INT205 – Database Management System
1/2564

LAB02: SQL Review

Submission:

- Submit a lab file named “int205_lab02_xxxxxxxxxxx.docx/.pdf” into the LEB2 system. xxxxxxxxxxx = your student id
- **Do NOT submit** both a PNG file and a MWB file.

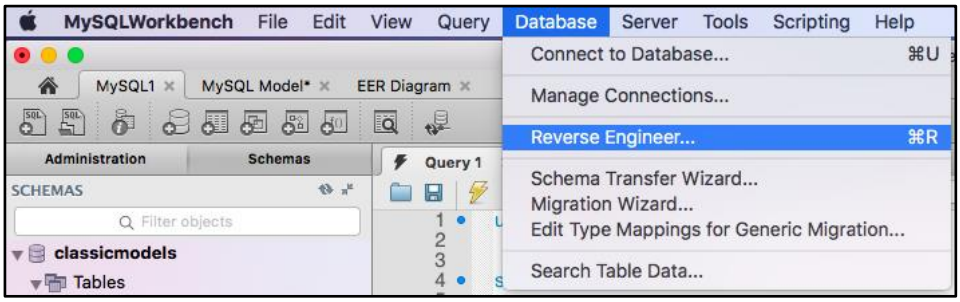
Due Date & Time:

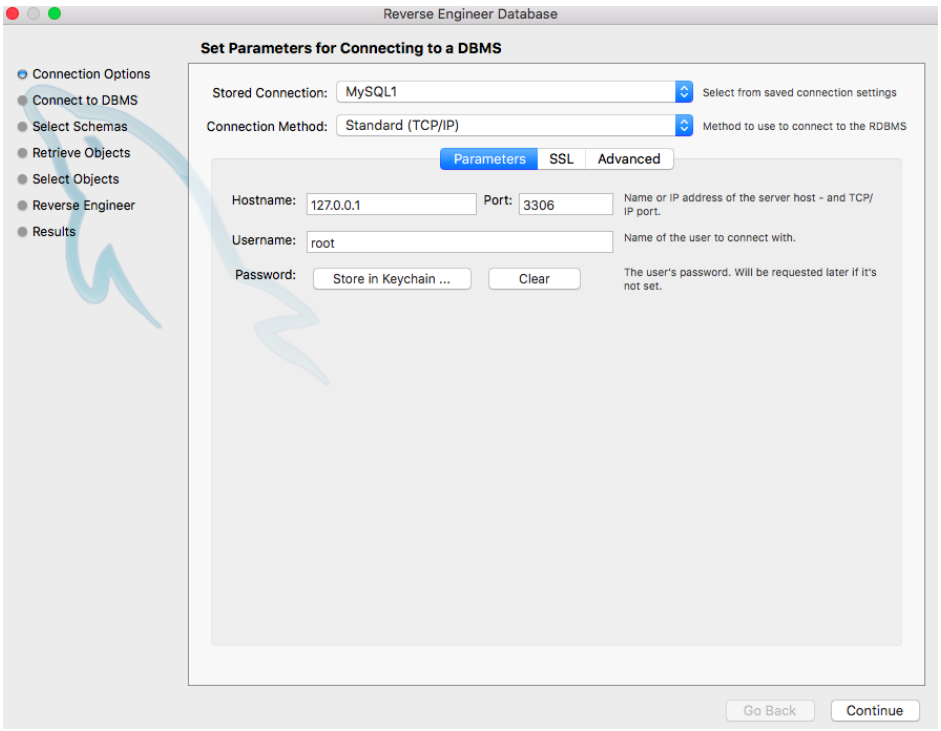
- Lecturer will inform the LAB02 due date and time in lab class.

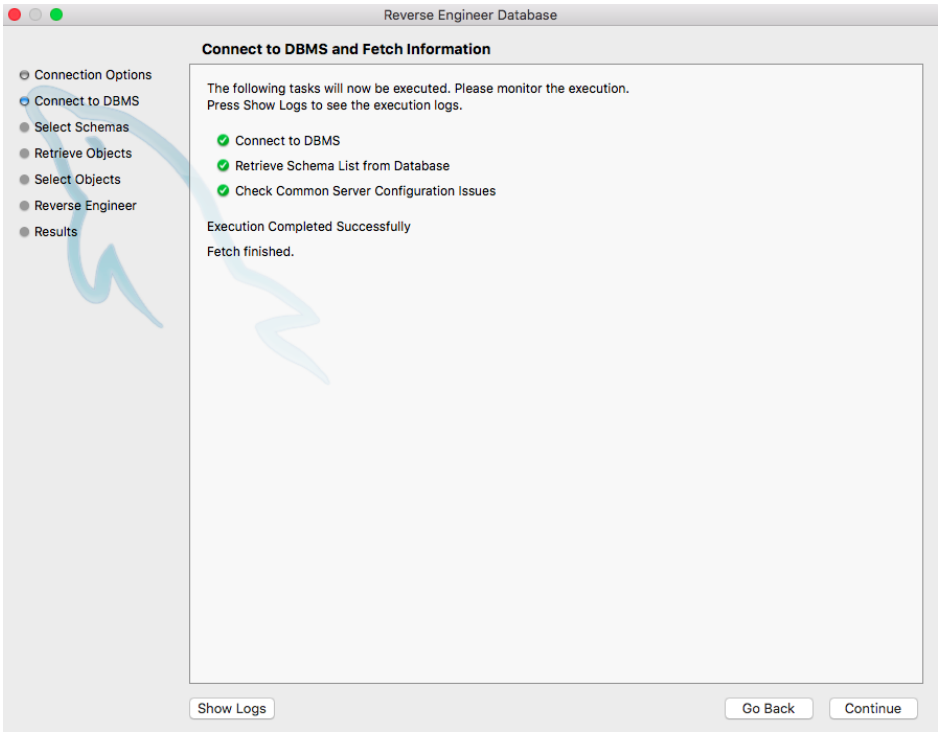
Task 1: Using MySQL Workbench to create an ER-diagram for the “classicmodels”.

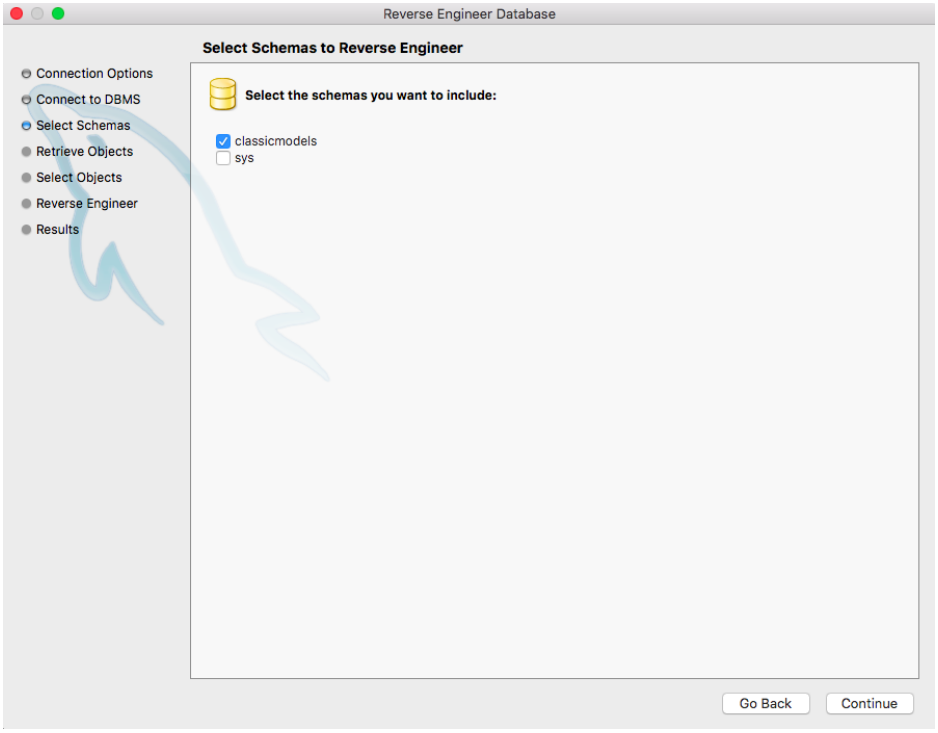
1.1 Use the script named “classicmodels” to generate ER diagram (Reverse Engineering technique).

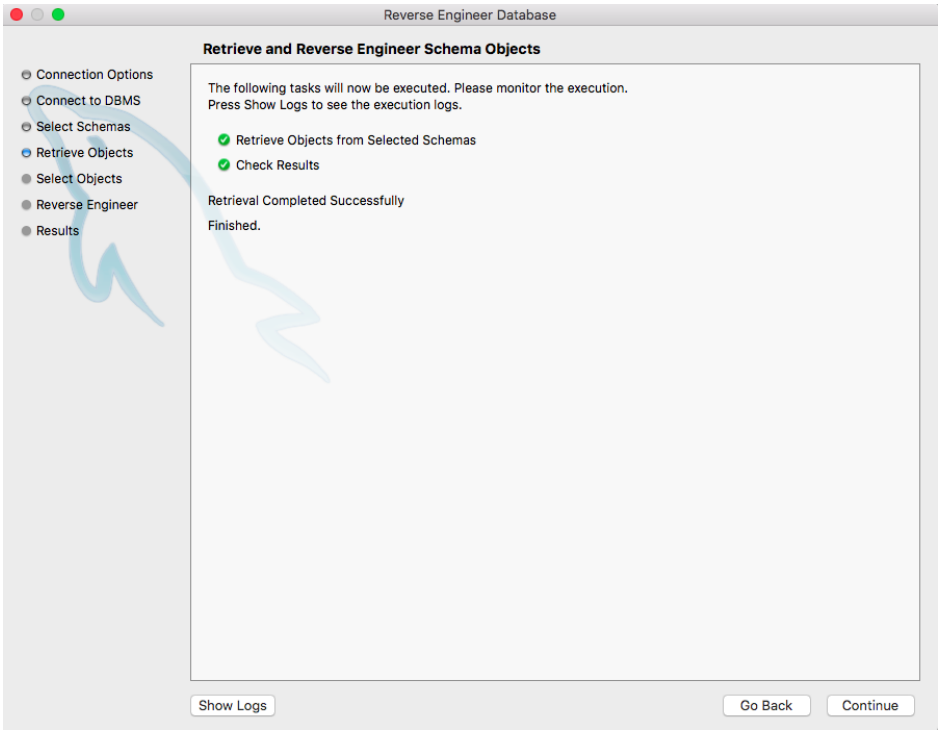
- Open the MySQL Workbench program
- Select the menu “Database” => “Reverse Engineer…”.
- Please follow the step by step instructions below:

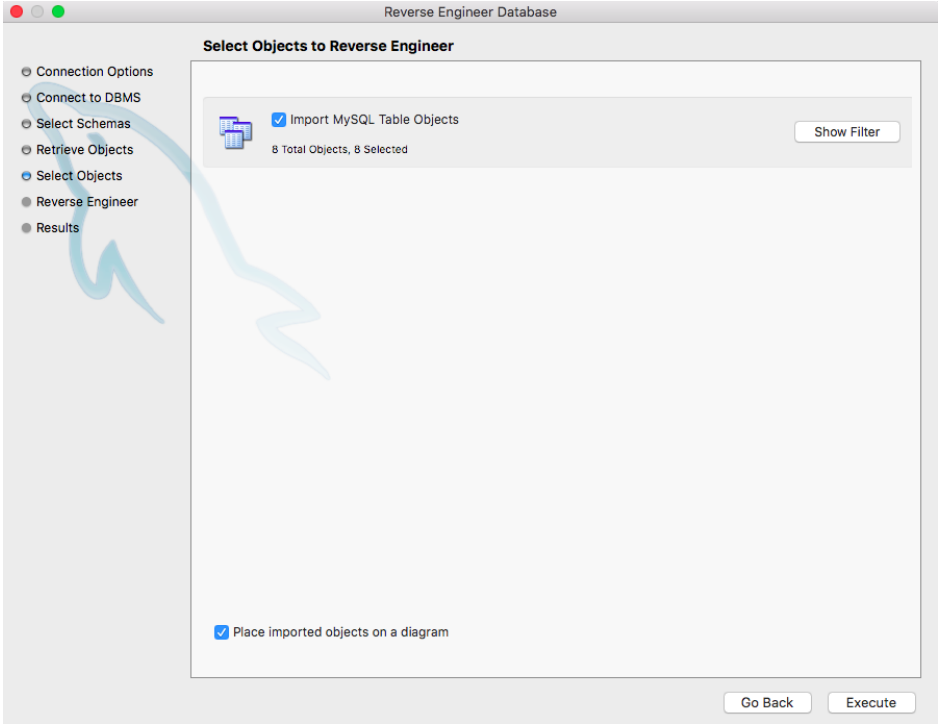


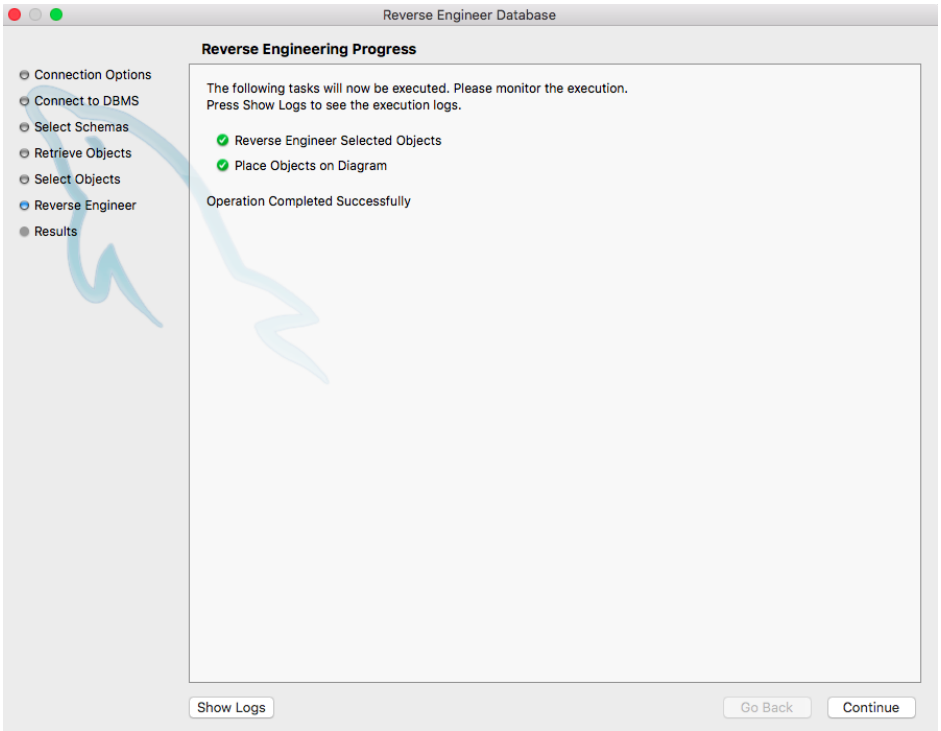

Reverse Engineer Database
Set Parameters for Connecting to a DBMS
Connection Options
Connect to DBMS
Select Schemas
Retrieve Objects
Select Objects
Reverse Engineer
Results
Stored Connection:
MySQL1
Select from saved connection settings
Connection Method:
Standard (TCP/IP)
Method to use to connect to the RDBMS
Parameters
SSL
Advanced
Hostname:
127.0.0.1
Port:
3306
Name or IP address of the server host - and TCP/IP port.
Username:
root
Name of the user to connect with.
Password:
Store in Keychain ...
Clear
The user's password. Will be requested later if it's not set.
Go Back
Continue

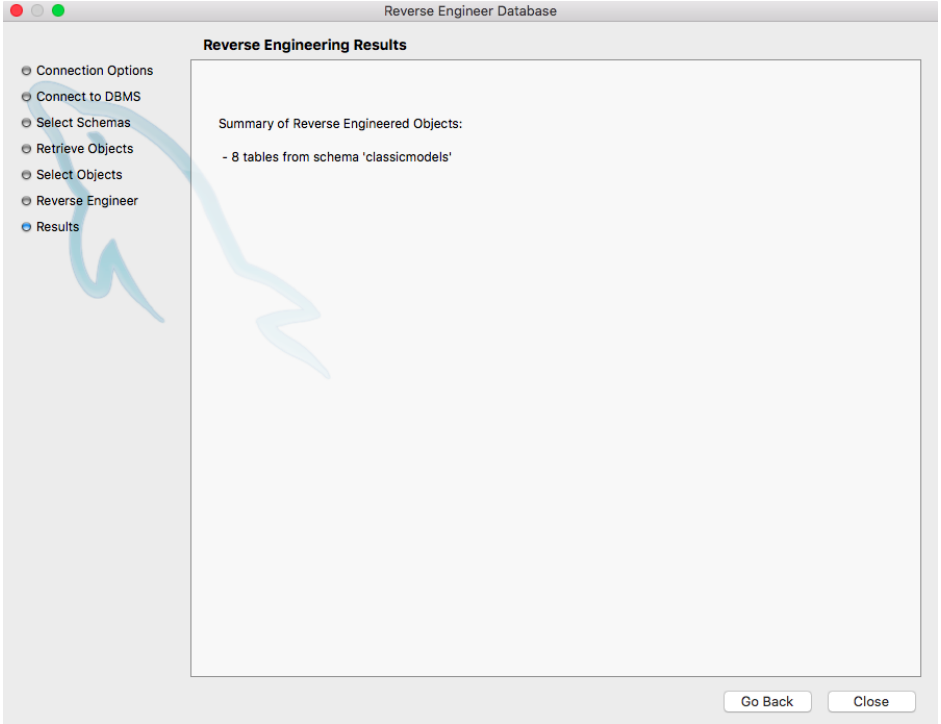

Reverse Engineer Database
Connect to DBMS and Fetch Information
Connection Options
Connect to DBMS
Select Schemas
Retrieve Objects
Select Objects
Reverse Engineer
Results
The following tasks will now be executed. Please monitor the execution.
Press Show Logs to see the execution logs.
Connect to DBMS
Retrieve Schema List from Database
Check Common Server Configuration Issues
Execution Completed Successfully
Fetch finished.
Show Logs
Go Back
Continue


Reverse Engineer Database
Select Schemas to Reverse Engineer
Connection Options
Connect to DBMS
Select Schemas
Retrieve Objects
Select Objects
Reverse Engineer
Results
Select the schemas you want to include:
classicmodels
sys
Go Back
Continue

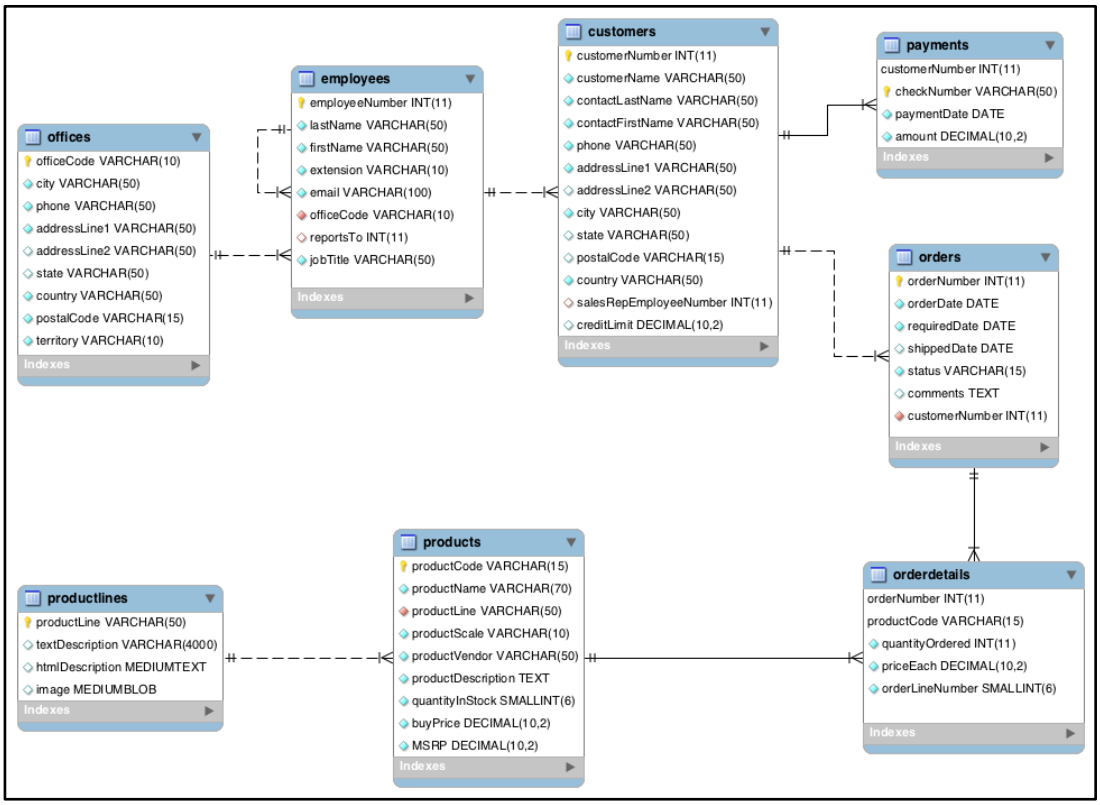

Reverse Engineer Database
Retrieve and Reverse Engineer Schema Objects
Connection Options
Connect to DBMS
Select Schemas
Retrieve Objects
Select Objects
Reverse Engineer
Results
The following tasks will now be executed. Please monitor the execution.
Press Show Logs to see the execution logs.
Retrieve Objects from Selected Schemas
Check Results
Retrieval Completed Successfully
Finished.
Show Logs
Go Back
Continue


Reverse Engineer Database
Select Objects to Reverse Engineer
Connection Options
Connect to DBMS
Select Schemas
Retrieve Objects
Select Objects
Reverse Engineer
Results
Import MySQL Table Objects
8 Total Objects, 8 Selected
Show Filter
Place imported objects on a diagram
Go Back
Execute


Reverse Engineer Database
Reverse Engineering Progress
Connection Options
Connect to DBMS
Select Schemas
Retrieve Objects
Select Objects
Reverse Engineer
Results
The following tasks will now be executed. Please monitor the execution.
Press Show Logs to see the execution logs.
Reverse Engineer Selected Objects
Place Objects on Diagram
Operation Completed Successfully
Show Logs
Go Back
Continue



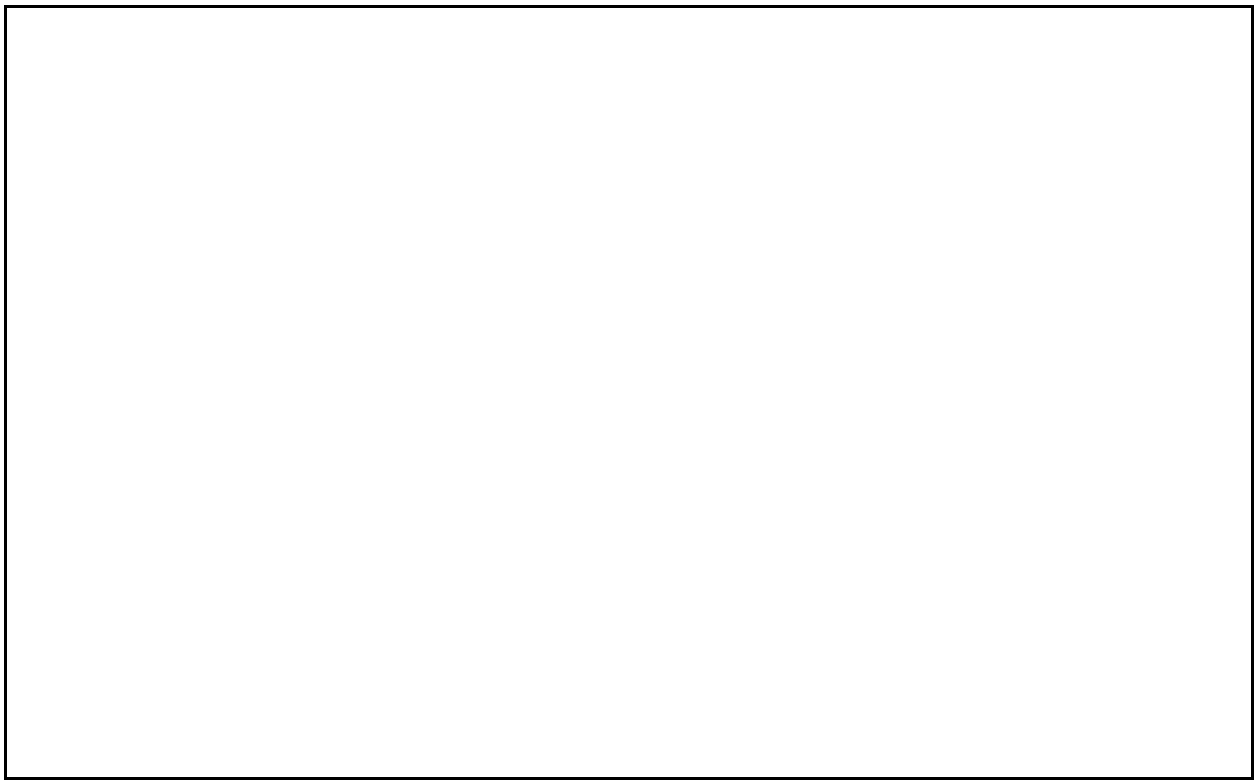
The example ER diagram for the classicmodels.



1.2 Re-arrange the ER diagram for readability and review the tables, columns, data types and relationships among the tables.

- Save a model named “classicmodels.mwb” (the default extension file is .mwb) and export a model as a .png file named “classicmodels_er.png” stored in your computer.

- Place your ER image (the png file) here.



Note: The MSRP is “Manufacturer's suggested retail price” (ราคาขายปลีกแนะนำของผู้ผลิต).

Task 2: Using the “classicmodels” schema and write SQL statements to answer the following questions.

The Syntax of SELECT statement:
Documentation: https://dev.mysql.com/doc/refman/8.0/en/select.html

Note: The MySQL error code 1064 is a syntax error. This means the reason there’s a problem is because MySQL doesn’t understand what you’re asking it to do.

Switch to SQL Editor

- You should specify the classicmodels database before writing SQL statements using the following command:

```
USE db_name;
```

The USE statement tells MySQL to use the named database as the default (current) database for subsequent statements. This statement requires some privilege for the database or some object within it.

2.1 List the product name and quantity in stock of all products that classified in the “Classic Cars” product line (กลุ่มของสินค้า/ผลิตภัณฑ์) and their buy prices are more than 80.
-- Capture the SQL statement + Result Screen and place here

2.2 List the customer name, city and country of all customers who live in the country named: Japan, Germany or Canada. Sort the results in descending order by country and ascending order by customer name.

2.3 List the order number and the total amount of sales for all orders. Name the total amount of sales column to “total_amount”.

2.4 List the order number and the total amount of sales of all orders that their total amount of sales is more than 55000. Name the total amount of sales column to “total_amount”.

2.5 List the customer name and the number of sales orders of all customers whose name start with the letter ‘D’. Name the number of sales orders column to “num_orders”.

2.6 List the customer name, the sales rep employee last name, and the check number of all customers who made the payment in year 2005. Name the sales rep employee last name column to “salesempname”.

2.7 List the manager last name (the employee who were reported to) and the number of employees of all managers. Name the manager last name and the number of employees columns to “mgrname” and “num_emp”, respectively.

2.8 Create your own question and the answered SQL statement should have SELECT, FROM, WHERE, GROUP BY and HAVING clauses.

2.9 Create your own question and the answered SQL statement should have SELECT, FROM 3 tables, WHERE and ORDER BY clauses.