

45.1 MySQL Workbench: Import and export

Import a database

MySQL Workbench can import an entire database from an SQL file. The SQL file normally contains SQL statements to create a database, create tables for the database, and insert the data into the tables.

The figure below shows the contents of an SQL file called company.sql. The SQL statements create a database called company with Employee and Department tables. Five employees and four departments are inserted into the tables.

Figure 45.1.1: company.sql for importing.

```
CREATE DATABASE IF NOT EXISTS company;

USE company;

DROP TABLE IF EXISTS Employee;
DROP TABLE IF EXISTS Department;

CREATE TABLE Employee (
    ID SMALLINT UNSIGNED,
    Name VARCHAR(60),
    Salary DECIMAL(7,2) NOT NULL,
    PRIMARY KEY(ID)
);

CREATE TABLE Department (
    Code TINYINT UNSIGNED
    AUTO_INCREMENT,
    Name VARCHAR(20) NOT NULL,
    Manager SMALLINT UNSIGNED,
    PRIMARY KEY (Code)
);

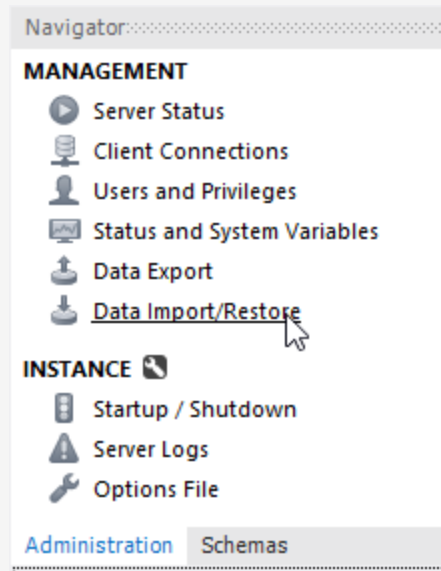
INSERT INTO Employee VALUES
    (2538, 'Lisa Ellison', 45000),
    (5384, 'Sam Snead', 32000),
    (6381, 'Maria Rodriguez', 95000),
    (7343, 'Gary Smith', 24500),
    (8392, 'Anna Watson', 41000);

INSERT INTO Department VALUES
    (44, 'Engineering', 2538),
    (82, 'Sales', 6381),
    (12, 'Marketing', 6381),
    (99, 'Technical support', NULL);
```

The following steps show how to import a database from an SQL file. The screenshots below are from Windows. Screens and buttons vary slightly on a Mac.

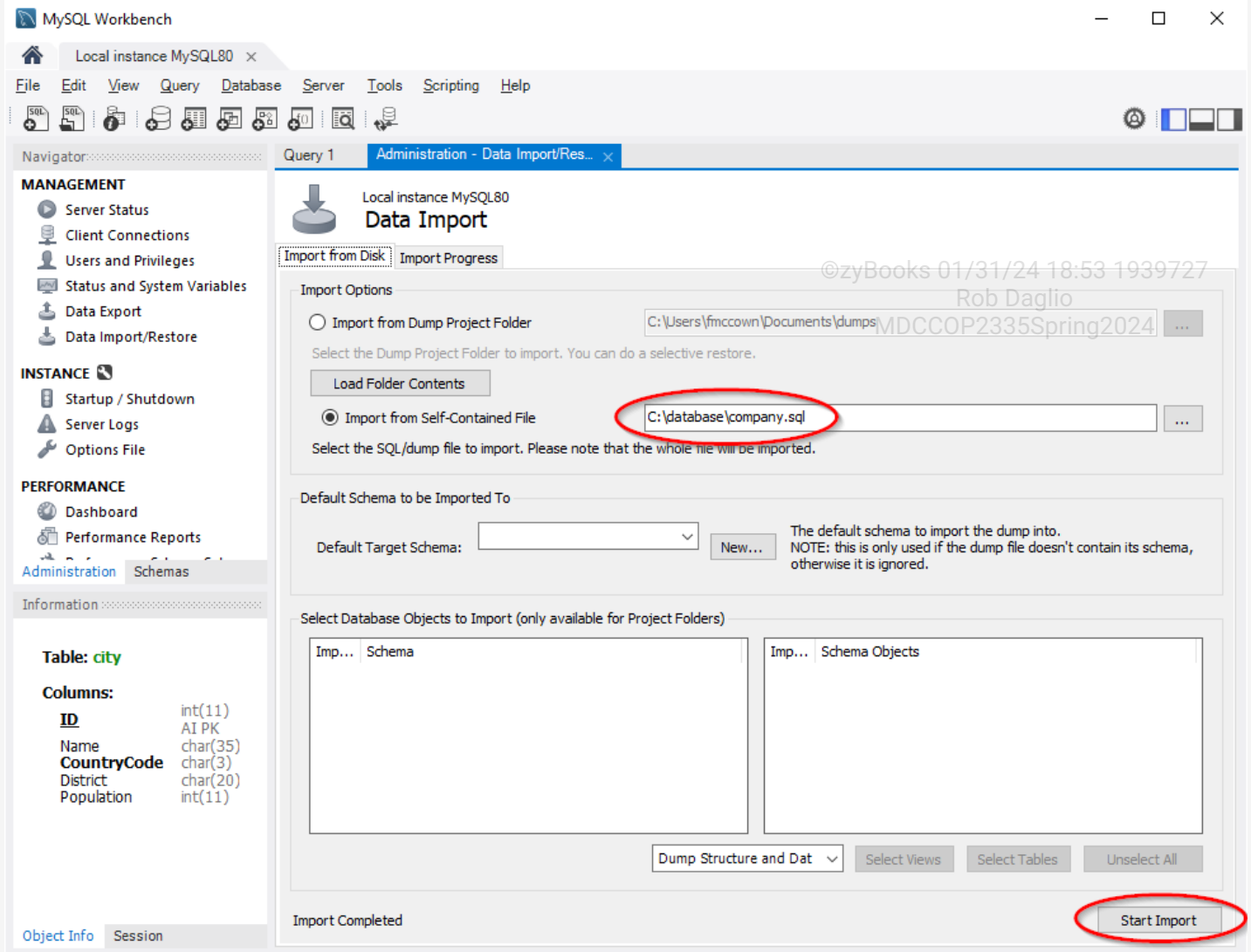
1. Start MySQL Workbench and connect to MySQL server.
2. Click the **Administration** tab in the Navigator sidebar.
3. In the Management section, click **Data Import/Restore**.

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4. Click **Import from Self-Contained File**.
5. Click ... button.
6. Navigate to and select the SQL file to import.
7. Click **Start Import** button.

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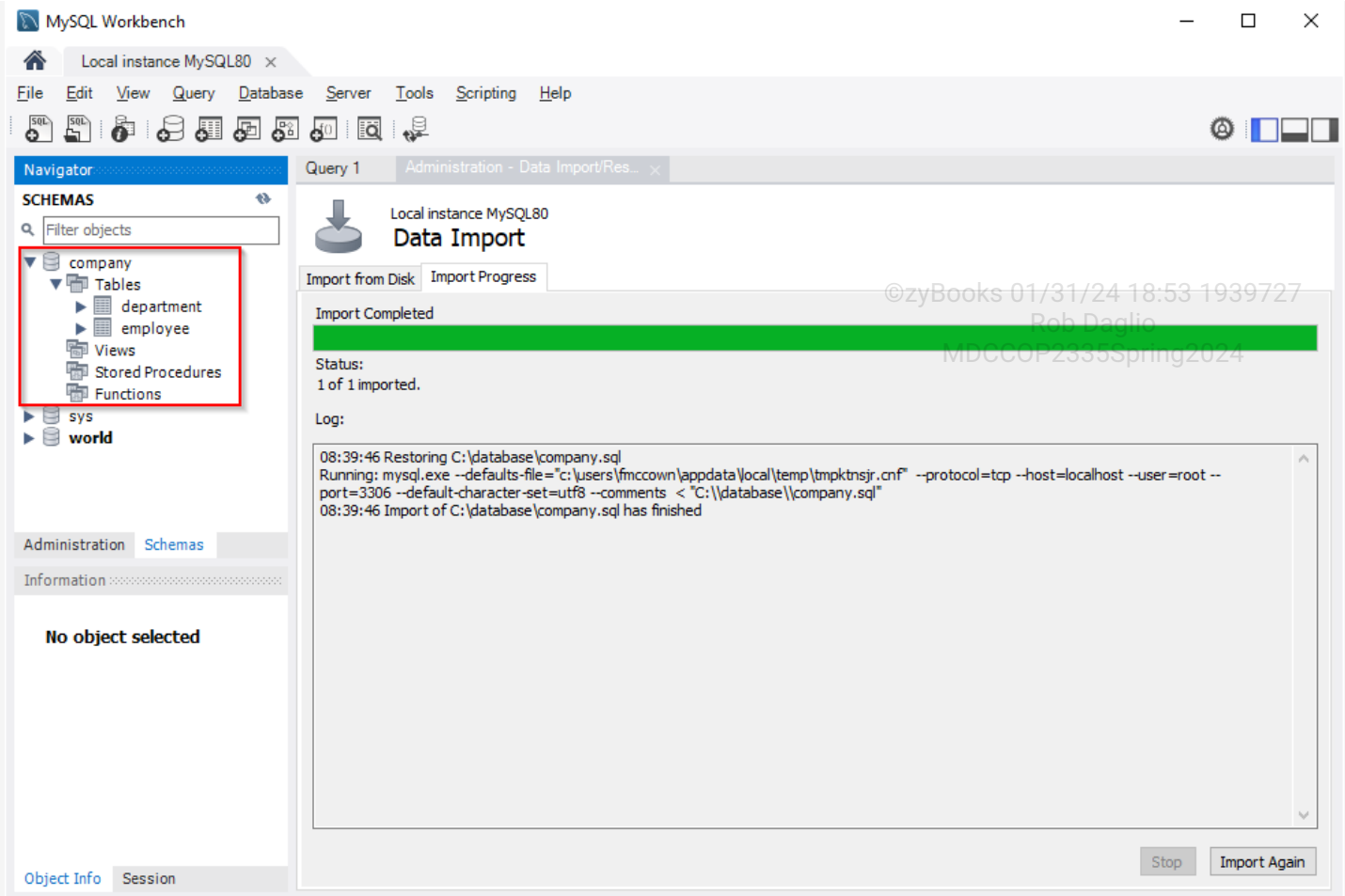


8. Wait until notification that import has completed.

To verify the import worked:

1. Click the **Schemas** tab in the Navigator sidebar.
2. Click the refresh button in the upper-right corner of the Navigator sidebar to refresh the list of Schemas.
3. Verify the new database appears in the Schemas list.

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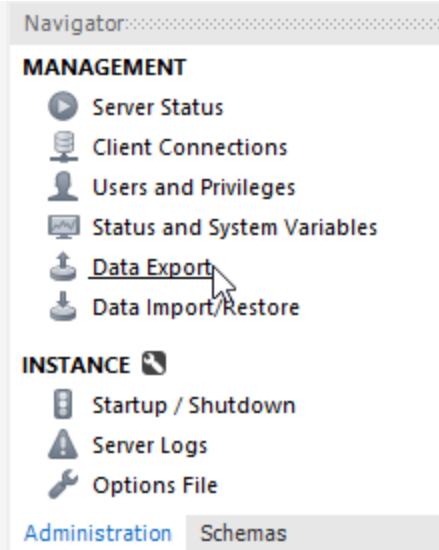
Export a database

MySQL Workbench can export an entire database to an SQL text file.

The following steps export a database to a file. The screenshots below are from Windows. Screens and buttons vary slightly on a Mac.

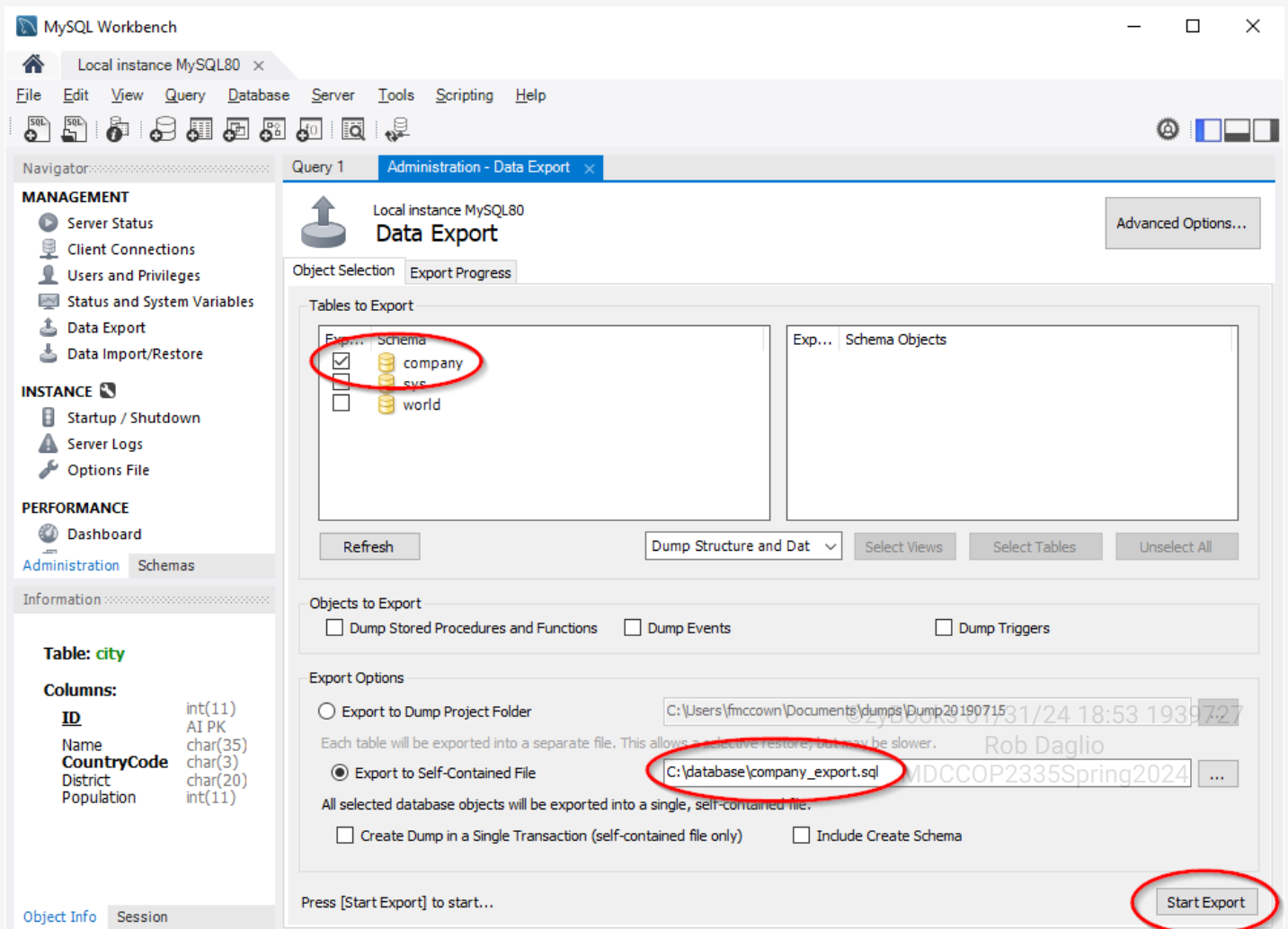
1. Start MySQL Workbench and connect to MySQL server.
2. Click the **Administration** tab in the Navigator sidebar.
3. In the Management section, click **Data Export**.

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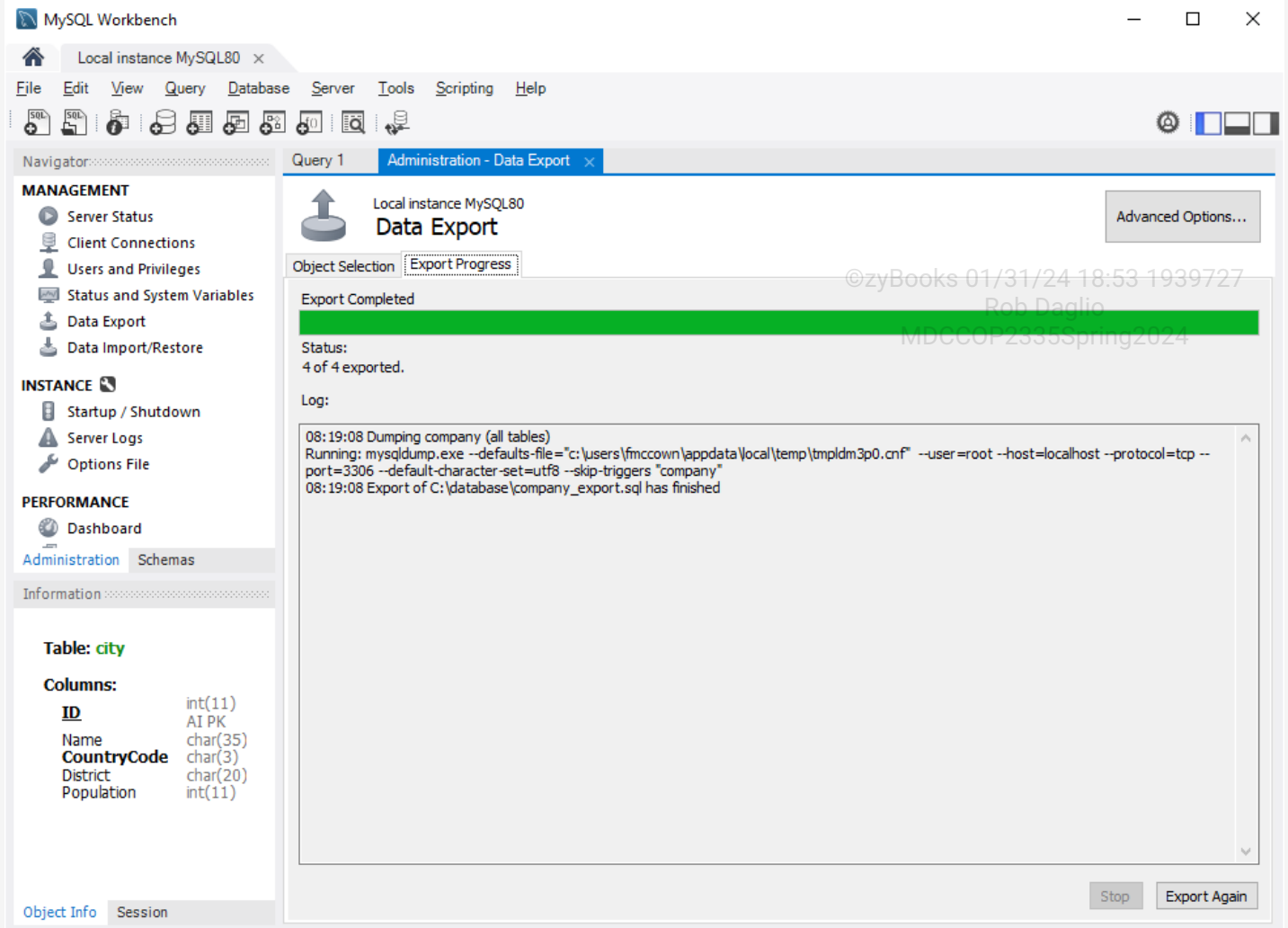


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4. Check the checkbox next to the database to be exported.
5. Select **Export to Self-Contained File** and enter the file path.
6. Click **Start Export** button.



7. Wait until notification that export has completed.



Verify the export worked by locating the SQL file produced by the export.

Exported files will use backticks around all table and column names. The **backtick** (``) delimits literals that represent identifiers, which allows spaces and reserved words to be used as identifiers. Ex:

```
CREATE TABLE `Employee`
```

Importing table data

Data may be imported into a specific table from a CSV (Comma-Separated Values) file or JSON file.

The figure below shows employee data in a CSV file named employee_table.csv. The first line lists the column names, and all other lines contain the ID, name, and salary for each employee. The CSV file uses commas to separate each data field, but MySQL supports other field separators like semicolons, colons, vertical bars, and tabs.

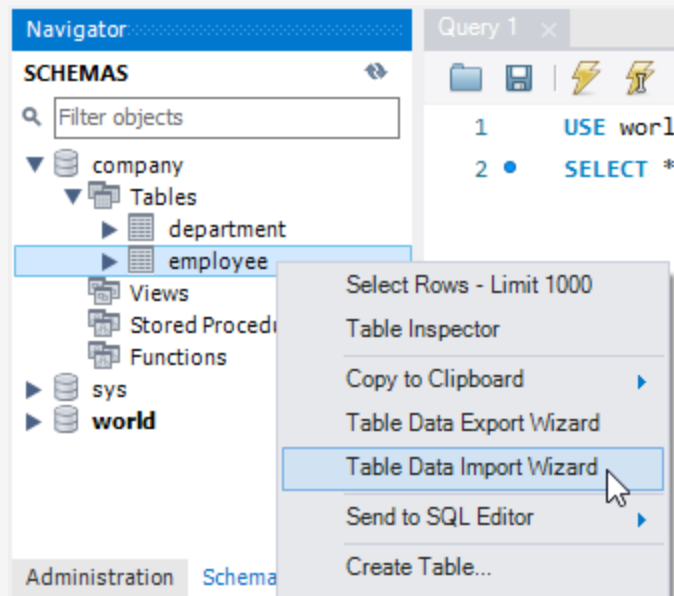
Figure 45.1.2: employee_table.csv.

```
"ID", "Name", "Salary"  
2538, "Lisa Ellison", 45000  
5384, "Sam Snead", 32000  
6381, "Maria  
Rodriguez", 95000  
7343, "Gary Smith", 24500  
8392, "Anna Watson", 41000
```

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The following steps import a CSV or JSON file. The screenshots below are from Windows. Screens and buttons vary slightly on a Mac.

1. Click the **Schemas** tab in the Navigator sidebar, and expand the desired database's table list.
2. Right-click the table name that will receive the imported data.
3. Choose **Table Data Import Wizard** from the context menu.



4. Click the **Browse...** button, select the CVS or JSON file to import, and click **Next**.

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 Table Data Import


Select File to Import

**Table Data Import allows you to easily import CSV, JSON datafiles.
You can also create destination table on the fly.**

File Path:

5. Click **Next** to import the data into the current table.

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 Table Data Import

Select Destination

Select destination table and additional options.

☒ Use existing table:

☐ Create new table: .

☐ Truncate table before import

< Back

Next >


Cancel

6. The columns from the file are displayed and checked by default, and the data to import is shown underneath. Click **Next**.

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Table Data Import

Configure Import Settings

Detected file format: csv 

Encoding:

utf-8

Columns:

<input checked="" type="checkbox"/>	Source Column	Dest Column
<input checked="" type="checkbox"/>	ID	<div>ID</div>
<input checked="" type="checkbox"/>	Name	<div>Title</div>
<input checked="" type="checkbox"/>	Salary	<div>Publishe</div>

ID	Name	Salary
2538	LisaEllison	45000
5384	Sam Snead	32000
6381	Maria Rodri...	95000
7343	Gary Smith	24500
8392	Anna Watson	41000

< Back


Next >

Cancel

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7. Click **Next** to begin the import.

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 Table Data Import

Import Data

The following tasks will now be performed. Please monitor the execution.

- ☐ Prepare Import
- ☐ Import data file

Click [Next >] to execute.

Show Logs

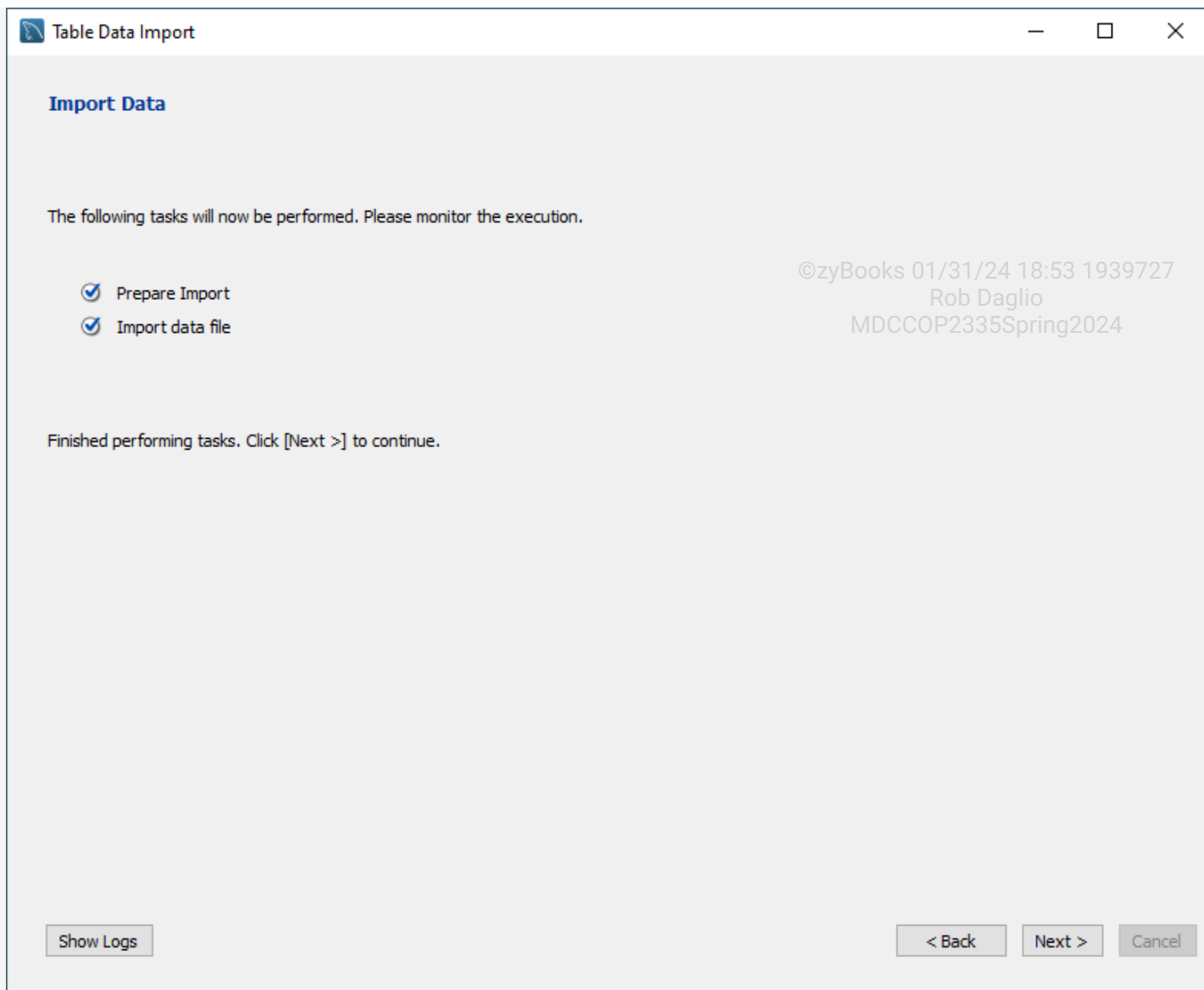
< Back

Next >

Cancel

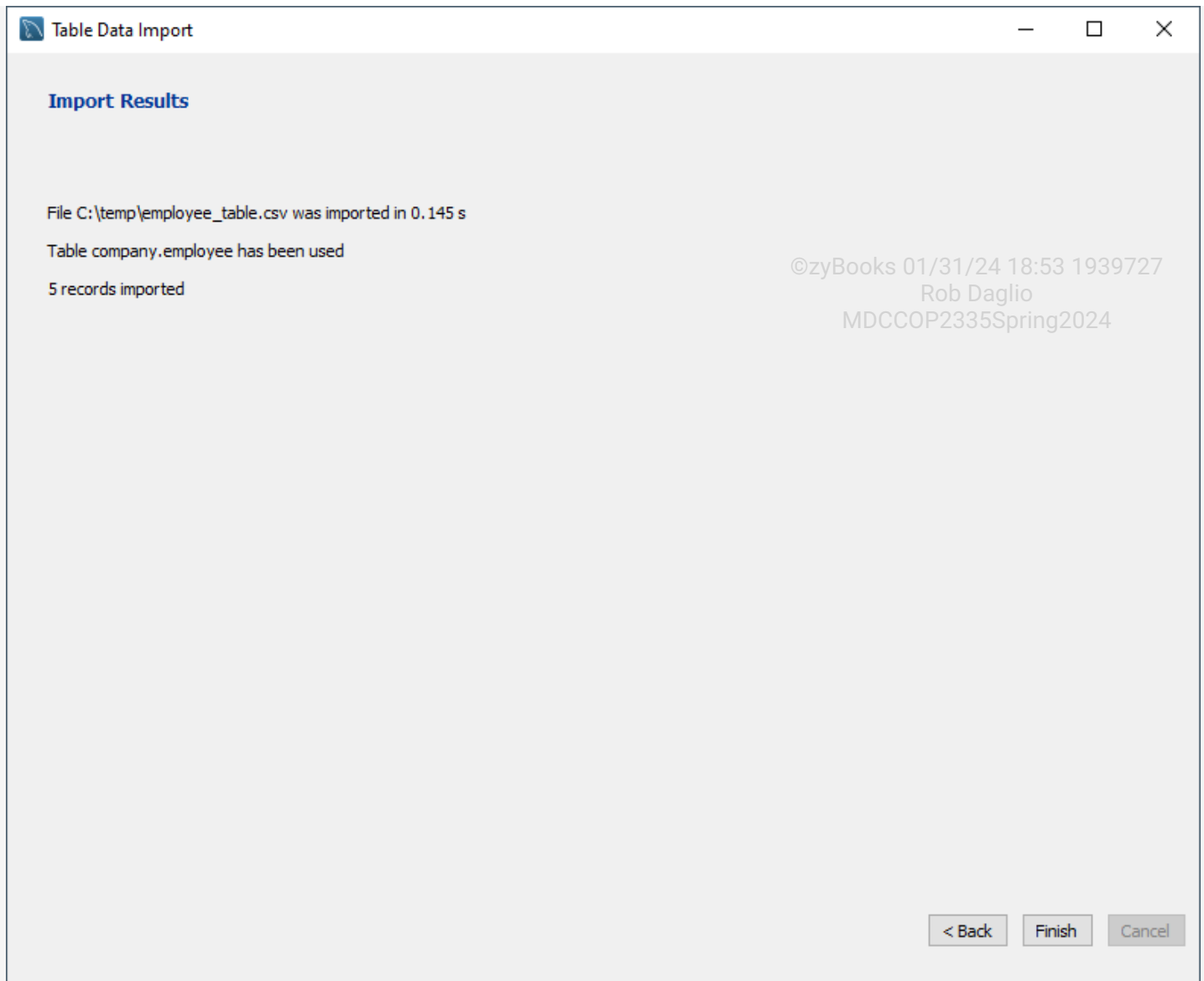
8. Click **Next** again to confirm the import has finished.

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9. View the import summary and press **Finish**.

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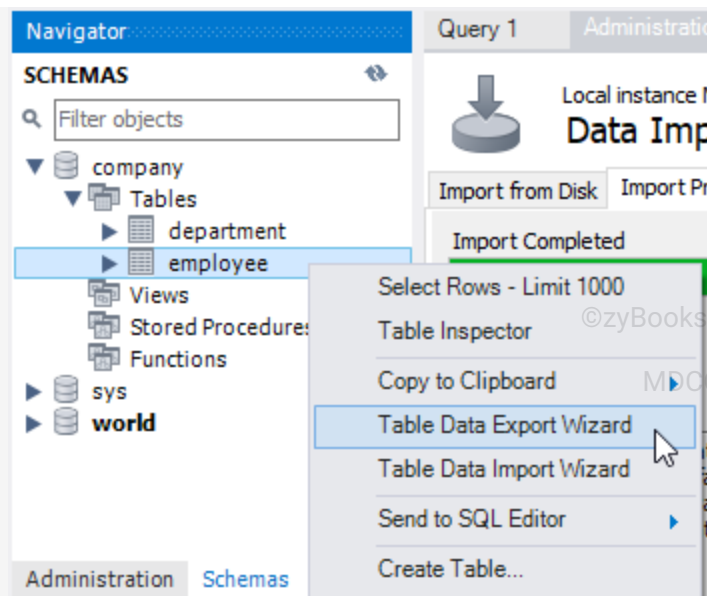


Note that if a row in the import data violates any column constraints, the row is not imported, and no error message is shown. Ex: If the row uses the same primary key value as an existing row in the table, the row is not imported.

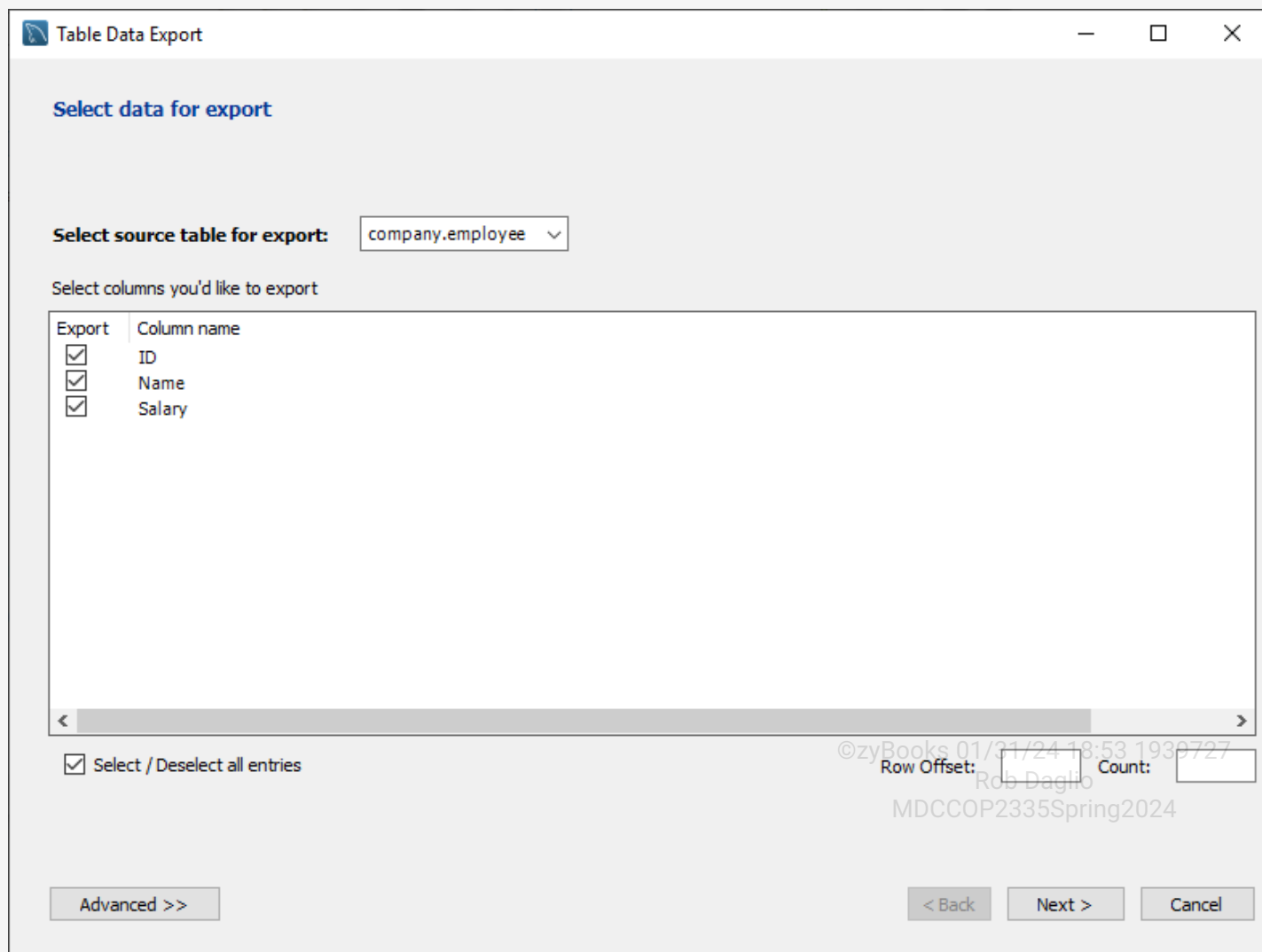
Export table data

The following steps export a CSV or JSON file. The screenshots below are from Windows. Screens and buttons vary slightly on a Mac.


1. Click the **Schemas** tab in the Navigator sidebar, and expand the desired database's table list.
2. Right-click the table name that contains the data to export.
3. Choose **Table Data Export Wizard** from the context menu.



4. All the table's columns are selected by default. Click **Next**.



5. Enter a file path to receive the exported data, choose **csv** or **json**, and click **Next**.

 Table Data Export

Select output file location

Table Data Export allows you to easily export data into CSV, JSON datafiles.

File Path: Browse...

☒ csv ☐ json

Options:

Line Separator

Endose Strings in

Field Separator

null and NULL word as SQL keyword

LF

"

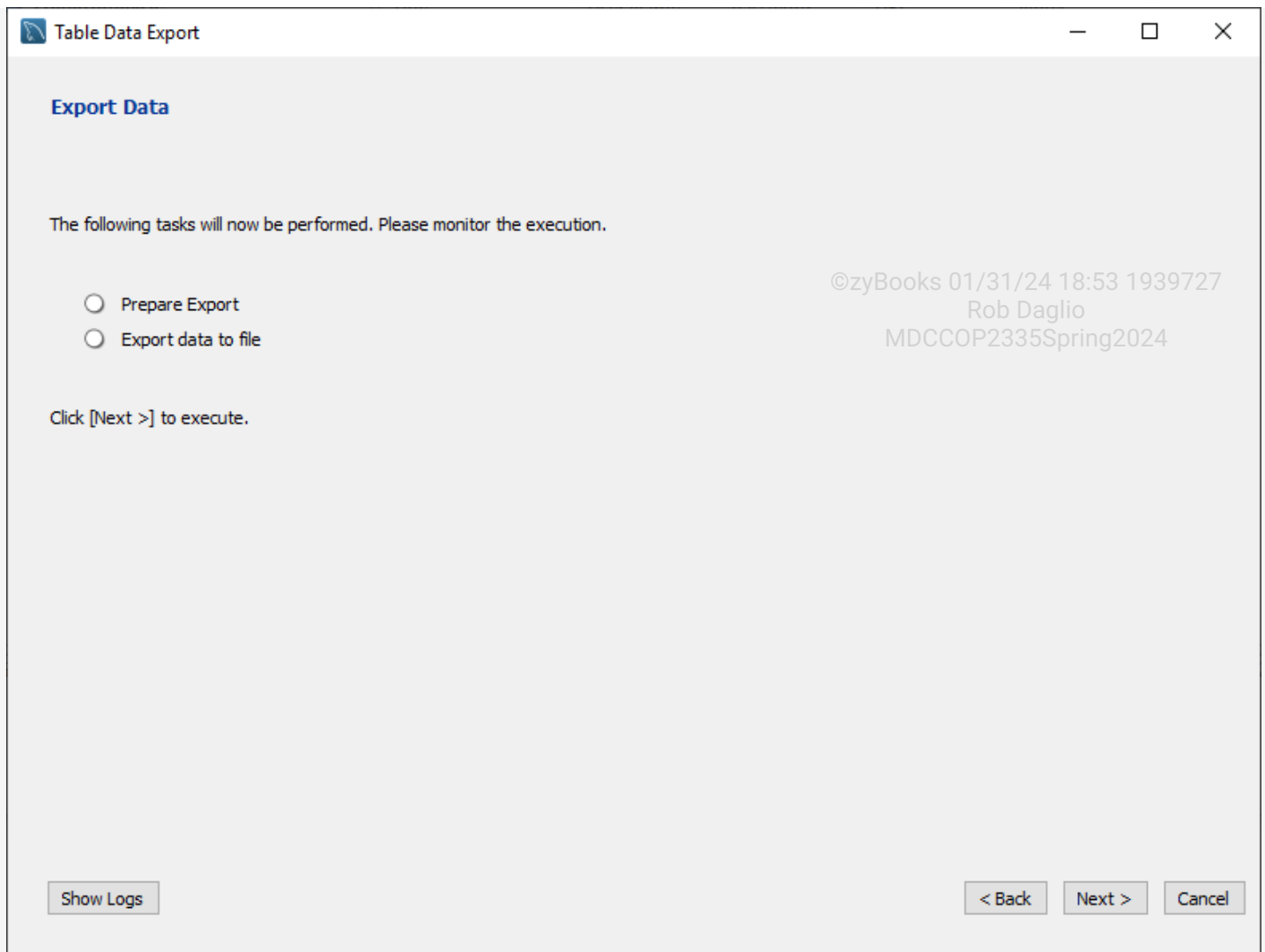
;

YES

☒ Export to local machine
If checked, rows will be exported on the location that started Workbench.
If not checked, rows will be exported on the server.
If server and computer that started Workbench are different machines, import of that file can be done manual way only.

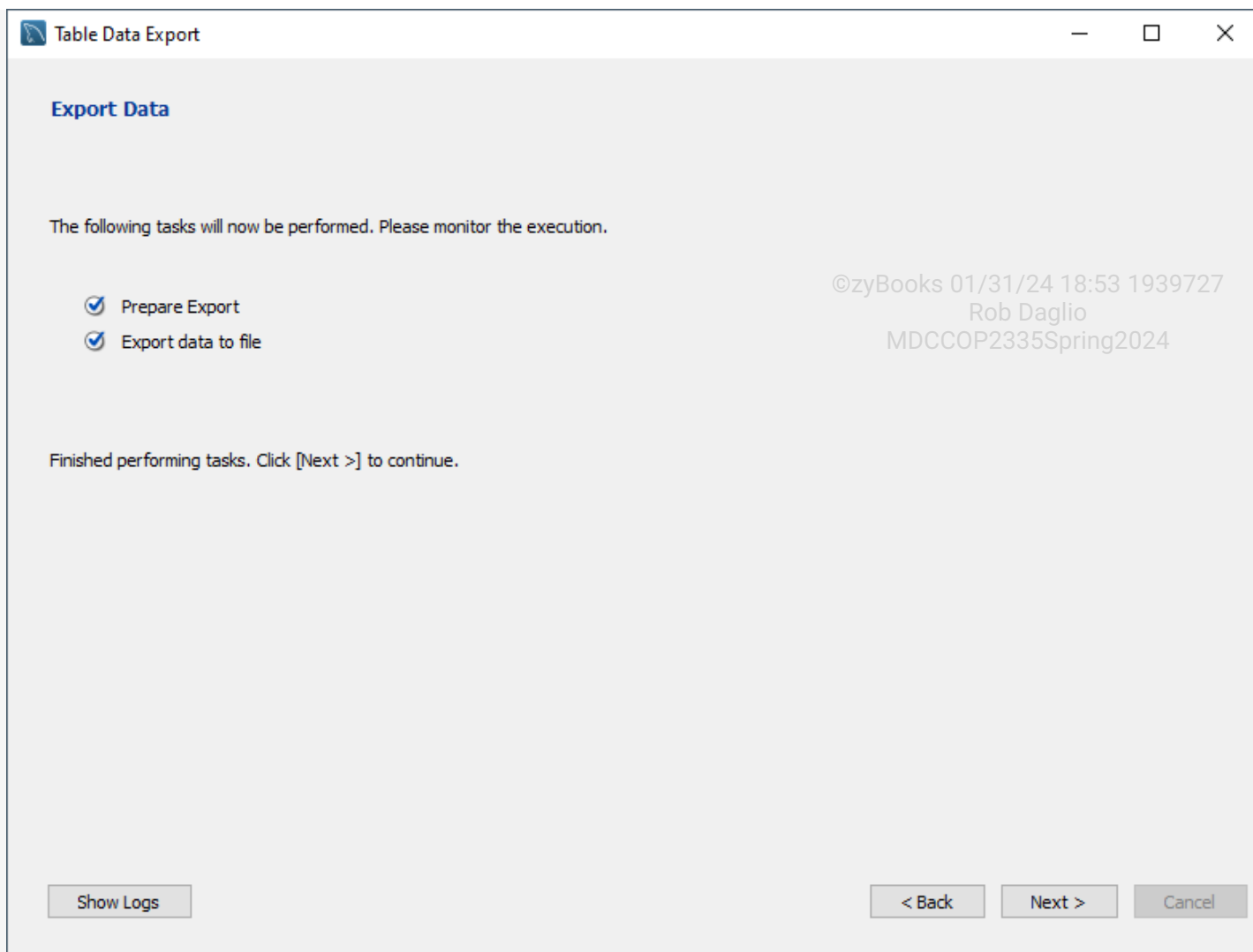
< Back Next > Cancel

6. Click **Next** to begin the export.



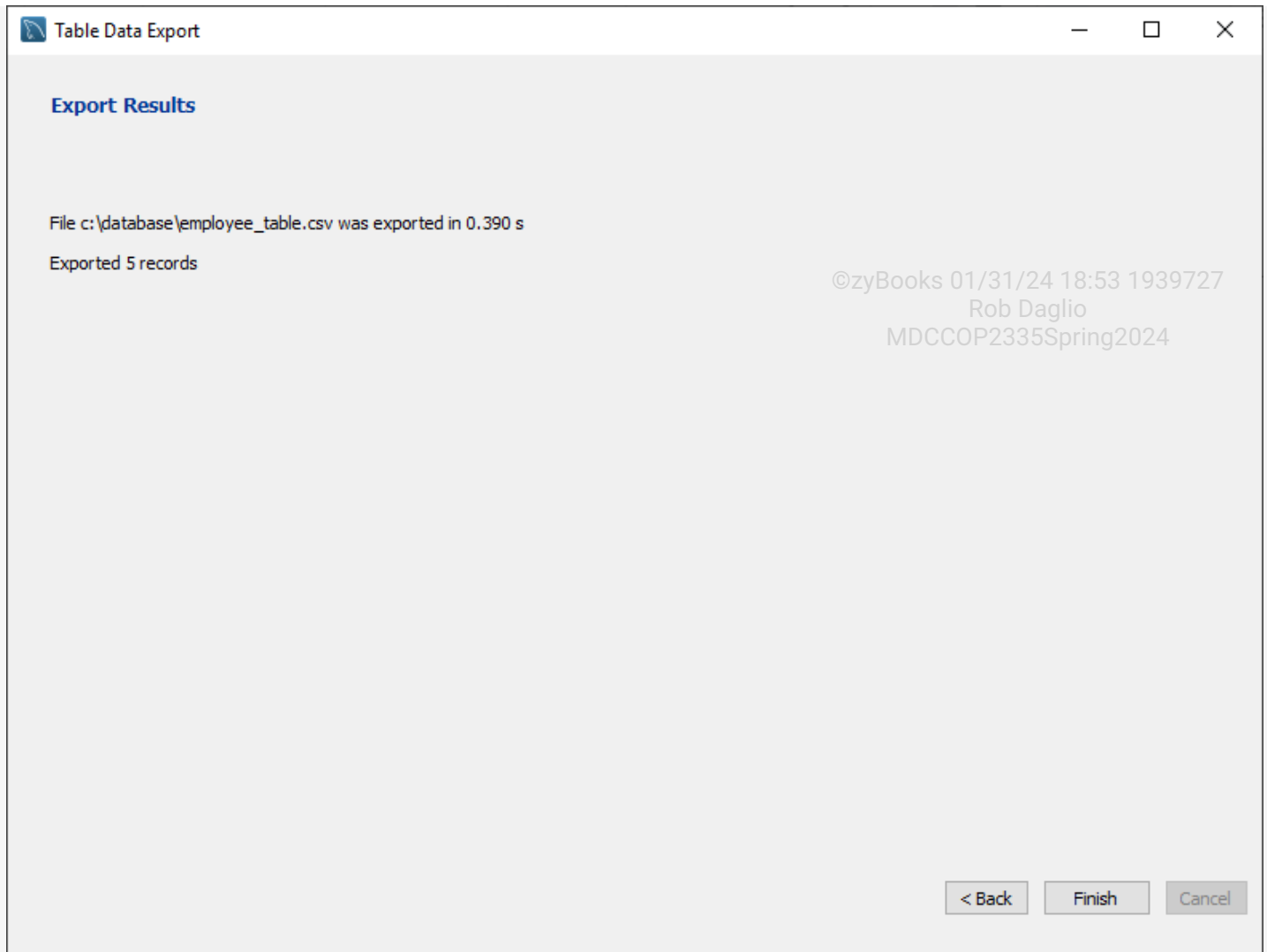
7. Click **Next** again to confirm the export has finished.

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8. View the export summary and click **Finish**.

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Verify the export worked by locating the export file and viewing the exported data in the file.

Exploring further:

- [MySQL Data Import and Export](#) from MySQL.com

45.2 MySQL Workbench: Stored procedures and functions

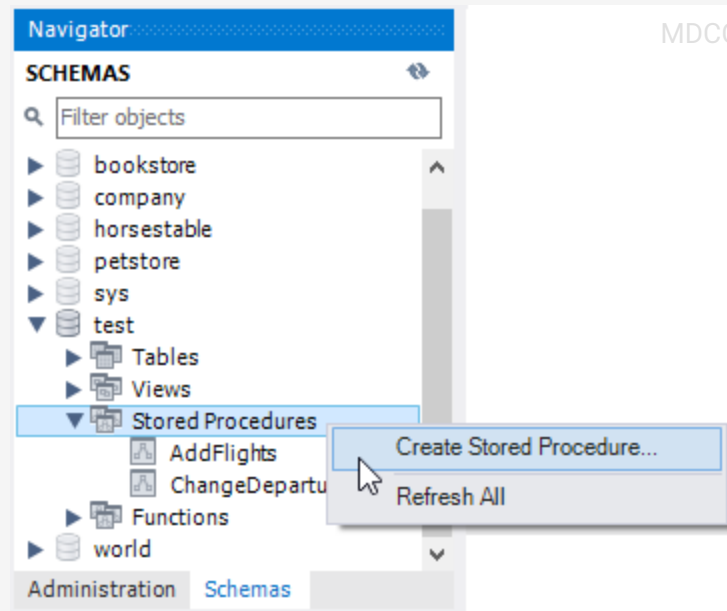
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Creating a stored procedure

MySQL Workbench provides a code editor for creating stored procedures.

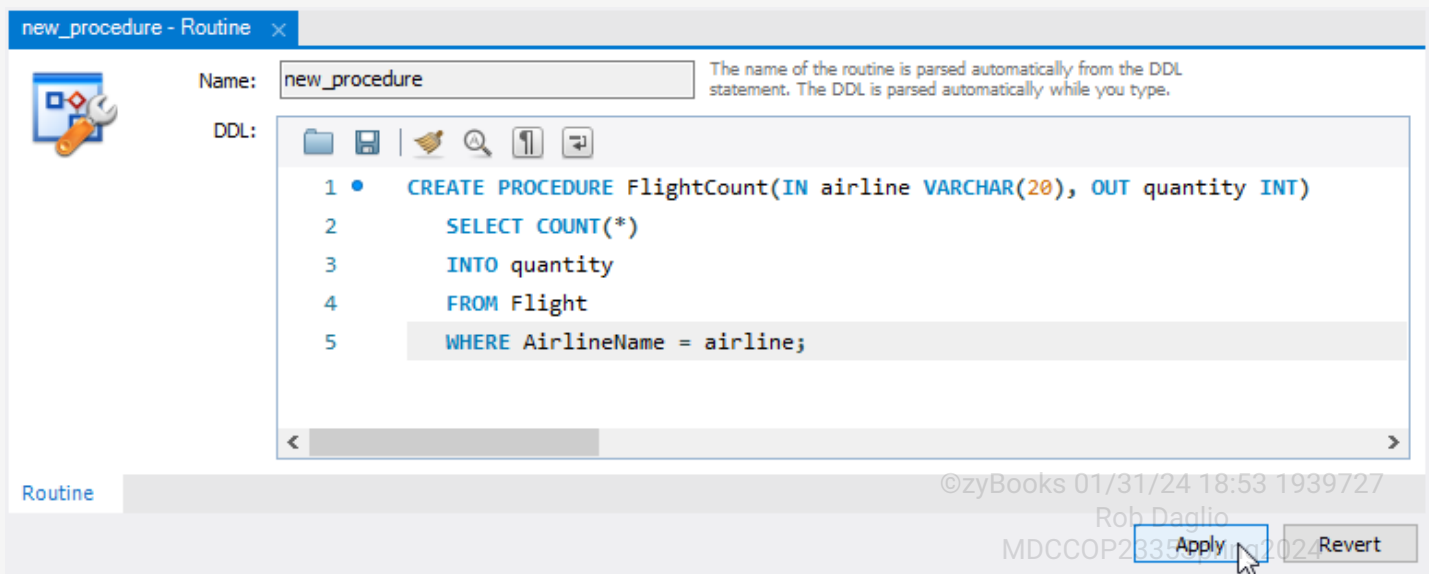
The following steps create a stored procedure . The screenshots below are from Windows. Screens and buttons vary slightly on a Mac.

1. Start MySQL Workbench and connect to MySQL server.
2. Click the **Schemas** tab in the Navigator sidebar.
3. Expand the desired database that will hold the stored procedure.
4. Right-click the database's **Stored Procedures** node.
5. Choose **Create Stored Procedure...** from the menu.



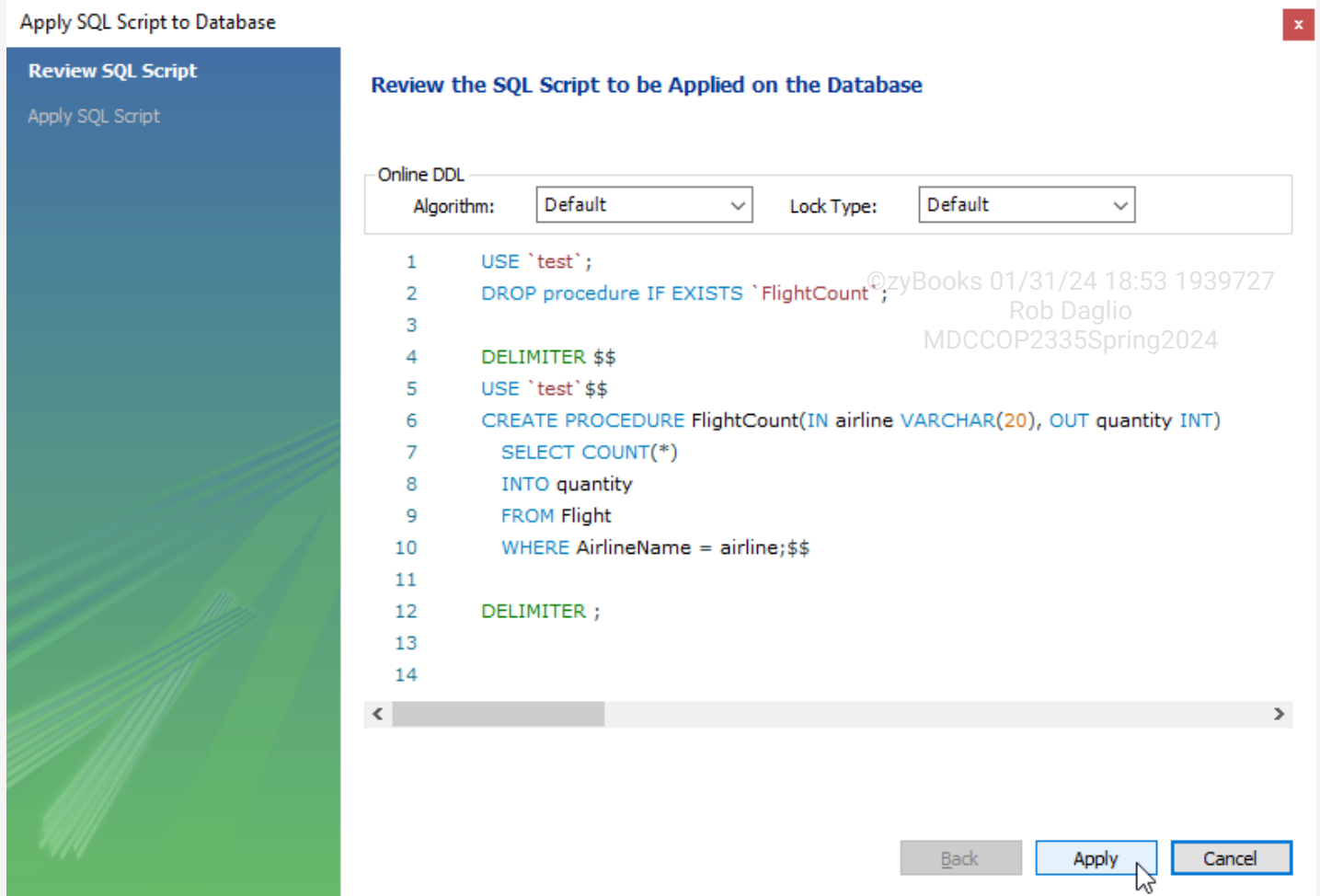
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6. Enter the CREATE PROCEDURE code into the code window and click **Apply**.



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7. The CREATE PROCEDURE code appears with some alteration in a dialog box. Click **Apply** to start the creation process.



8. If the procedure is successfully created, click **Finish** in the dialog box.
9. If an error occurs, review the message log in the dialog box, click **Cancel**, and attempt to correct the problem.

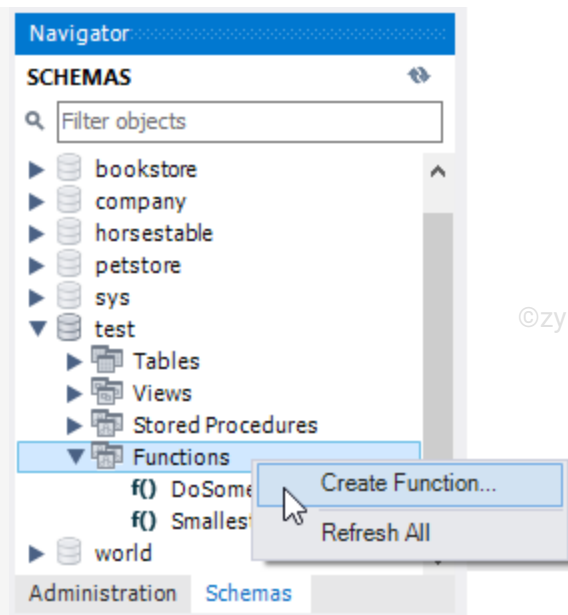
Creating a function

MySQL Workbench also provides a code editor for creating a function. The steps are similar to the steps for creating a stored procedure.

The screenshots below are from Windows. Screens and buttons vary slightly on a Mac.

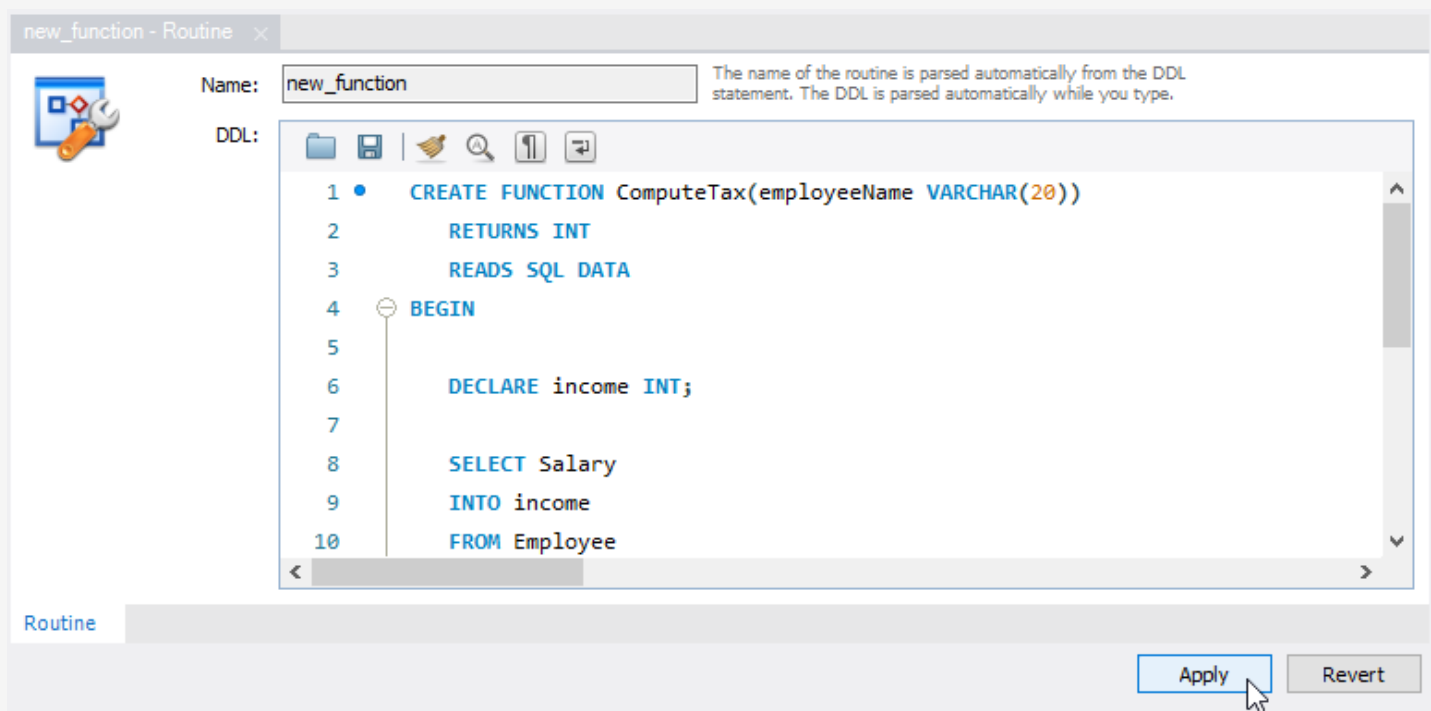
1. Start MySQL Workbench and connect to MySQL server.
2. Click the **Schemas** tab in the Navigator sidebar.
3. Expand the desired database that will hold the function.
4. Right-click the database's **Functions** node.
5. Choose **Create Function...** from the menu.

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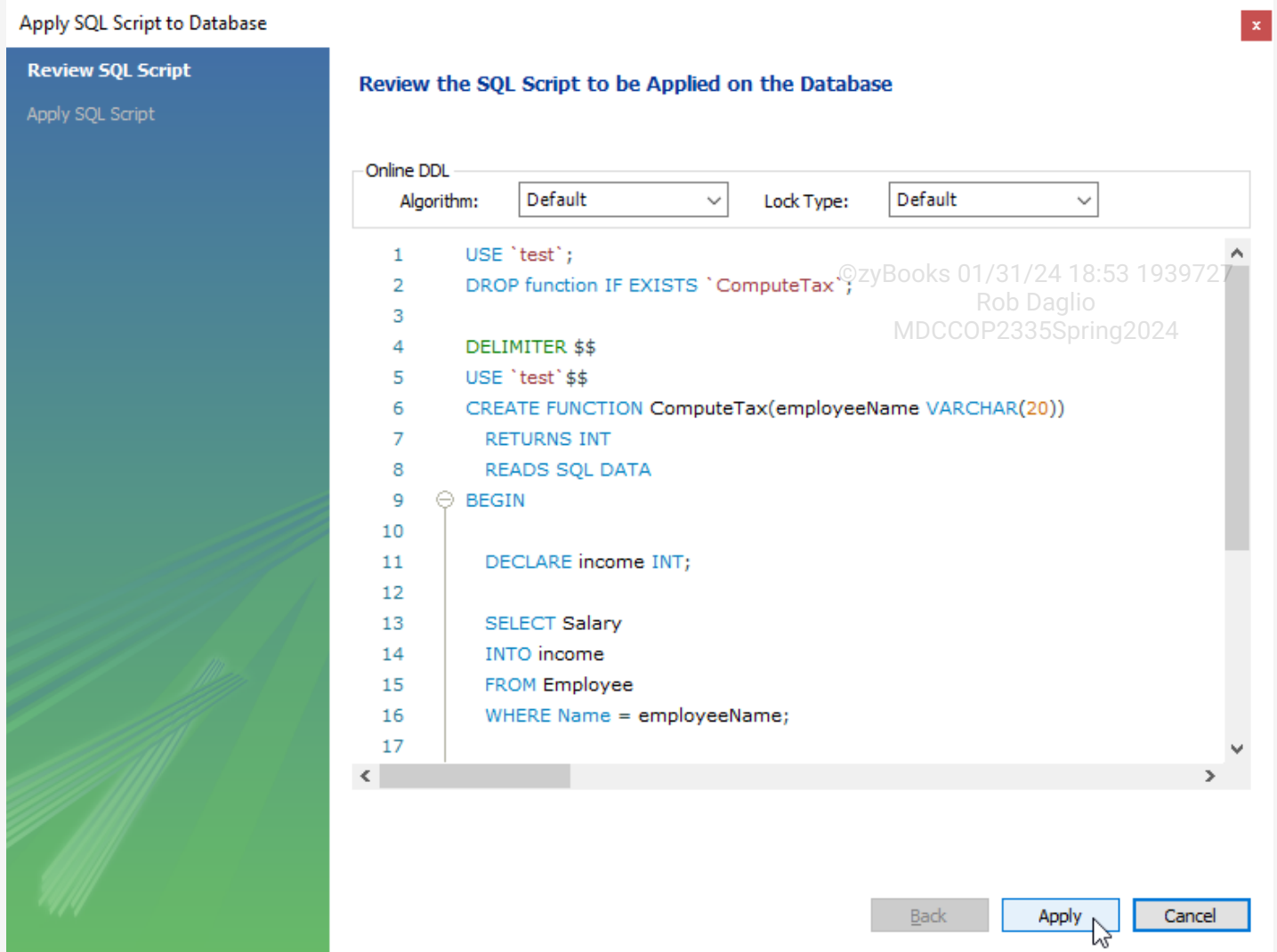
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6. Enter the CREATE FUNCTION code into the code window and click **Apply**.



7. The CREATE FUNCTION code appears with some alteration in a dialog box. Click **Apply** to start the creation process.

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8. If the procedure is successfully created, click **Finish** in the dialog box.
9. If an error occurs, review the message log in the dialog box, click **Cancel**, and attempt to correct the problem.