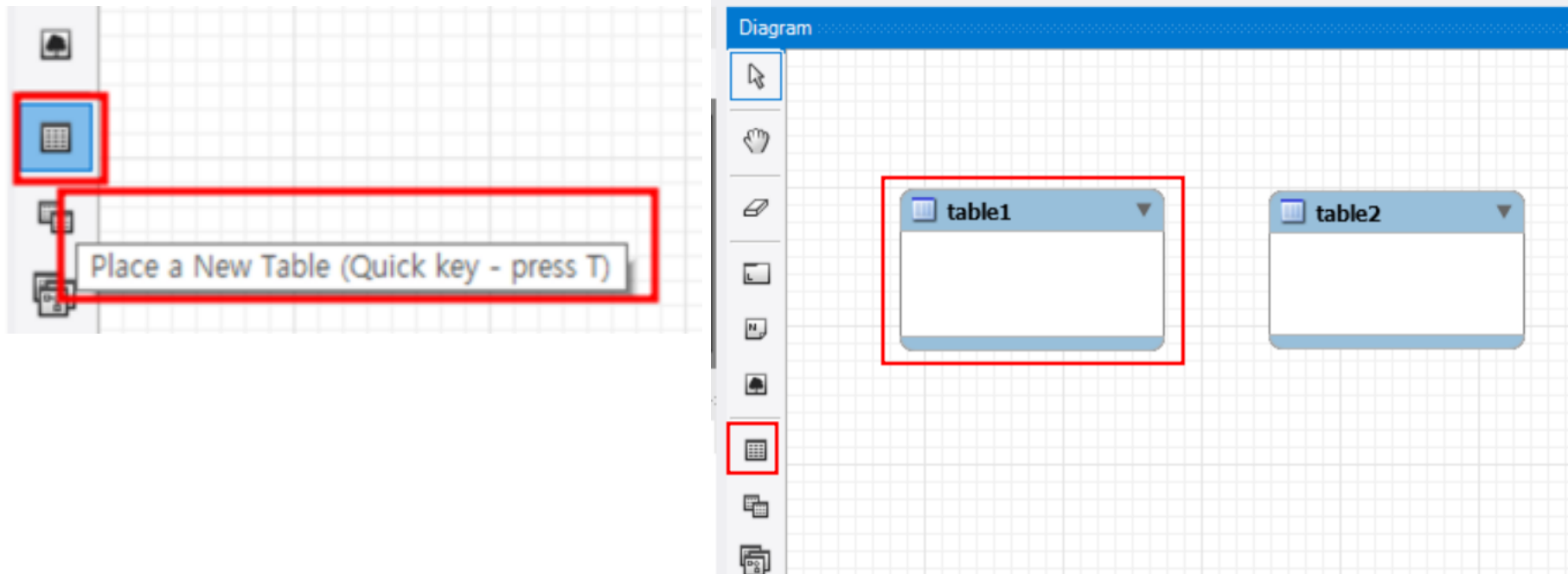
DataBase Modeling: Add Diagram

- +Add Diagram >> EER Diagram Tab



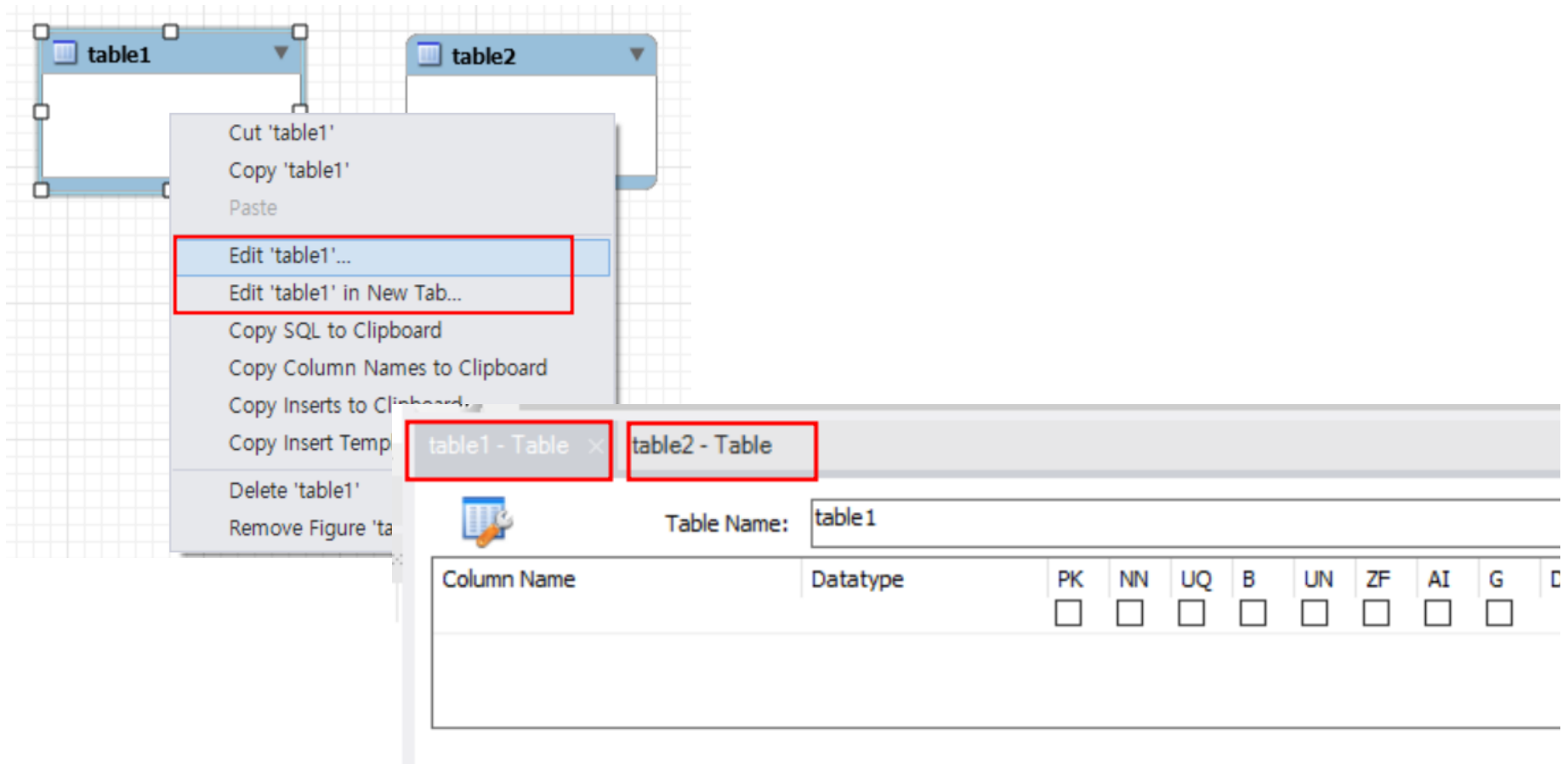
DataBase Modeling: New Table

- Diagram >> Place a New Table >> table1 / table2



DataBase Modeling: Table

- Diagram >> Place a New Table >> table1 >> 우클릭
 - Edit 'table1'...
 - Edit 'table2' in New Tab...



DataBase Modeling: Table

- table1 : Table >> Table Name: user

user - Table x table2 - Table

Table Name: user

Column Name	Datatype	PK	NN	UQ	B	UN	ZF	AI	G	Default/Expression
userid	INT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
username	VARCHAR(45)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
grade	VARCHAR(45)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

- Table Name: product

user - Table product - Table x

Table Name: product

Column Name	Datatype	PK	NN	UQ	B	UN	ZF	AI	G	Default/Expression
productcode	INT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
productname	VARCHAR(45)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ea	INT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
price	INT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

DataBase Modeling: Table

- Table Name: order

user - Table product - Table **order - Table** × order_detail - Table

Table Name:

Column Name	Datatype	PK	NN	UQ	B	UN	ZF	AI	G	D
orderid	INT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
orderdate	VARCHAR(45)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

- Table Name: order_detail

user - Table product - Table order - Table **order_detail - Table** ×

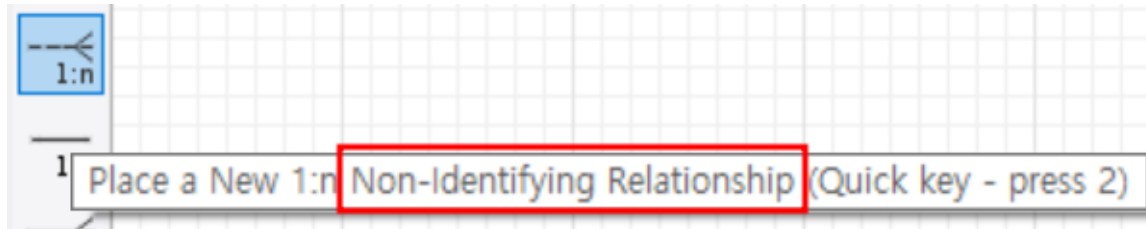
Table Name:

Column Name	Datatype	PK	NN	UQ	B	UN	ZF	AI	G	D
cnt	INT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

DataBase Modeling: Entity Relationship

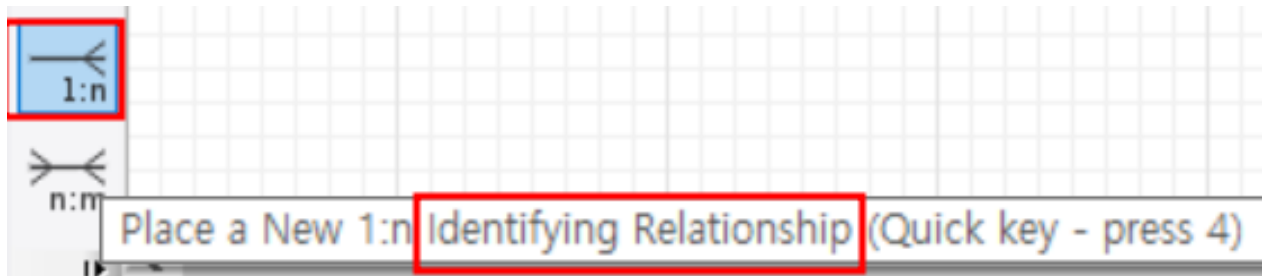
■ 비식별관계

- FK가 참조하는 테이블에서 일반 속성 사용
- 점선 관계선



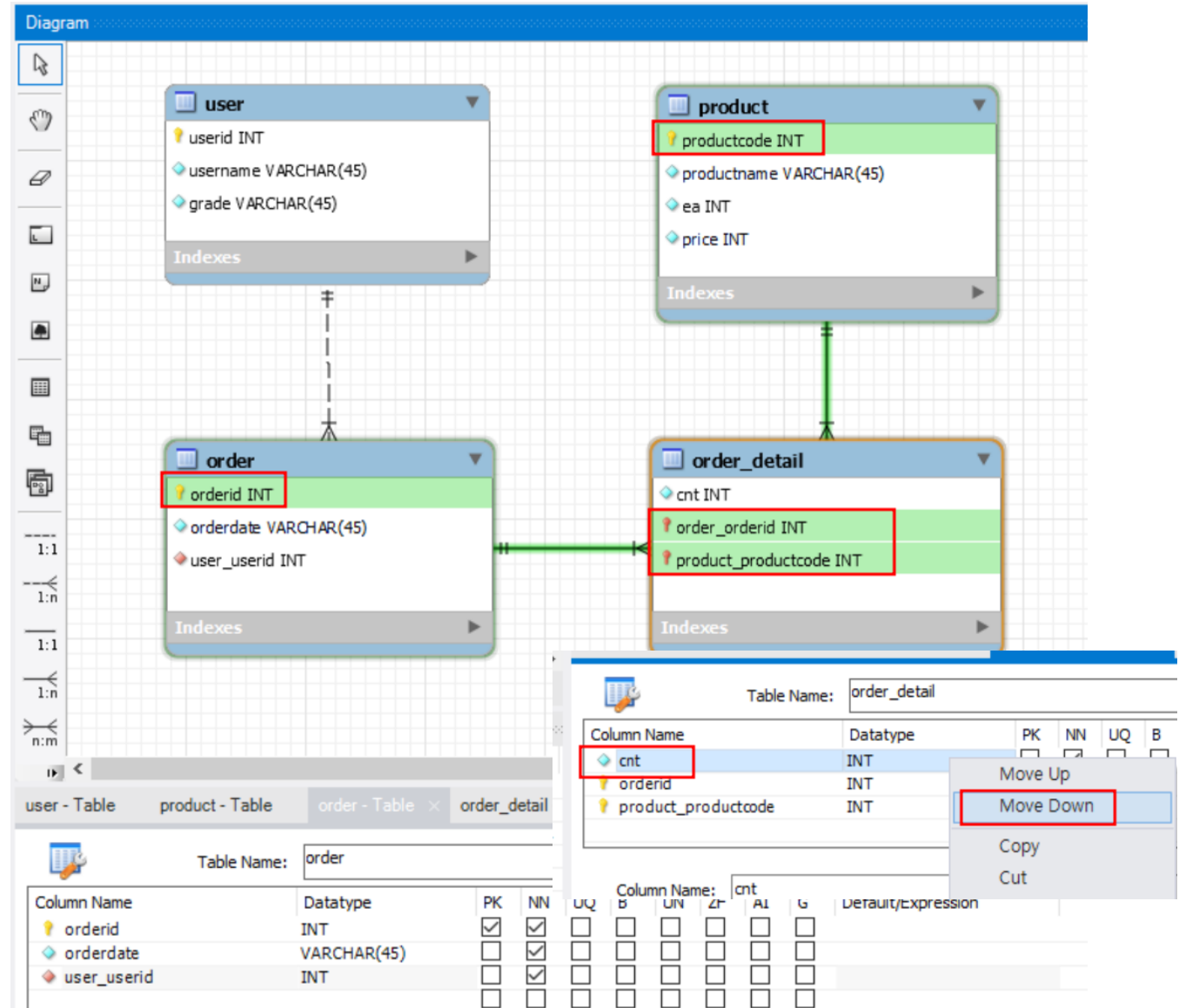
■ 식별관계

- FK가 참조하는 테이블에서 PK 속성 사용
- 실선 관계선



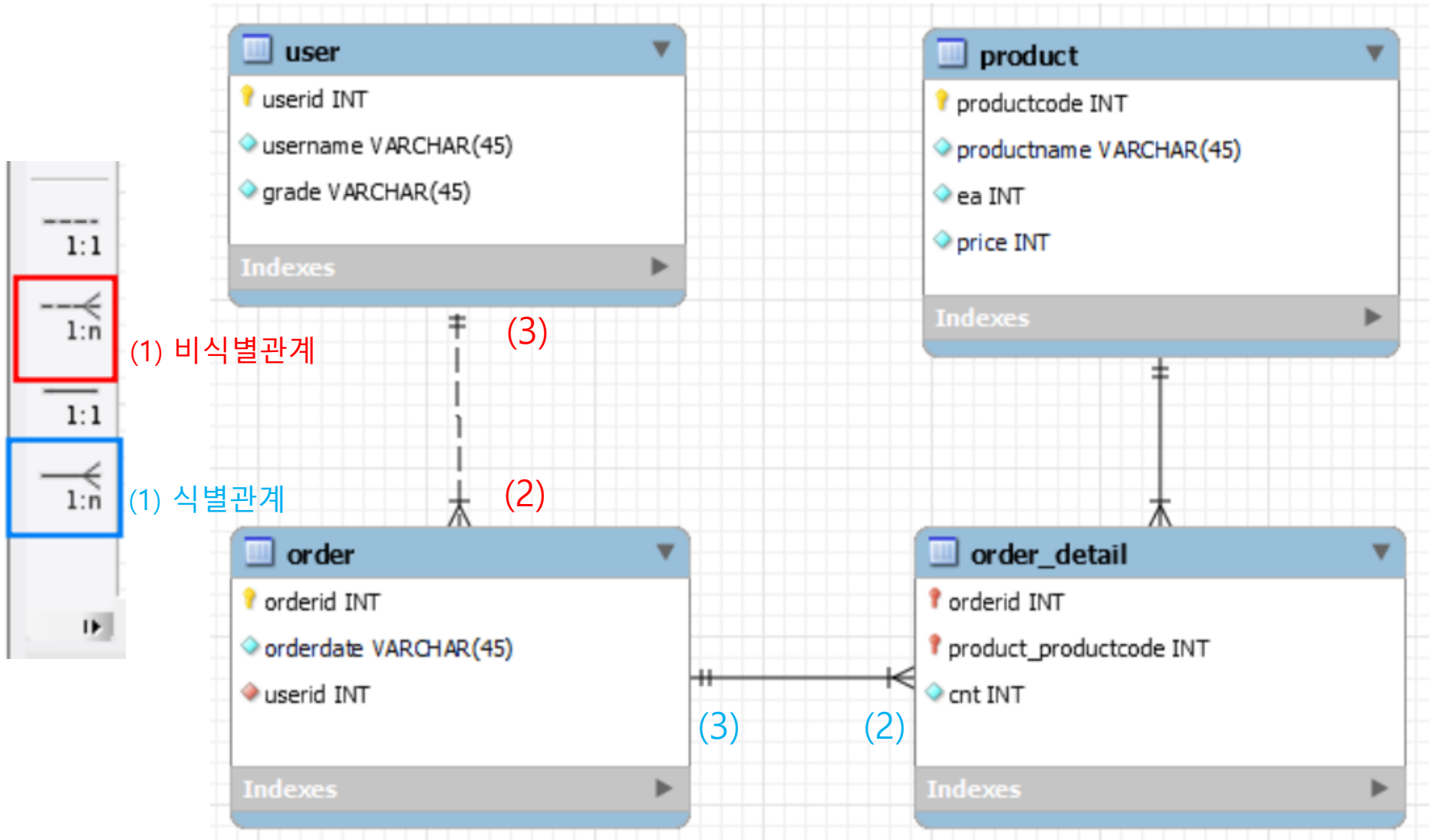
DataBase Modeling : Entity Relationship :

- 회원 ➔ 주문
- 주문 ➔ 주문상세
- 상품 ➔ 주문상세



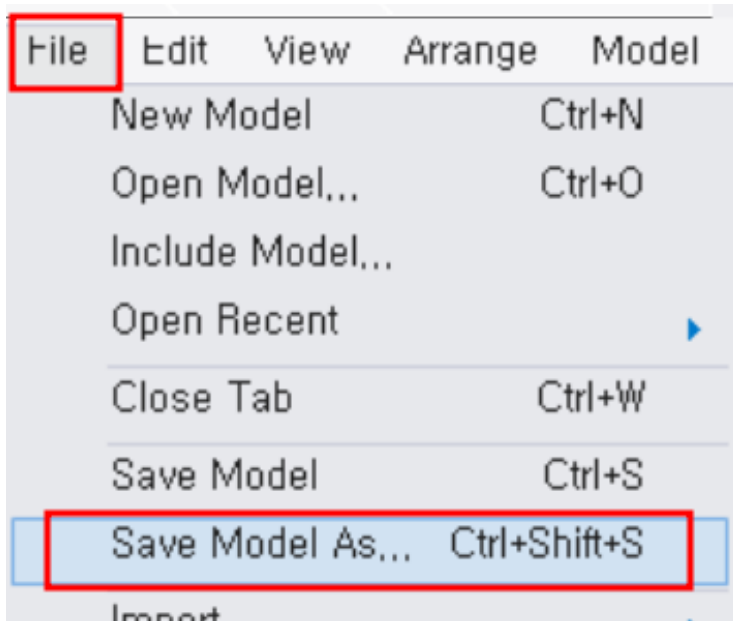
DataBase Modeling: Entity Relationship

■ 회원 / 상품 / 주문 / 주문상세



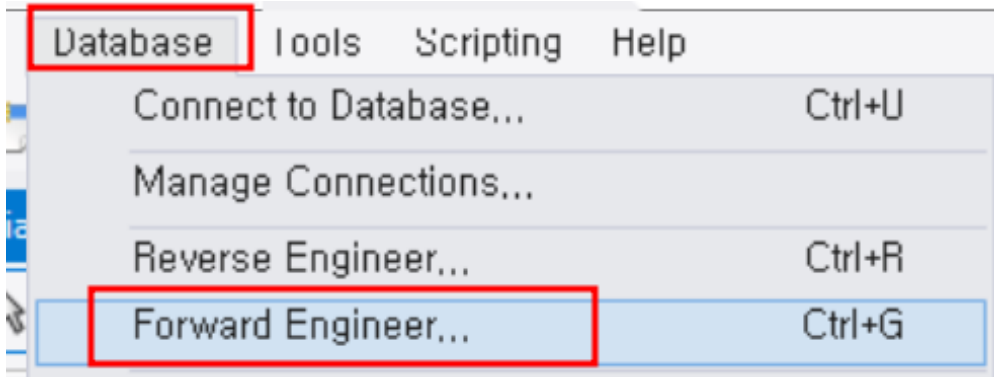
DataBase Modeling: Save Model

- File >> Save Model As... >>
 - C:\SSAFY\db_modeling\productdb.mwb
 - 저장폴더 영문명 사용: 한글 폴더명 오류 발생(workbench 버그)



DataBase Modeling: Database 물리적 모델 변환

- Database >> Forward Engineer...



DataBase Modeling: Database 물리적 모델 변환

- Database >> Forward Engineer...
 - >> Set Parameters for Connecting to a DBMS

Forward Engineer to Database

Connection Options
Options
Select Objects
Review SQL Script
Commit Progress

Set Parameters for Connecting to a DBMS

Stored Connection: ssafy
Connection Method: Standard (TCP/IP)

Parameters SSL Advanced

Hostname: 127.0.0.1 Port: 3306
Username: ssafy
Password: Store in Vault ... Clear

Default Schema:

Name or IP address of the server host - and TCP/IP port.
Name of the user to connect with.
The user's password. Will be requested later if it's not set.
The schema to use as default schema. Leave blank to select it later.

Back

Next

Cancel

14

DataBase Modeling: Database 물리적 모델 변환

- Database >> Forward Engineer...
 - >> Set Options for Database to be Created >> Next

Forward Engineer to Database

Connection Options

Options

Select Objects

Review SQL Script

Commit Progress

Set Options for Database to be Created

Tables

- ☐ Skip creation of FOREIGN KEYS
- ☐ Skip creation of FK Indexes as well
- ☐ Generate separate CREATE INDEX statements
- ☐ Generate INSERT statements for tables
- ☐ Disable FK checks for INSERTs

Other Objects

- ☐ Don't create view placeholder tables
- ☐ Do not create users. Only create privileges (GRANTS)

Code Generation

- ☐ DROP objects before each CREATE object
- ☐ Generate DROP SCHEMA
- ☐ Omit schema qualifier in object names
- ☐ Generate USE statements
- ☐ Add SHOW WARNINGS after every DDL statement
- ☒ Include model attached scripts

Back Next Cancel

DataBase Modeling: Database 물리적 모델 변환




- Database >> Forward Engineer...
>> Select Objects to Forward Engineer >> Next

Forward Engineer to Database

Connection Options
Options
Select Objects
Review SQL Script
Commit Progress

Select Objects to Forward Engineer

To exclude objects of a specific type from the SQL Export, disable the corresponding checkbox. Press Show Filter and add objects or patterns to the ignore list to exclude them from the export.

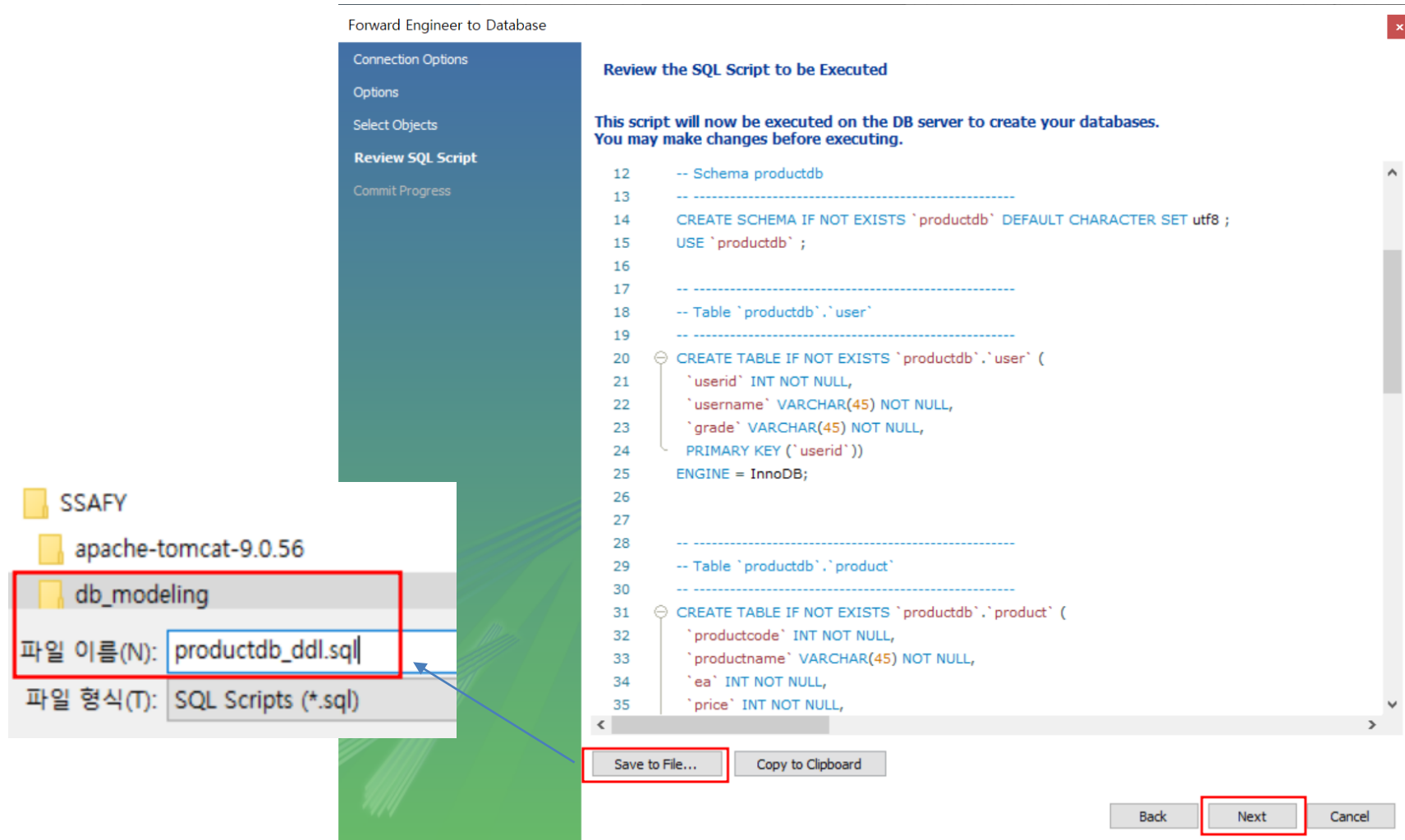
	<input checked="" type="checkbox"/> Export MySQL Table Objects 4 Total Objects, 4 Selected	Show Filter
	<input type="checkbox"/> Export MySQL View Objects 0 Total Objects, 0 Selected	Show Filter
	<input type="checkbox"/> Export MySQL Routine Objects 0 Total Objects, 0 Selected	Show Filter
	<input type="checkbox"/> Export MySQL Trigger Objects 0 Total Objects, 0 Selected	Show Filter
	<input type="checkbox"/> Export User Objects 0 Total Objects, 0 Selected	Show Filter

Back Next Cancel

DataBase Modeling: Database 물리적 모델 변환

■ Database >> Forward Engineer...

>> Review the SQL Script to be Executed >> Save to File... >> Next



DataBase Modeling: Database 물리적 모델 변환

- Database >> Forward Engineer...
 - >> Forward Engineering Progress

Forward Engineer to Database

Connection Options

Options

Select Objects

Review SQL Script

Commit Progress

Forward Engineering Progress

The following tasks will now be executed. Please monitor the execution. Press Show Logs to see the execution logs.

- ☒ Connect to DBMS
- ☒ Execute Forward Engineered Script
- ☒ Read Back Changes Made by Server
- ☒ Save Synchronization State

Forward Engineer Finished Successfully

Show Logs

Navigation: SCHEMAS

Filter objects

- ▼ productdb
 - Tables
 - Views
 - Stored Procedures
 - Functions
- ▼ sakila
- ▼ ssafydb
- ▼ sys
- ▼ world

Administration Schemas

Information

Schema: ssafydb

Query 1 x Search

1 • use productdb;

2 • show tables;

3

4

Result Grid

Tables_in_productdb
order
order_detail
product
user

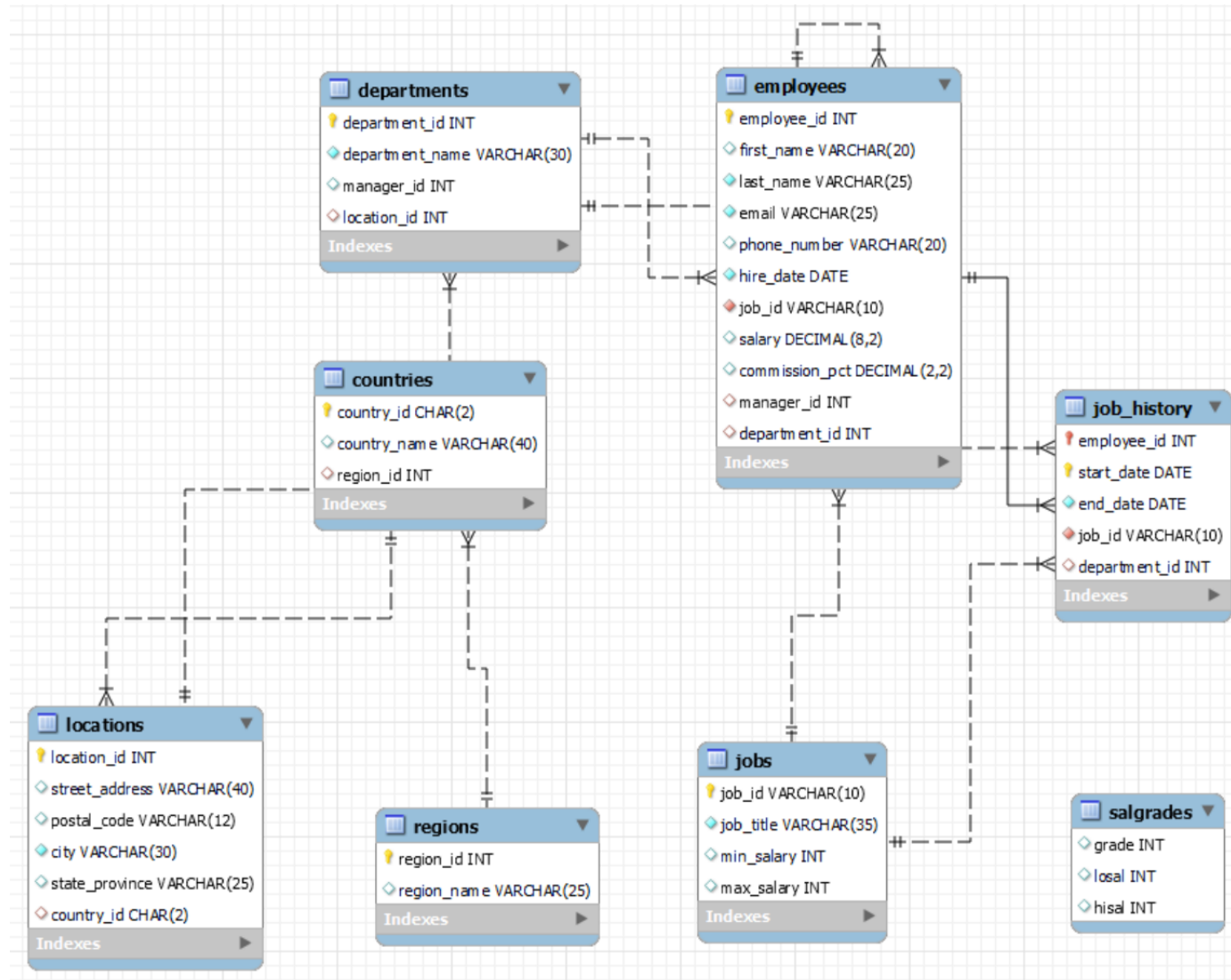
Back Close Cancel

DataBase → Modeling: Reverse Engineering

- DataBase >> Reverse Engineer
- Set Parameters for Connecting to a DBMS >> Next
- Connect to DBMS and Fetch Information >> 모두 체크 확인 >> Next
- Select the schemas you want to include >> "ssafydb" 선택 >> Next
- Retrive and Reverse Engineer Schema Object >> 모두 체크 확인 >> Next
- 기본으로 모두 선택된 상태 >> Execute
 - Show Filter >> 필요한 내용만 선택 가능
- Reverse Engineering Progress >> 모두 체크 확인 >> Next >> Finish
- 변환 완료된 Database Modeling Diagram 확인
- File >> Save Model as... >> C:\SSAFY\db_modeling\ssafydb.mwb

DataBase → Modeling: Reverse Engineering

■ ssafydb ER Diagram



DB Modeling Tools

- ERWin
- Microsoft Visio
- SQL Power Architect
- MySQL Workbench
- exERD