

# Using MySQL Workbench 8

Data Warehousing

School of Information

ISTE-434/724

# Topics

- MySQL Workbench connections
- MySQL Extended Entity Relationship Diagrams (EER)
- LOAD DATA INFILE ... INTO TABLE Statement

# What is Workbench?

- MySQL Workbench provides a graphical tool for working with MySQL Servers and databases.
- MySQL Workbench provides three main areas of functionality:
  - SQL Development
  - Data Modeling
  - Server Administration

# SQL Development

- Enables you to create and manage connections to database servers. As well as allowing you configure connection parameters
- MySQL Workbench provides the capability to execute SQL queries on the database connections using the built-in SQL Editor.

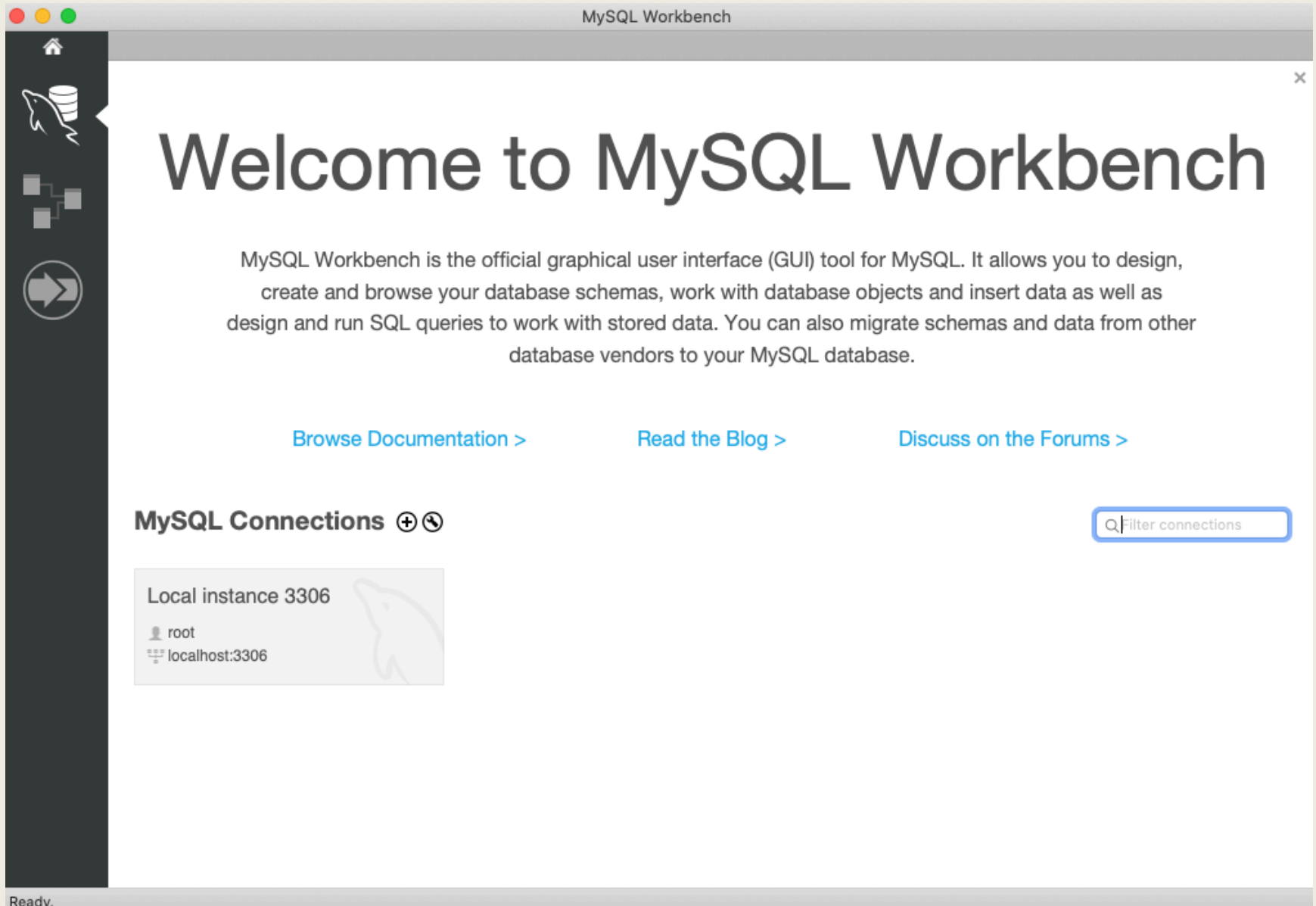
# Data Modeling

- Enables you to create models of your database schema graphically
- Reverse and forward engineer between a schema and a live database
- Edit all aspects of your database using the comprehensive Table Editor which provides:
  - Easy-to-use facilities for editing Tables
  - Columns
  - Indexes
  - Triggers
  - Partitioning
  - Inserts
  - Privileges
  - Routines
  - Views.

# Server Administration

- Enables you to create and administer server instances.
  - Startup
  - Shutdown

# Main Menu



# Setting Up a Database Connection

## (MySQL Workbench 8)

The image shows the 'Setup New Connection' dialog box in MySQL Workbench. The 'Connection Name' field is set to 'DW localhost' and is circled in red. The 'Connection Method' is 'Standard (TCP/IP)'. The 'Parameters' tab is selected, showing 'Hostname: 127.0.0.1', 'Port: 3306', 'Username: root', and a 'Password' field with a 'Store in Keychain ...' button. A red arrow points from this button to a smaller 'Store Password For Connection' dialog box. This sub-dialog has the title 'Please enter password for the following service:' and displays 'Service: Mysql@127.0.0.1:3306' and 'User: root'. It has a password input field with ten dots, and 'Cancel' and 'OK' buttons. The main dialog also has 'Configure Server Management...', 'Test Connection', 'Cancel', and 'OK' buttons at the bottom.

Setup New Connection

Connection Name: DW localhost Type a name for the connection

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.

Default Schema:

Store Password For Connection

Please enter password for the following service:

Service: Mysql@127.0.0.1:3306

User: root

Password: .....

Cancel OK

Configure Server Management... Test Connection Cancel OK



# Testing Connection

Setup New Connection

Connection Name:  Type a name for the connection

Connection Method:  Method to use to connect to the RDBMS


Parameters SSL Advanced

Hostname:  Port:  Name or IP address of the server host - and TCP/IP port.

Username:  Name of the user to connect with.

Password:   The user's password. Will be requested later if it's not set.

Default Schema:  The schema to use as default schema. Leave blank to select it later.



**Successfully made the MySQL connection**

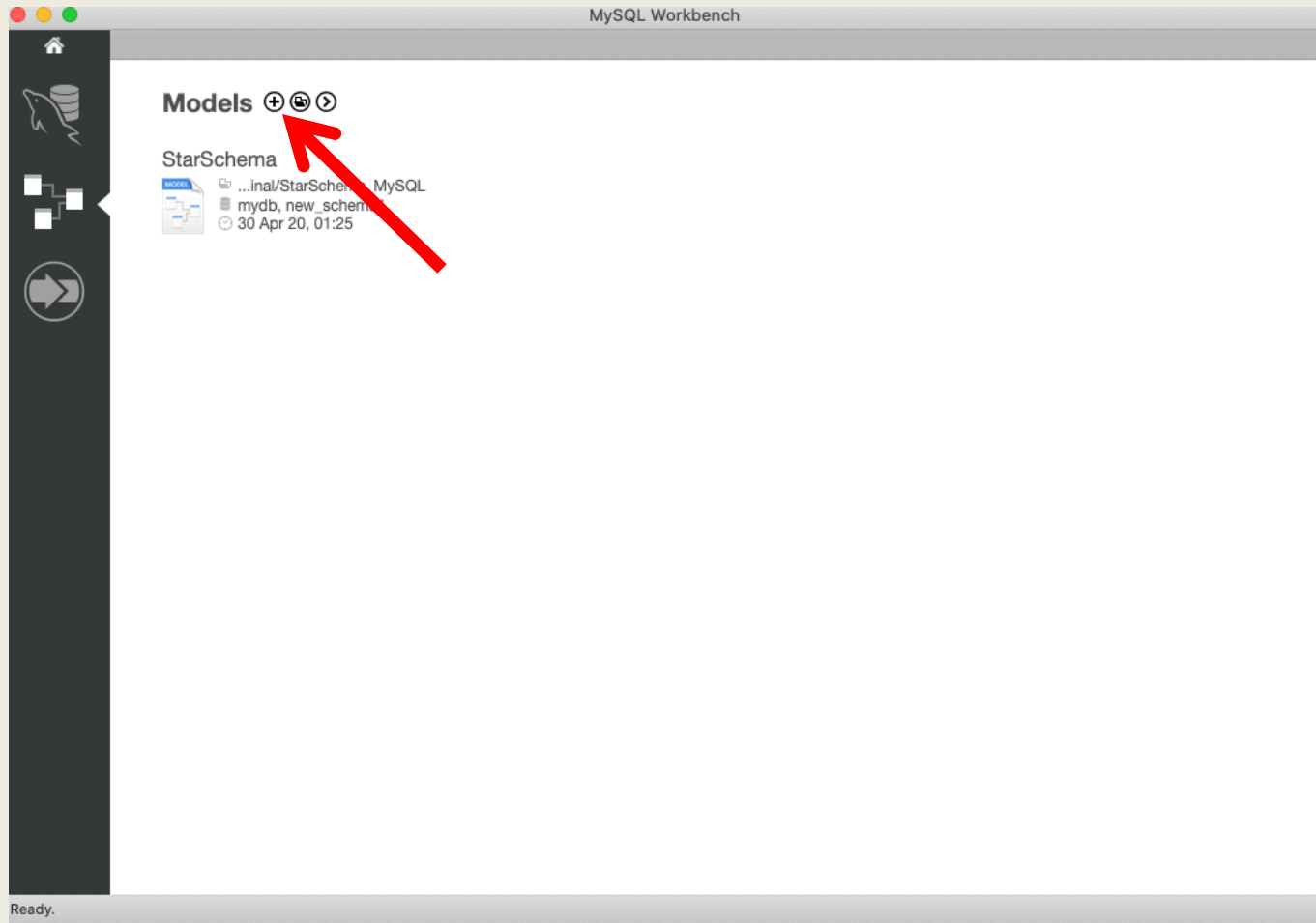
Information related to this connection:

Host: 127.0.0.1  
Port: 3306  
User: root  
SSL: enabled with TLS\_AES\_256\_GCM\_SHA384

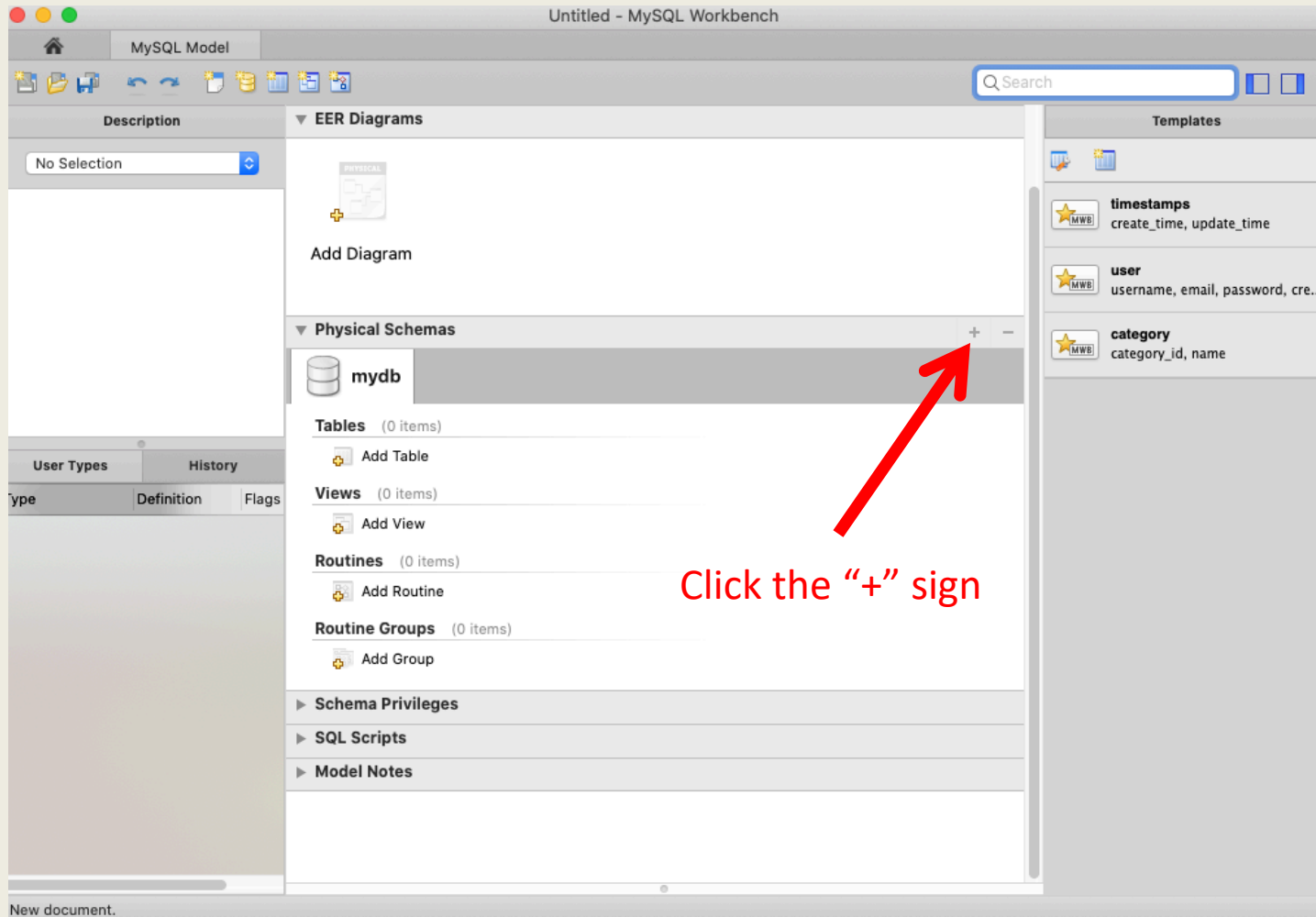
A successful MySQL connection was made with the parameters defined for this connection.

# EER Modeling

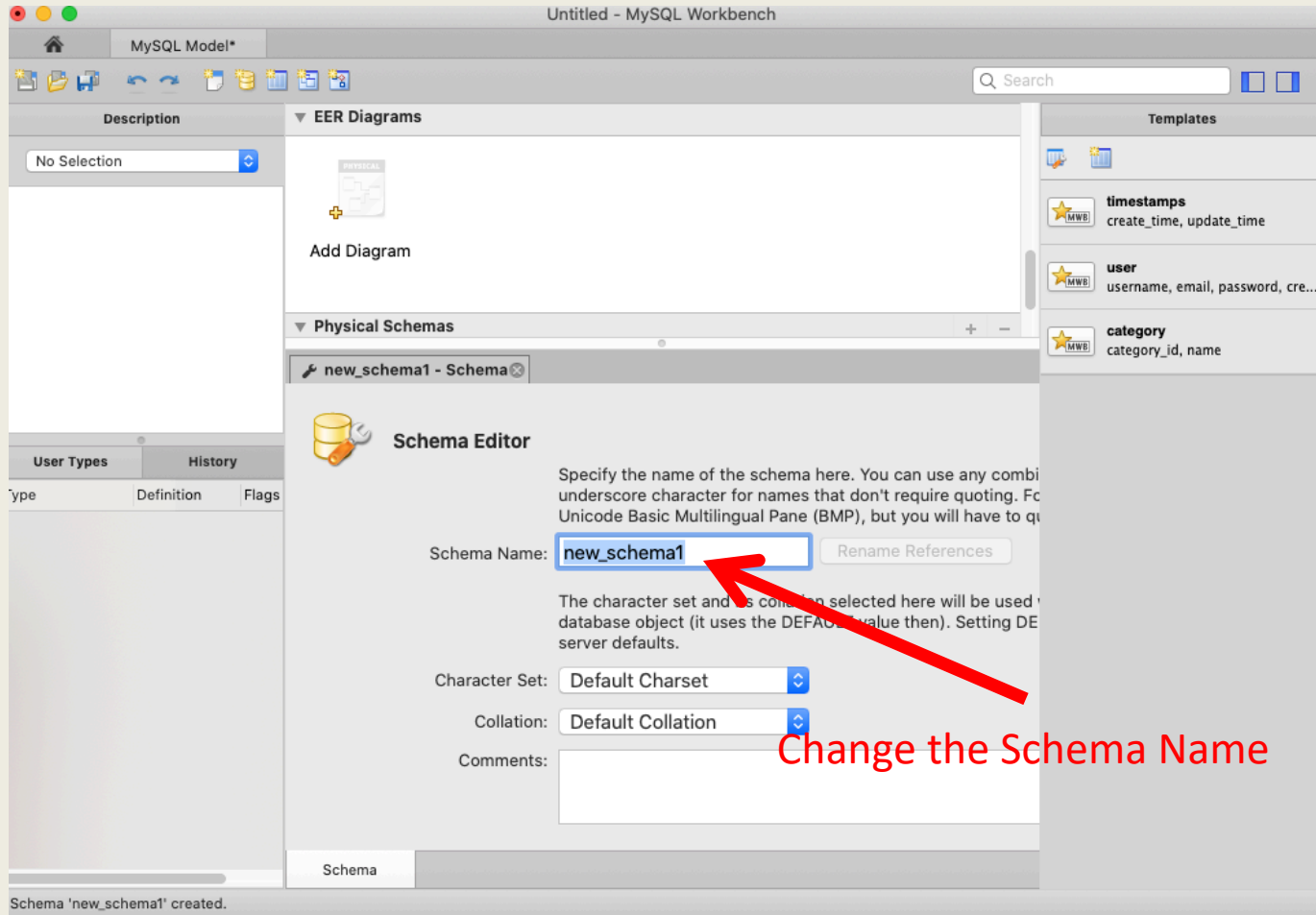
(MySQL Workbench 8)



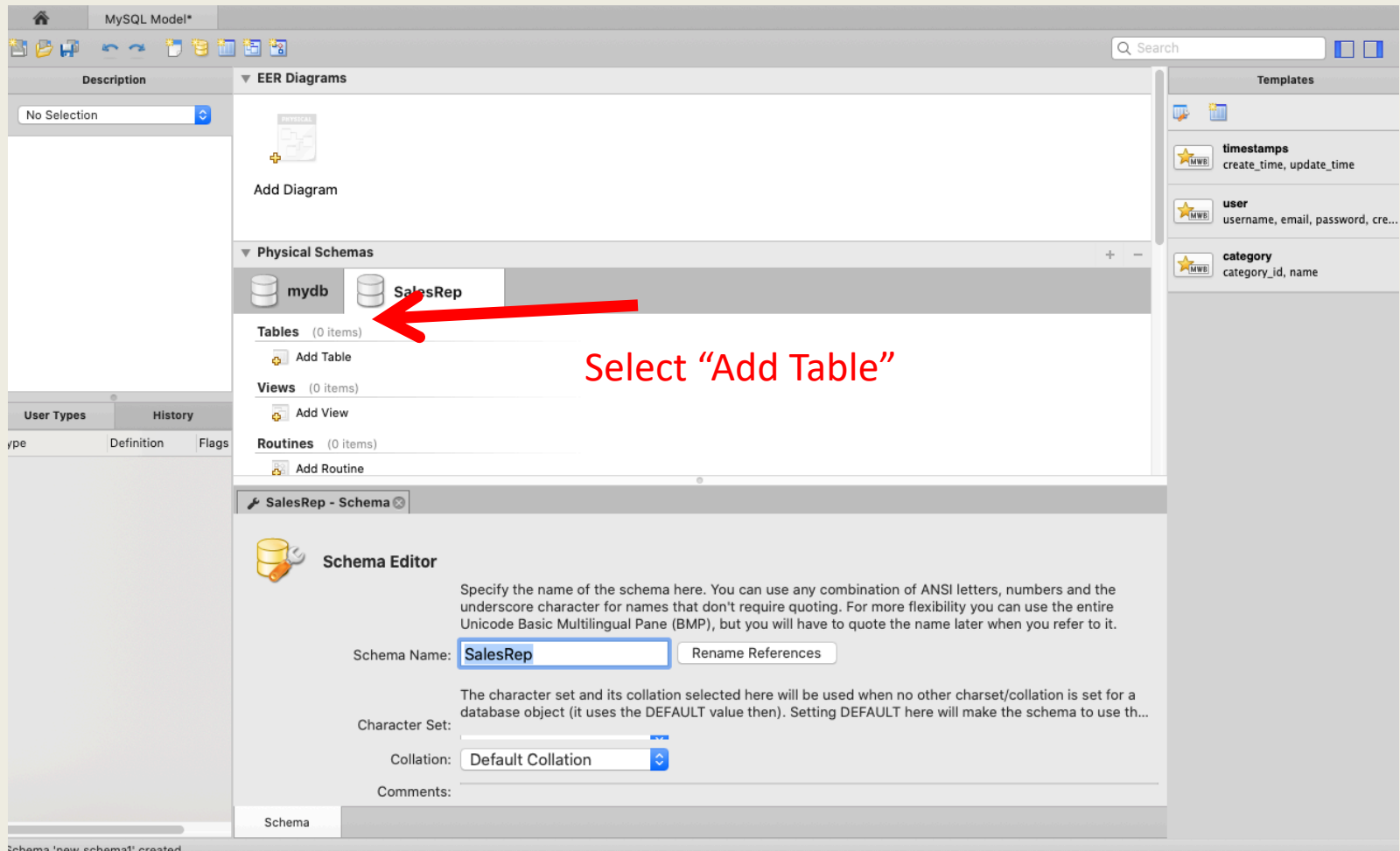
# Create a New Schema



# Change Schema Name

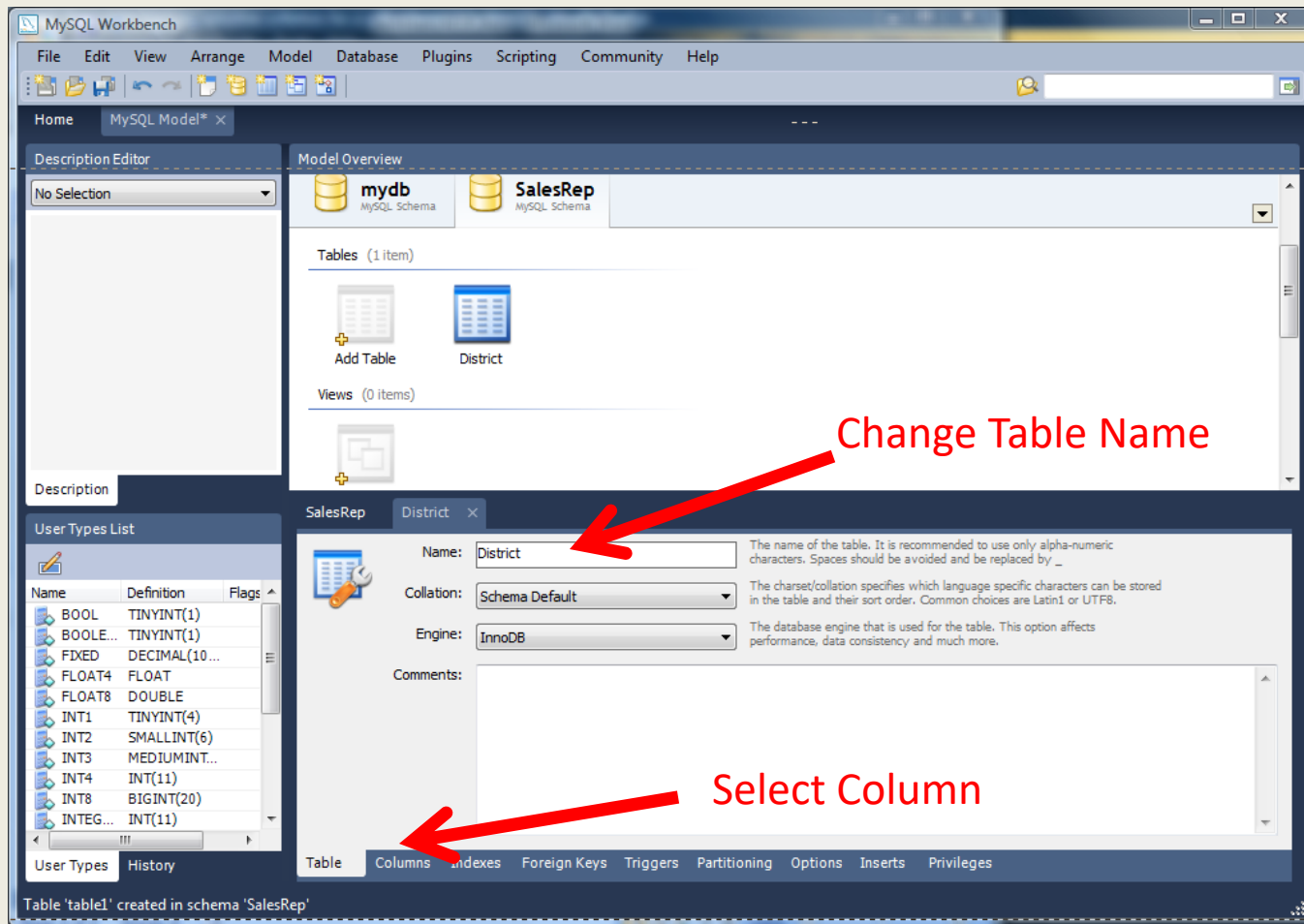


# SalesRep Database

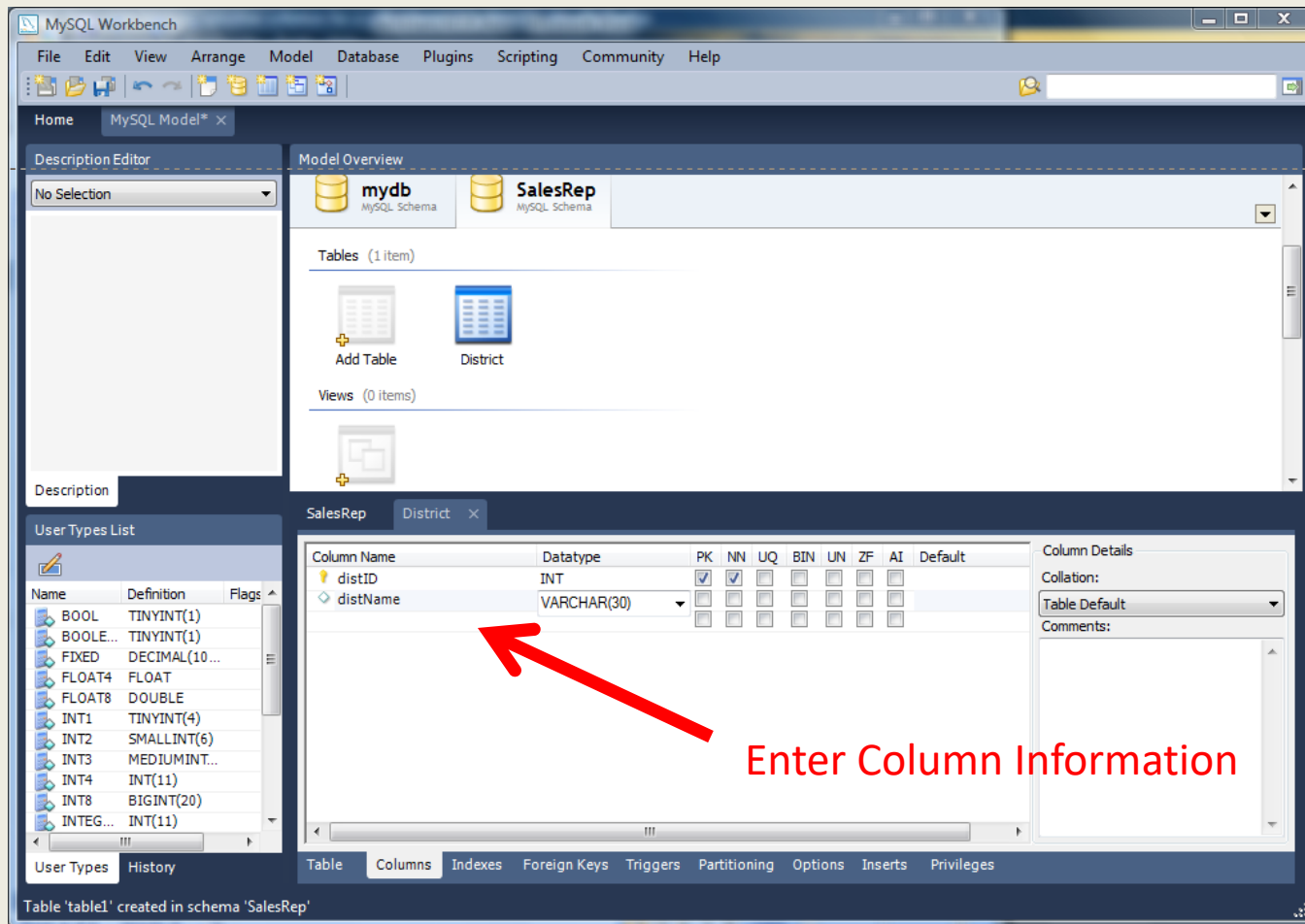


Change to UTF8

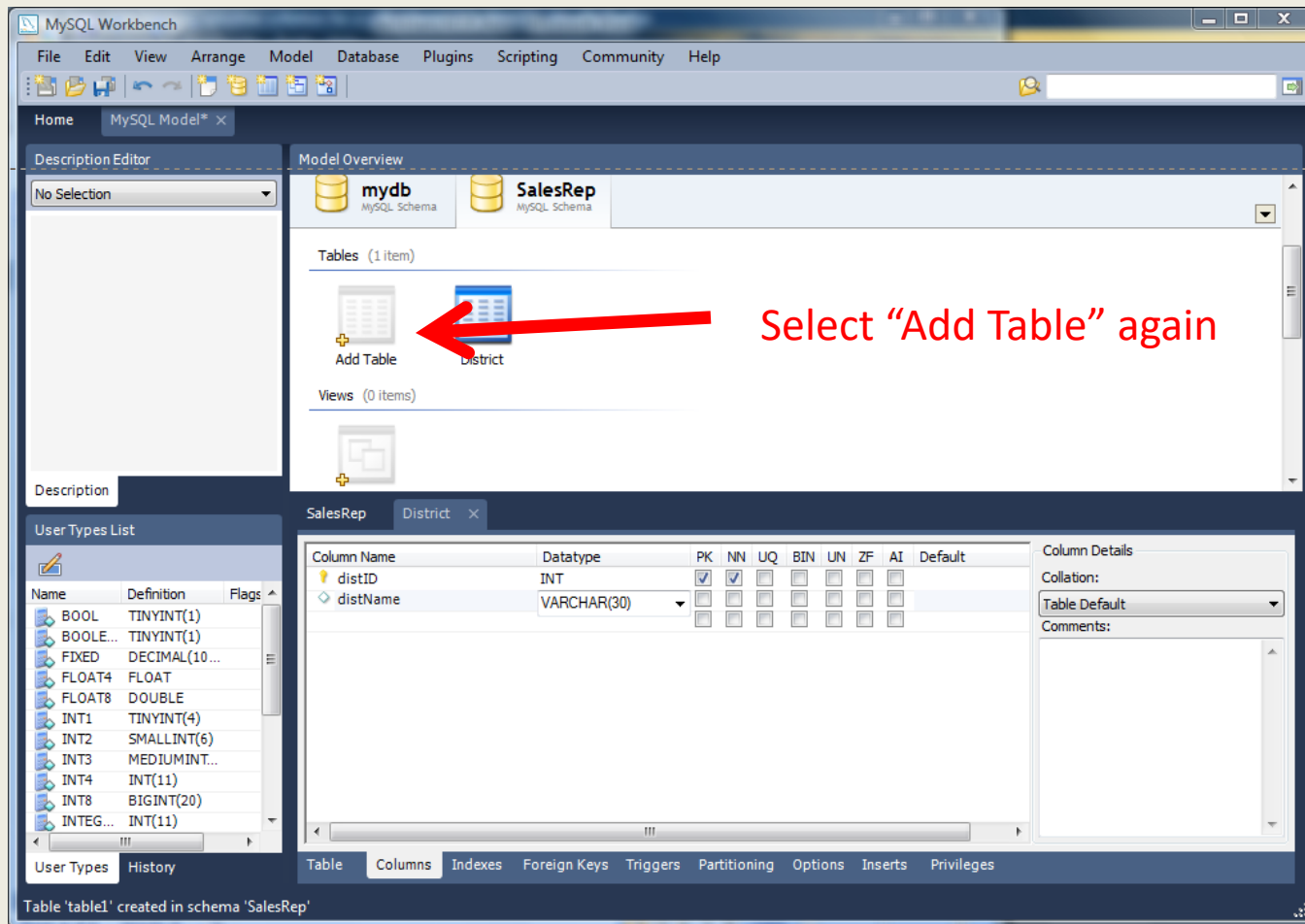
# Configure Table



# Columns

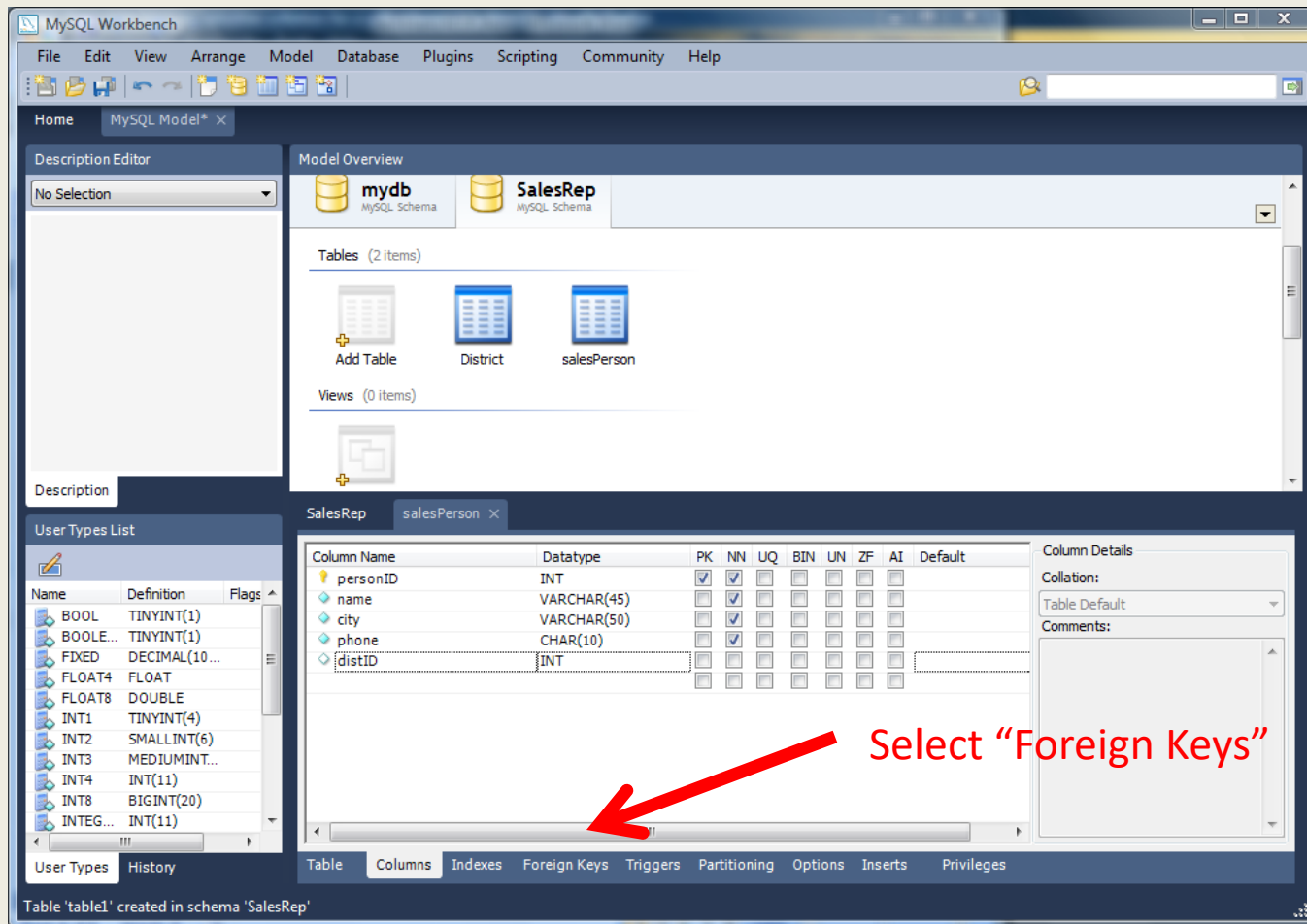


# Add a Second table





# The Second Table



# Foreign Keys

The screenshot shows the MySQL Workbench interface with the 'SalesPerson' table selected. The 'Foreign Key' tab is active, showing a list of foreign keys. The 'distID' column is selected as the referenced column. The 'Foreign key details' panel shows the 'distID' column selected as the referenced column. The 'On Update' and 'On Delete' actions are set to 'NO ACTION'. The 'Comment' field is empty. The 'Skip on SQL generation' checkbox is unchecked.

Foreign Key	Referenced Table
distID	'SalesRep', 'District'

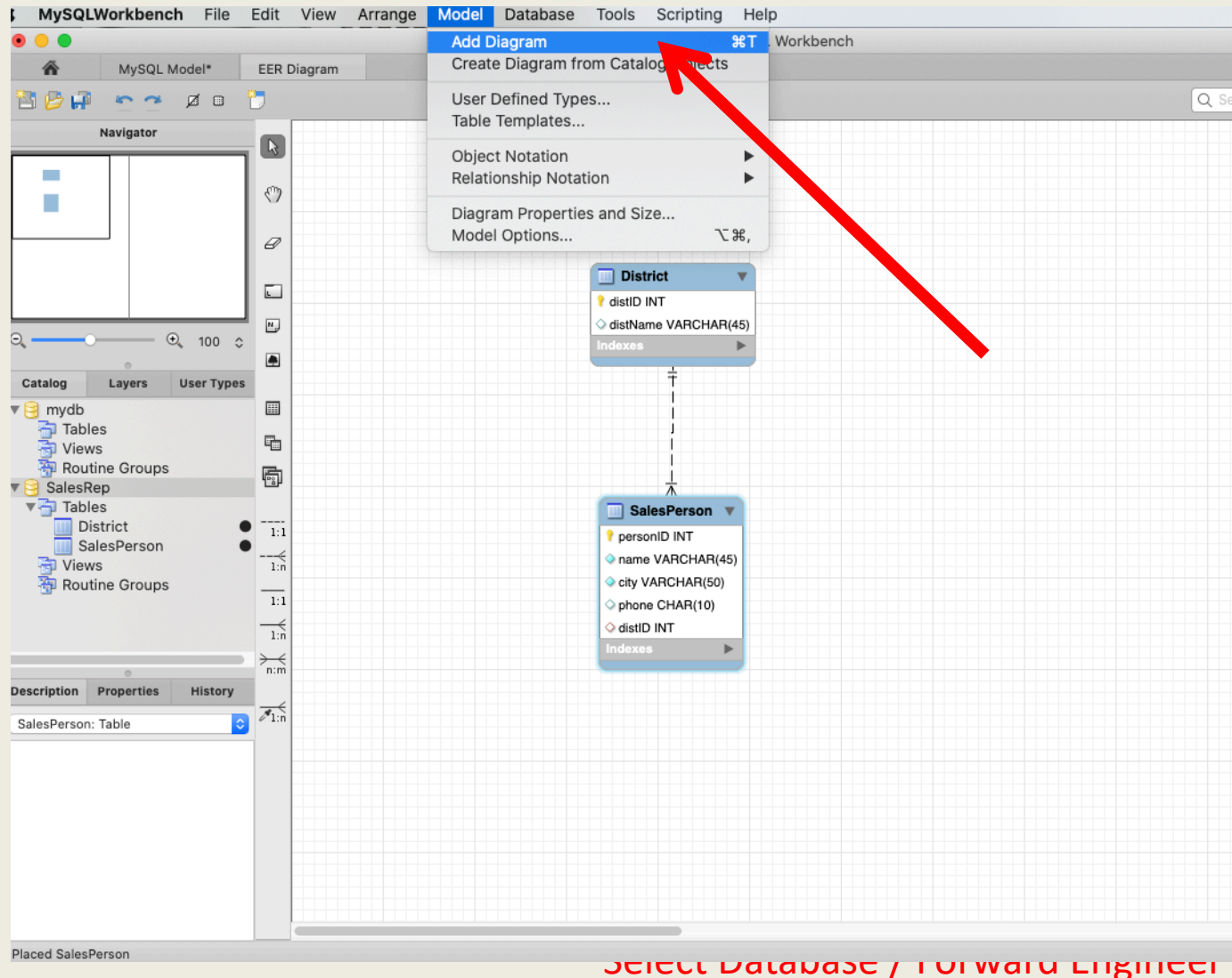
Column	Referenced Column
<input type="checkbox"/> personID	
<input type="checkbox"/> name	
<input type="checkbox"/> city	
<input type="checkbox"/> phone	
<input checked="" type="checkbox"/> distID	distID

On Update: NO ACTION  
On Delete: NO ACTION  
Comment:  
☐ Skip on SQL generation

Add foreign Key Constraints

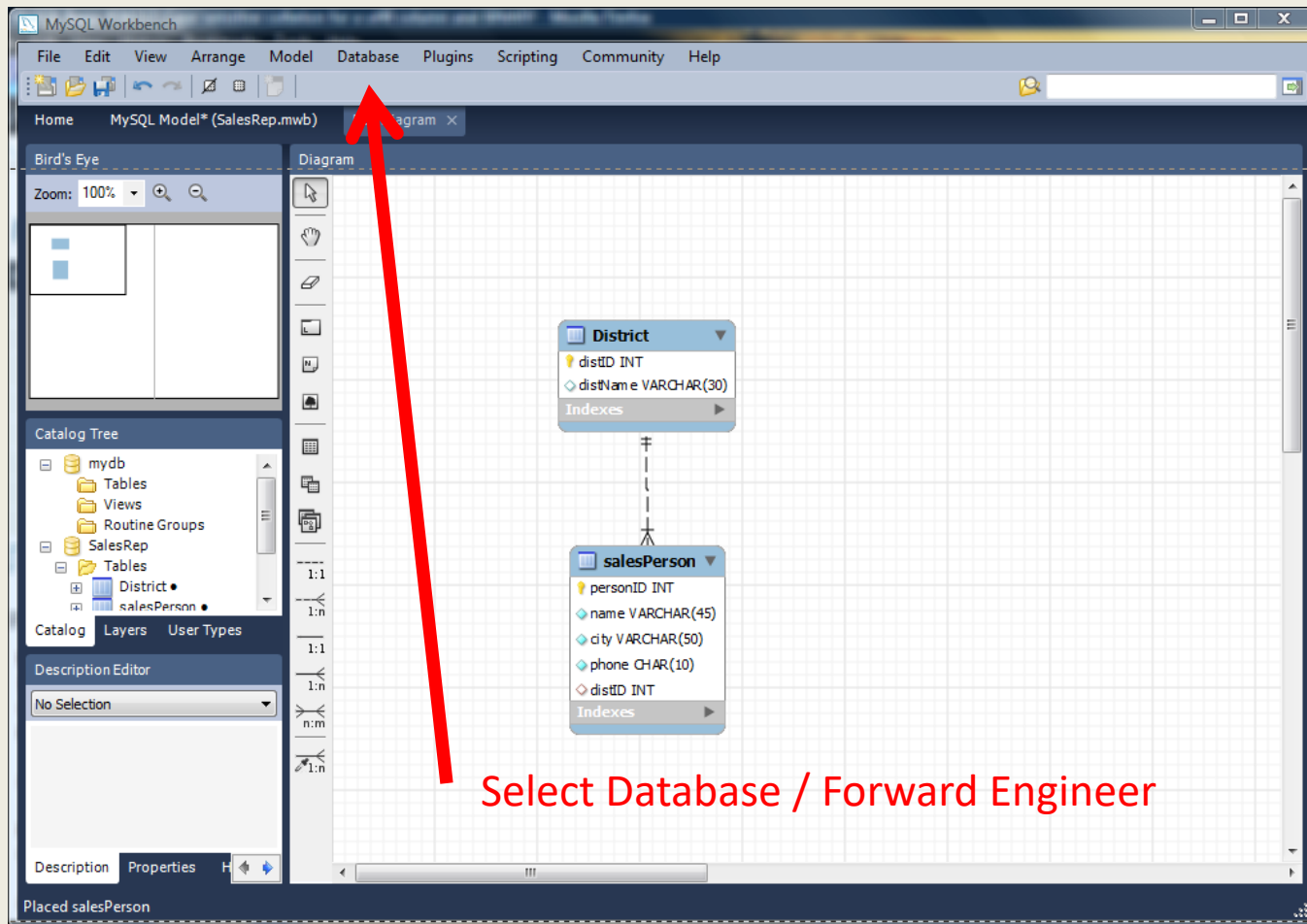
Name the constraint: table1\_table2\_FK

# Diagram Representation

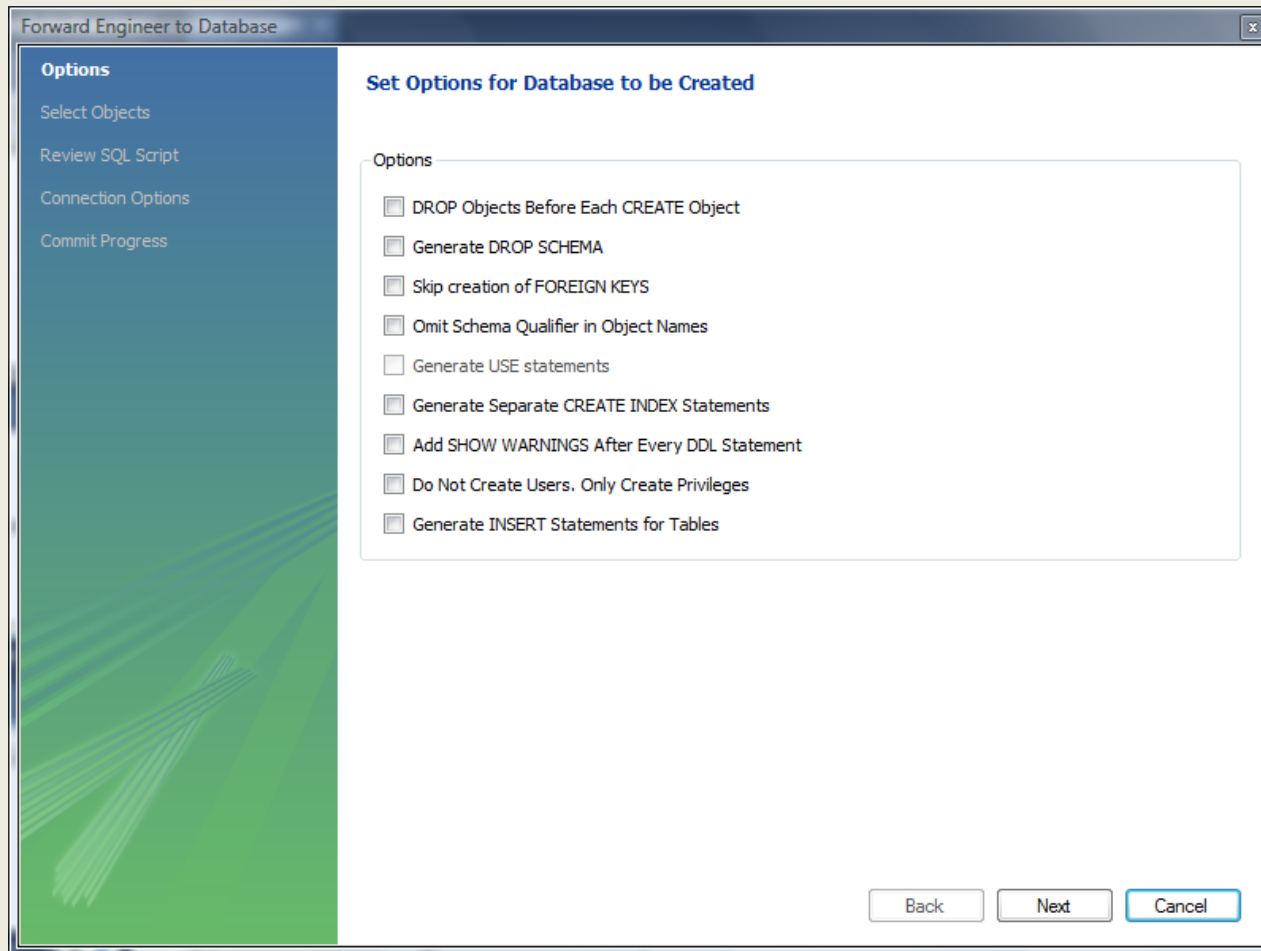


SELECT Database / Forward Engineer

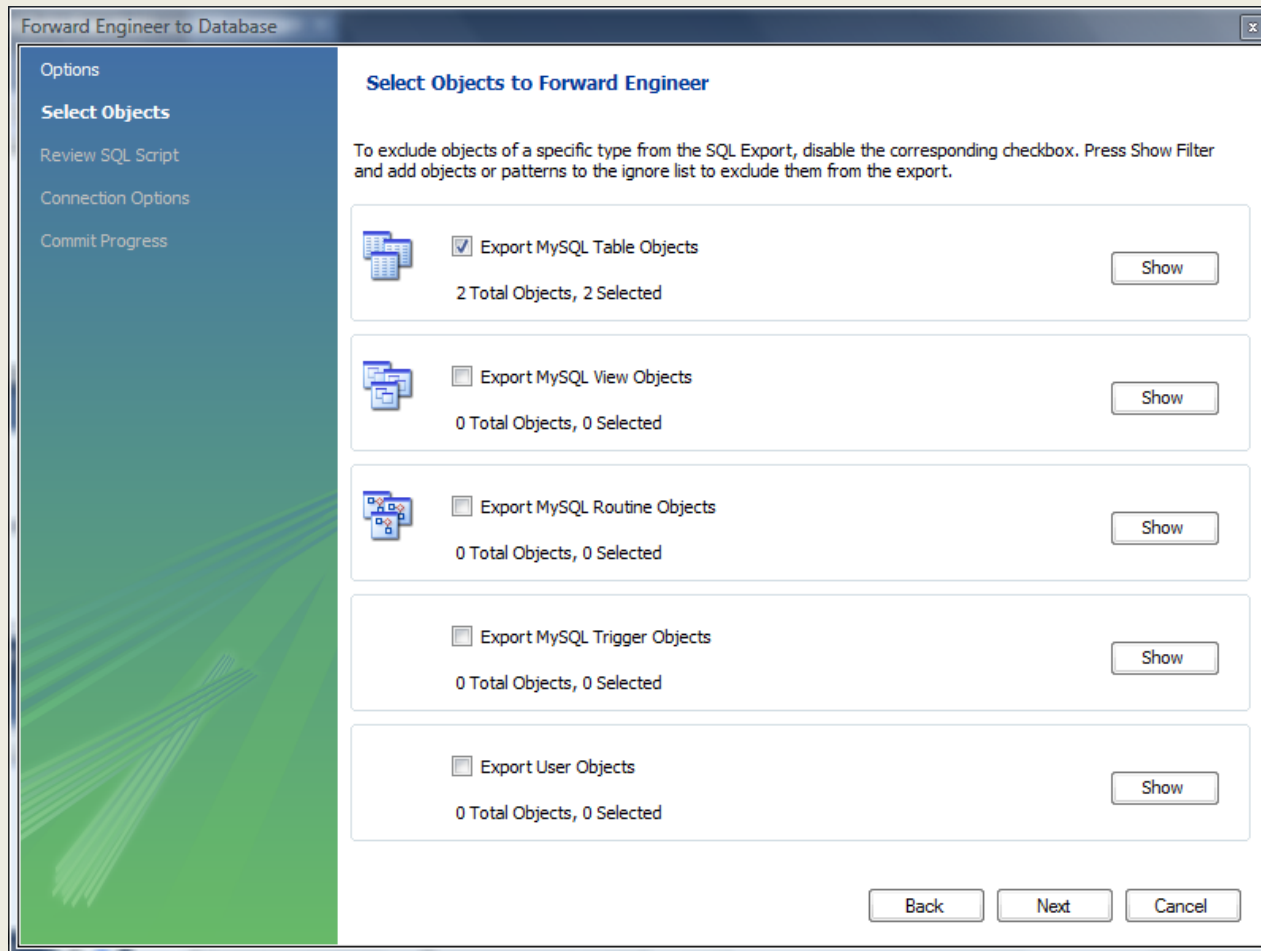
# Diagram Representation



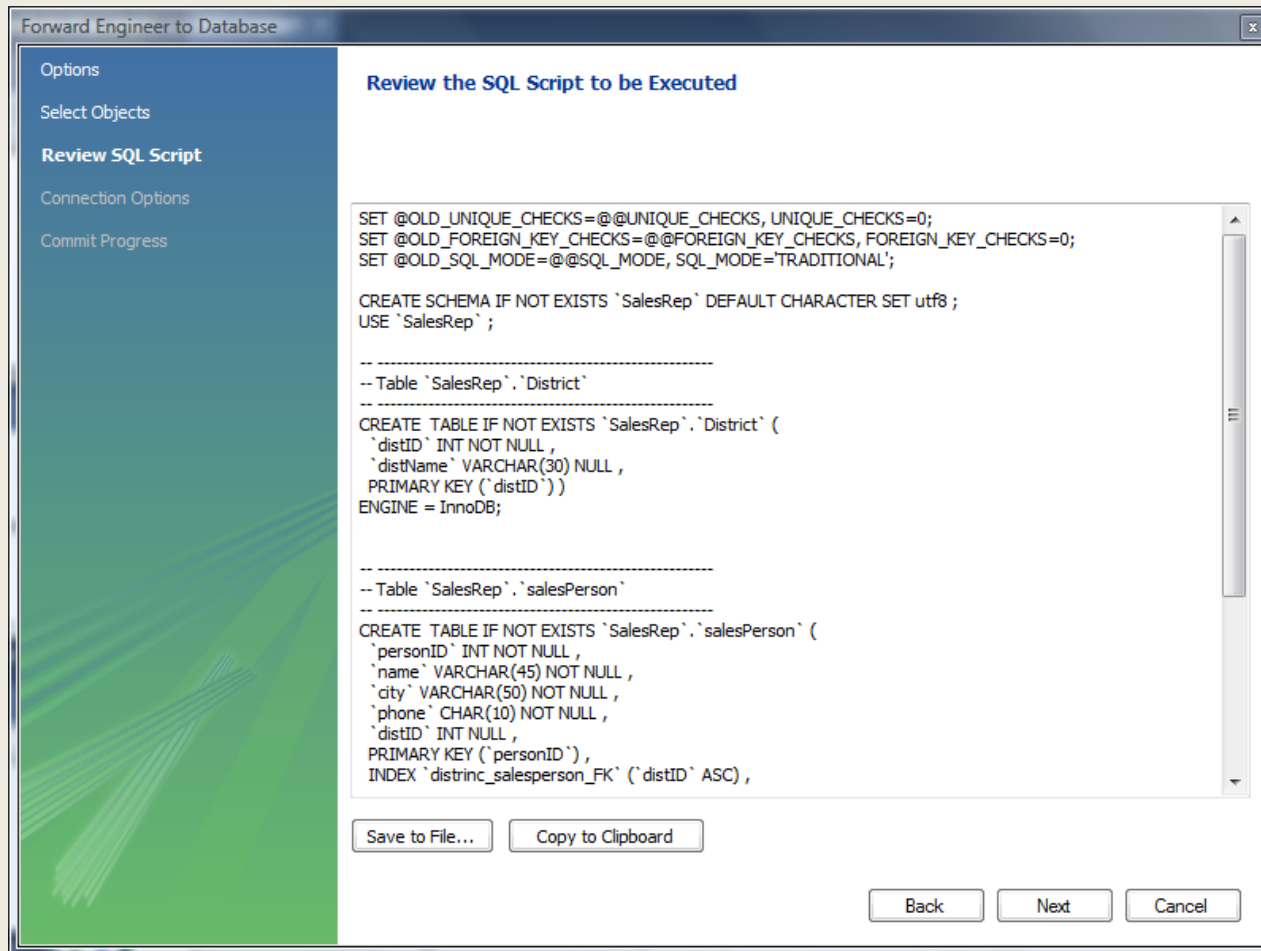
# Choose How to Generate SQL Code



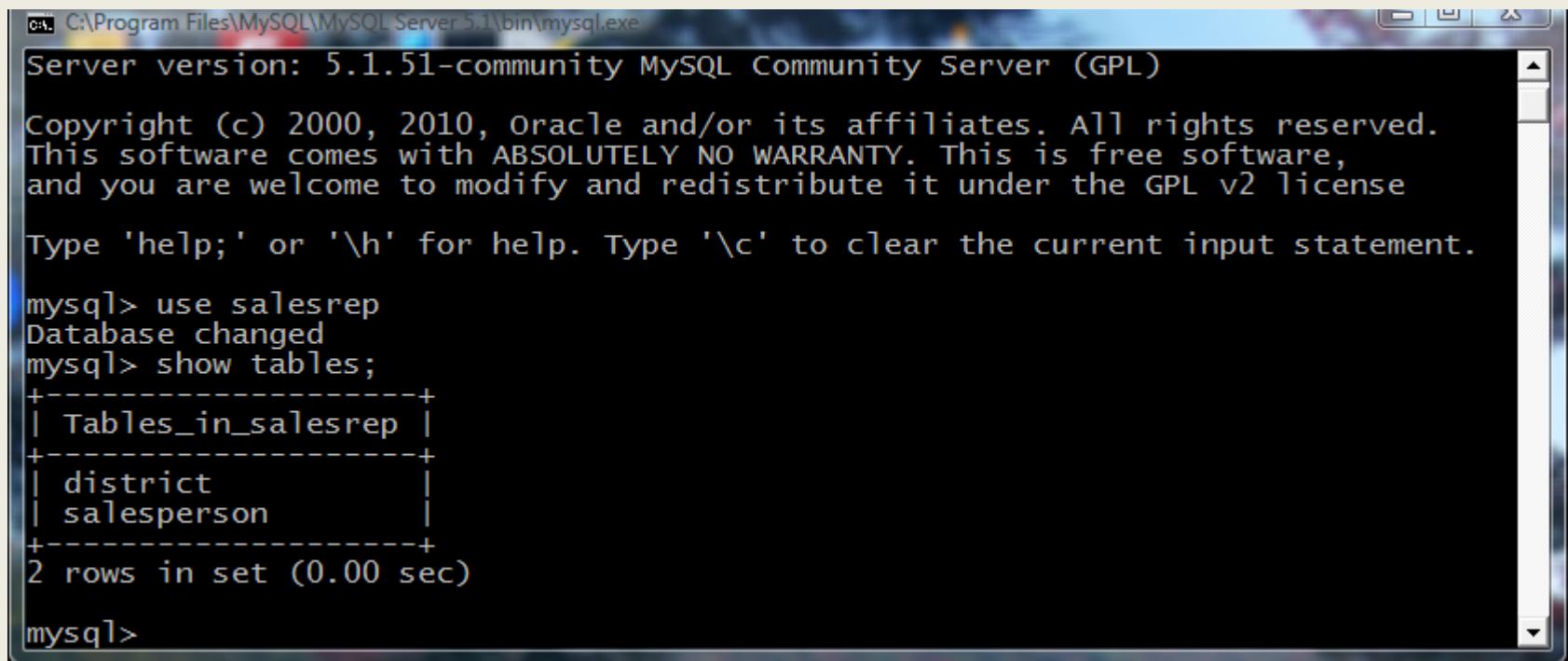
# Export the Objects



# Schema Creation Code



# The Tables Have Been Created



```
C:\Program Files\MySQL\MySQL Server 5.1\bin\mysql.exe
Server version: 5.1.51-community MySQL Community Server (GPL)

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

mysql> use salesrep
Database changed
mysql> show tables;
+-----+
| Tables_in_salesrep |
+-----+
| district            |
| salesperson         |
+-----+
2 rows in set (0.00 sec)

mysql>
```



# Save

- Don't forget to **SAVE** your Workbench Model
  - File / Save As
- Will create a .mwb file

# Table Data Import

The screenshot displays a database management interface with a sidebar on the left showing a tree of schemas and tables. The main area shows a SQL query editor with the following query:

```
1 • SELECT * FROM SalesRep.SalesPerson;
```

A context menu is open over the 'District' table in the 'SalesRep' schema. The menu options are:

- Select Rows - Limit 1000
- Table Inspector
- Copy to Clipboard
- Table Data Export Wizard
- Table Data Import Wizard
- Send to SQL Editor
- Create Table...
- Create Table Like...
- Alter Table...
- Table Maintenance...
- Drop Table...
- Truncate Table...
- Search Table Data...
- Refresh All

A red arrow points from the 'District' table in the sidebar to the 'Table Data Import Wizard' option in the context menu.

The interface also includes a 'Limit to 1000 rows' dropdown and a 'Browse...' button.

# LOAD DATA SQL Statement

```
LOAD DATA INFILE 'c:/11ASQL/DistrictData.csv'  
INTO TABLE District  
FIELDS TERMINATED BY ';'   
ENCLOSED BY '"'   
LINES TERMINATED BY '\r\n'  
IGNORE 1 LINES;
```

- Mac OS X, you would likely want to use LINES TERMINATED BY '\r'.)
- Can use OPTIONALLY ENCLOSED BY
- Don't have extra blanks in data file