

Lab: CREATE, ALTER, TRUNCATE, DROP into Tables in MySQL using phpMyAdmin



Estimated time needed: 20 minutes

In this lab, you will learn how to create tables and load data in the MySQL database service using the phpMyAdmin graphical user interface (GUI) tool.

Software Used in this Lab

In this lab, you will use [MySQL](#). MySQL is a Relational Database Management System (RDBMS) designed to efficiently store, manipulate, and retrieve data.



To complete this lab you will utilize MySQL relational database service available as part of IBM Skills Network Labs (SN Labs) Cloud IDE. SN Labs is a virtual lab environment used in this course.

Database Used in this Lab

mysql_learners database has been used in this lab.

Objectives

After completing this lab, you will be able to use phpMyAdmin with MySQL to:

- Create a database.
- Create a new table in a database.
- Add, delete, or modify columns in an existing table.
- Remove all rows from an existing table without deleting the table itself.
- Delete an existing table in a database

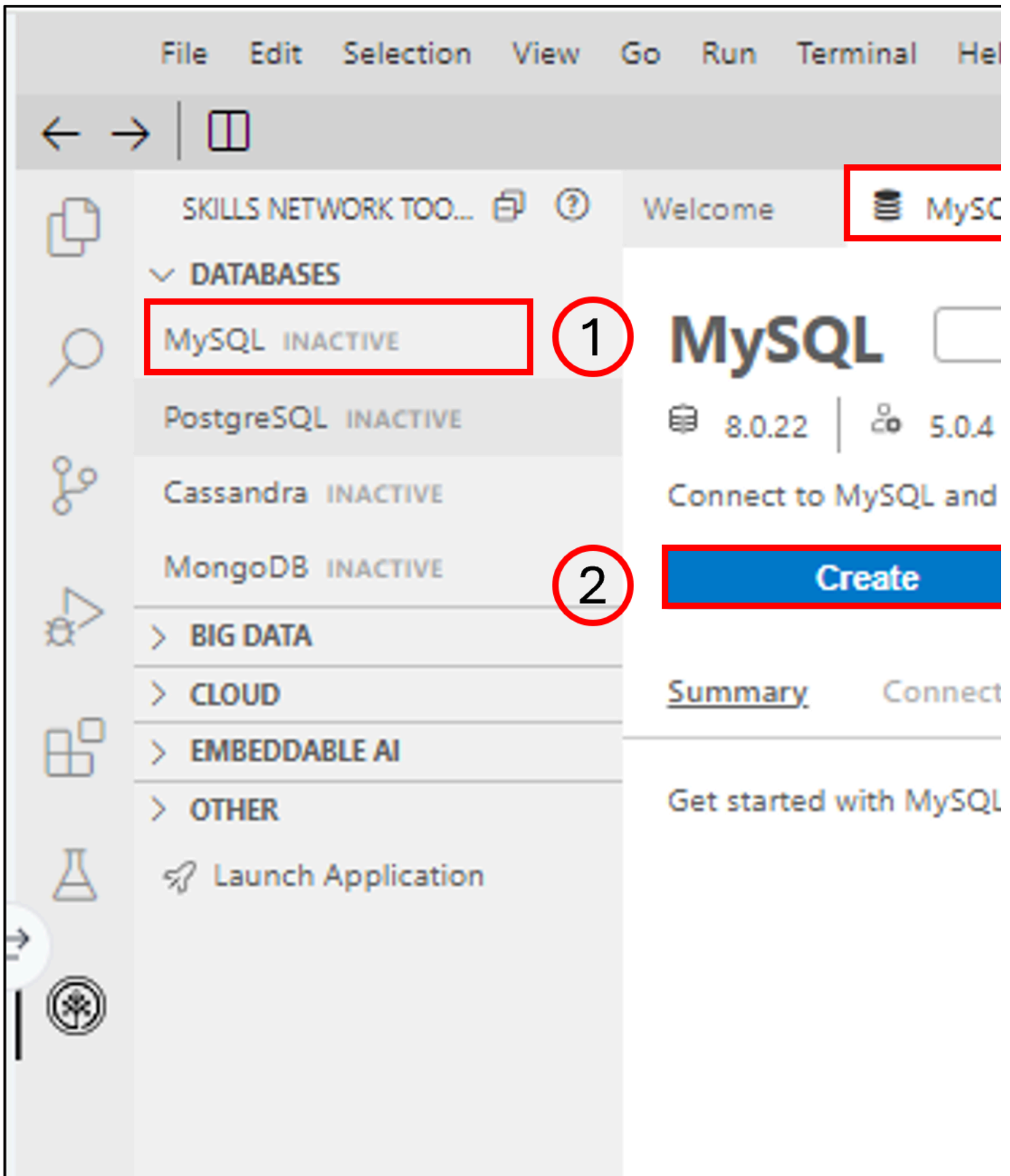
Exercise

In this exercise through different tasks, you will learn how to create tables and load data in the MySQL database service using the phpMyAdmin graphical user interface (GUI) tool.

Task A: Create a database

1. Click on **Skills Network Toolbox**. In **Database** section, click **MySQL**.

To start the MySQL click **Create**.



2. Once MySQL has started, click on **phpMyAdmin** button to open **phpMyAdmin** in new window.

The screenshot shows the Skills Network Tools interface. The top menu bar includes File, Edit, Selection, View, Go, Run, Terminal, and Help. Below the menu is a navigation bar with a back arrow, a forward arrow, and a book icon. The left sidebar contains a list of categories: DATABASES, BIG DATA, CLOUD, EMBEDDABLE AI, and OTHER. Under DATABASES, MySQL is listed as ACTIVE and is highlighted with a red box. Other databases listed are PostgreSQL (INACTIVE), Cassandra (INACTIVE), and MongoDB (INACTIVE). Under OTHER, there is a 'Launch Application' button with a rocket icon. The main content area on the right shows the 'Welcome' message for MySQL. It displays the MySQL logo, version 8.0.22, and connector version 5.0.4. There is a 'Create' button and a 'Summary' tab. Below the summary, there is a text block: 'Your database and phpMyAdmin details on how to navigate the tool.' This is followed by a 'You can manage MySQL' section with a 'phpMyAdmin' button and a red box containing a square icon with an arrow pointing out. Below this is a text block: 'Or to interact with the database using the command line interface.' and a 'MySQL CLI' button.

File Edit Selection View Go Run Terminal Help

SKILLS NETWORK TOO... Welcome MySQL

▼ DATABASES

MySQL ACTIVE

PostgreSQL INACTIVE

Cassandra INACTIVE

MongoDB INACTIVE

> BIG DATA

> CLOUD

> EMBEDDABLE AI

> OTHER

Launch Application

MySQL

8.0.22 | 5.0.4

Connect to MySQL and

Create

Summary Connecti

Your database and phpM
details on how to naviga

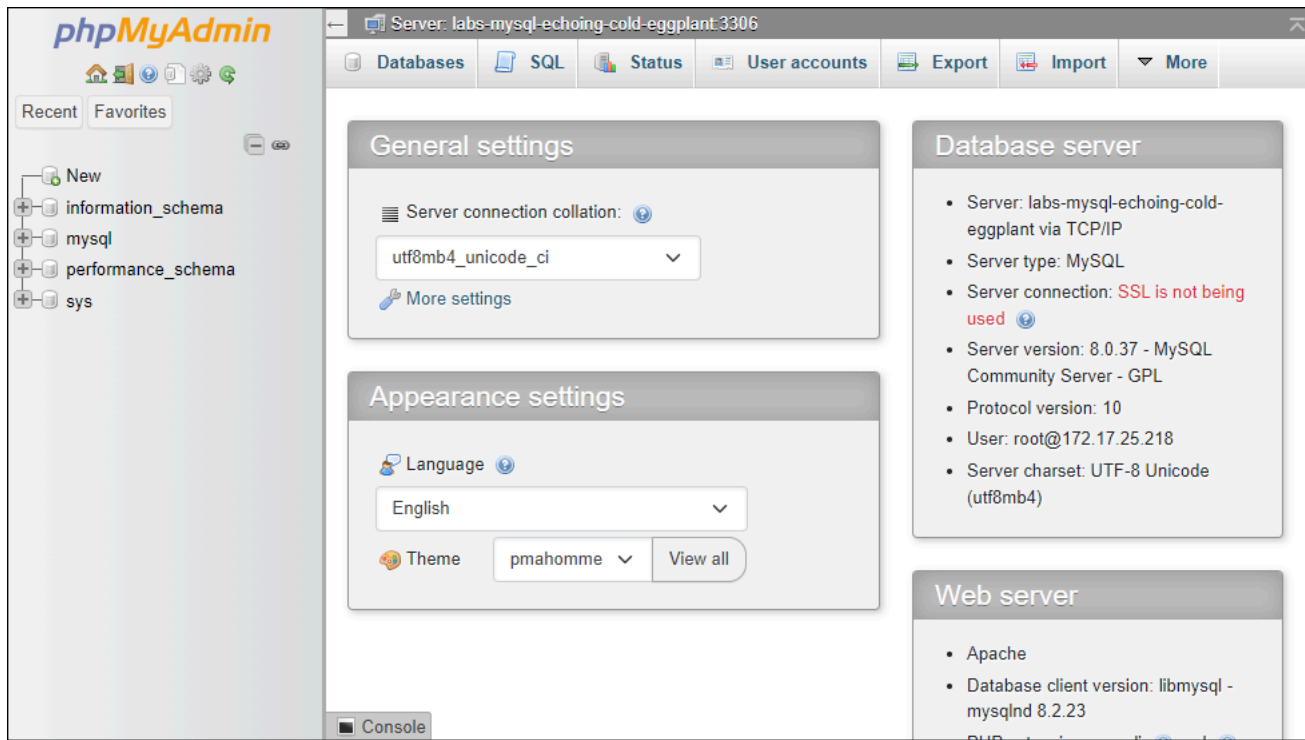
You can manage MySQL

phpMyAdmin

Or to interact with the d

MySQL CLI

3. You will see the phpMyAdmin GUI tool.



4. In the tree-view, click **New** to create a new empty database. Then enter **Mysql_Learners** as the name of the database and select **utf8mb4_0900_ai_ci** and click **Create**.

UTF-8 is the most commonly used character encoding for content or data.
Proceed to Task B.

The screenshot displays the phpMyAdmin web interface. The main header features the 'phpMyAdmin' logo and a row of icons for home, back, help, document, settings, and refresh. Below these are 'Recent' and 'Favorites' buttons. A sidebar on the left lists databases: 'New' (highlighted with a red box and a circled '1'), 'information_schema', 'mysql', 'performance_schema', and 'sys'. On the right, a 'Databases' section shows a 'Create' button (highlighted with a red box and a circled '2') and a list of databases with checkboxes: 'information_schema', 'mysql', 'performance_schema', and 'sys'.

phpMyAdmin

Recent Favorites

New 1

information_schema

mysql

performance_schema

sys

Databases

Create 2

MySQL_L

Check

Data

inform

mysql

perfo

sys



In this lab, you will learn some commonly used DDL (Data Definition Language) statements of SQL. First you will learn the CREATE statement, which is used to create a new table in a database. Next, you will learn the ALTER statement which is used to add, delete, or modify columns in an existing table. Then, you will learn the TRUNCATE statement which is used to remove all rows from an existing table without deleting the table itself. Lastly, you will learn the DROP statement which is used to delete an existing table in a database.

How does the syntax of a CREATE statement look?

```
CREATE TABLE table_name (
    column1 datatype,
    column2 datatype,
    column3 datatype,
    ....
);
```

How does the syntax of an ALTER statement look?

```
ALTER TABLE table_name
ADD COLUMN column_name data_type column_constraint;
ALTER TABLE table_name
DROP COLUMN column_name;
ALTER TABLE table_name
ALTER COLUMN column_name SET DATA TYPE data_type;
ALTER TABLE table_name
CHANGE current_column_name new_column_name;
```

How does the syntax of a TRUNCATE statement look?

```
TRUNCATE TABLE table_name;
```

How does the syntax of a DROP statement look?

```
DROP TABLE table_name;
```

In this exercise, you will use the CREATE statement to create two new tables using Db2.

1. You need to create two tables, **PETSALE** and **PET**. To create the two tables PETSAL and PET, copy the code below and paste it to the textarea of the **SQL** page. Click **Go**.

```
CREATE TABLE PETSAL (
```

```

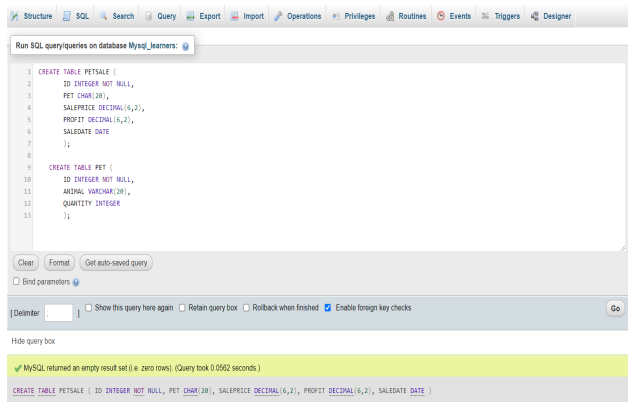
ID INTEGER NOT NULL,
PET CHAR(20),
SALEPRICE DECIMAL(6,2),
PROFIT DECIMAL(6,2),
SALEDATE DATE
);

```

```

CREATE TABLE PET (
ID INTEGER NOT NULL,
ANIMAL VARCHAR(20),
QUANTITY INTEGER
);

```



2. Now insert some records into the two newly created tables and show all the records of the two tables. Copy the code below and paste it to the textarea of the **SQL** page. Click **Go**.

```

INSERT INTO PETSale VALUES
(1, 'Cat', 450.09, 100.47, '2018-05-29'),
(2, 'Dog', 666.66, 150.76, '2018-06-01'),
(3, 'Parrot', 50.00, 8.9, '2018-06-04'),
(4, 'Hamster', 60.60, 12, '2018-06-11'),
(5, 'Goldfish', 48.48, 3.5, '2018-06-14');

```

```

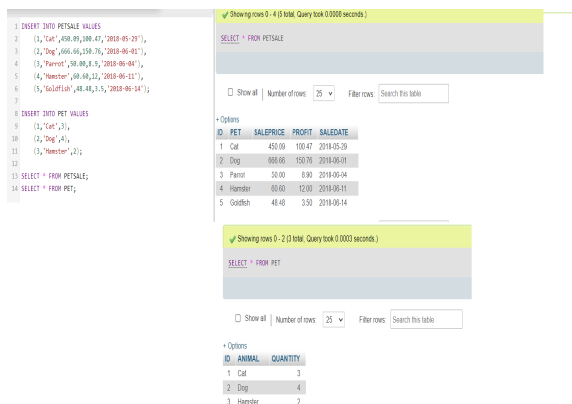
INSERT INTO PET VALUES
(1, 'Cat', 3),
(2, 'Dog', 4),
(3, 'Hamster', 2);

```

```

SELECT * FROM PETSale;
SELECT * FROM PET;

```



In this exercise, you will use the ALTER statement to add, delete, or modify columns in two of the existing tables created in exercise 1.

Task A: ALTER using ADD COLUMN

1. Add a new **QUANTITY** column to the **PETSALE** table and show the altered table. Copy the code below and paste it to the textarea of the **SQL** page. Click **Go**.

```
ALTER TABLE PETSALE
ADD COLUMN QUANTITY INTEGER;
SELECT * FROM PETSALE;
```

MySQL returned an empty result set (i.e. zero rows). (Query took 0.0481 seconds)

ALTER TABLE PETSALE ADD COLUMN QUANTITY INTEGER;

Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.

Showing rows 0 - 4 (5 total, Query took 0.0005 seconds)

SELECT * FROM PETSALE

Show all
Number of rows: 25
Filter rows:
Search this table

Options

	PET	SALEPRICE	PROFIT	SALEDATE	QUANTITY
1	Cat	450.09	100.47	2018-05-29	NULL
2	Dog	666.66	150.76	2018-06-01	NULL
3	Parrot	50.00	8.90	2018-06-04	NULL
4	Hamster	60.60	12.00	2018-06-11	NULL
5	Goldfish	48.48	3.50	2018-06-14	NULL

2. Now update the newly added **QUANTITY** column of the **PETSALE** table with some values and show all the records of the table. Copy the code below and paste it to textarea of the **SQL** page. Click **Go**.

```
UPDATE PETSALE SET QUANTITY = 9 WHERE ID = 1;
UPDATE PETSALE SET QUANTITY = 3 WHERE ID = 2;
UPDATE PETSALE SET QUANTITY = 2 WHERE ID = 3;
UPDATE PETSALE SET QUANTITY = 6 WHERE ID = 4;
UPDATE PETSALE SET QUANTITY = 24 WHERE ID = 5;
SELECT * FROM PETSALE;
```

UPDATE PETSALE SET QUANTITY = 9 WHERE ID = 1;
UPDATE PETSALE SET QUANTITY = 3 WHERE ID = 2;
UPDATE PETSALE SET QUANTITY = 2 WHERE ID = 3;
UPDATE PETSALE SET QUANTITY = 6 WHERE ID = 4;
UPDATE PETSALE SET QUANTITY = 24 WHERE ID = 5;
SELECT * FROM PETSALE;

ID
1
2
3
4
5

Task B: ALTER using DROP COLUMN

1. Delete the **PROFIT** column from the **PETSALE** table and show the altered table. Copy the code below and paste it to the textarea of the **SQL** page. Click **Go**.

```
ALTER TABLE PETSALE
DROP COLUMN PROFIT;
SELECT * FROM PETSALE;
```

about:blank

8/11

Run SQL query/queries on table **Mysql_learners.PETSALE**:

```

1 ALTER TABLE PETSALE
2   DROP COLUMN PROFIT;
3
4   SELECT * FROM PETSALE;

```

+ Options

ID	PET	SALEPRICE	SALEDATE	QUA
1	Cat	450.09	2018-05-29	
2	Dog	666.66	2018-06-01	
3	Parrot	50.00	2018-06-04	
4	Hamster	60.60	2018-06-11	
5	Goldfish	48.48	2018-06-14	

☐ Show all | Number of rows: 25

Task C: ALTER using ALTER COLUMN

1. Change the data type to **VARCHAR(20)** type of the column **PET** of the table **PETSALE** and show the altered table. Copy the code below and paste it to the textarea of the **SQL** page. Click **Go**.

```

ALTER TABLE PETSALE CHANGE PET PET VARCHAR(20);
SELECT * FROM PETSALE;

```

Run SQL query/queries on table **Mysql_learners.PETSALE**:

```

1
2 ALTER TABLE PETSALE CHANGE `PET` `PET` VARCHAR(20);
3
4 SELECT * FROM PETSALE;

```

Table structure

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
<input type="checkbox"/> 1	ID	int			No	None			Change Drop More
<input type="checkbox"/> 2	PET	varchar(20)	utf8mb4_0900_ai_ci		Yes	NULL			Change Drop More
<input type="checkbox"/> 3	SALEPRICE	decimal(6,2)			Yes	NULL			Change Drop More
<input type="checkbox"/> 4	SALEDATE	date			Yes	NULL			Change Drop More
<input type="checkbox"/> 5	QUANTITY	int			Yes	NULL			Change Drop More

Task D: ALTER using RENAME COLUMN

1. Rename the column **PET** to **ANIMAL** of the **PETSALE** table and show the altered table. Copy the code below and paste it to the textarea of the **SQL** page. Click **Go**.

```
ALTER TABLE `PETSALE` CHANGE `PET` `ANIMAL` varchar(20);
SELECT * FROM PETSALE;
```

Browse
Structure
SQL
Search
Insert
Export
Import
Privileges
Operations

Run SQL query/queries on table Mysql_learners.PETSALE:

1 ALTER TABLE `PETSALE` CHANGE `PET` `ANIMAL` varchar(20);

Showing rows 0 - 4 (5 total, Query took 0.0006 seconds.)

```
select * from `PETSALE`
```

☐ Show all | Number of rows: 25 Filter rows: Search this table

Options

ID	ANIMAL	SALEPRICE	SALEDATE	QUANTITY
1	Cat	450.09	2018-05-29	9
2	Dog	666.66	2018-06-01	3
3	Parrot	50.00	2018-06-04	2
4	Hamster	60.60	2018-06-11	6
5	Goldfish	48.48	2018-06-14	24

☐ Show all | Number of rows: 25 Filter rows: Search this table

In this exercise, you will use the TRUNCATE statement to remove all rows from an existing table created in exercise 1 without deleting the table itself.

1. Remove all rows from the **PET** table and show the empty table. Copy the code below and paste it to the textarea of the **SQL** page. Click **Go**.

```
TRUNCATE TABLE PET ;
SELECT * FROM PET;
```



The screenshot shows a database management tool interface with a menu bar at the top containing: Browse, Structure, SQL, Search, Insert, Export, Import, Privileges, and Operations. Below the menu bar is a header bar that says "Run SQL query/queries on table Mysql_learners.PETSALE:". The main area is a text editor with two lines of SQL code:

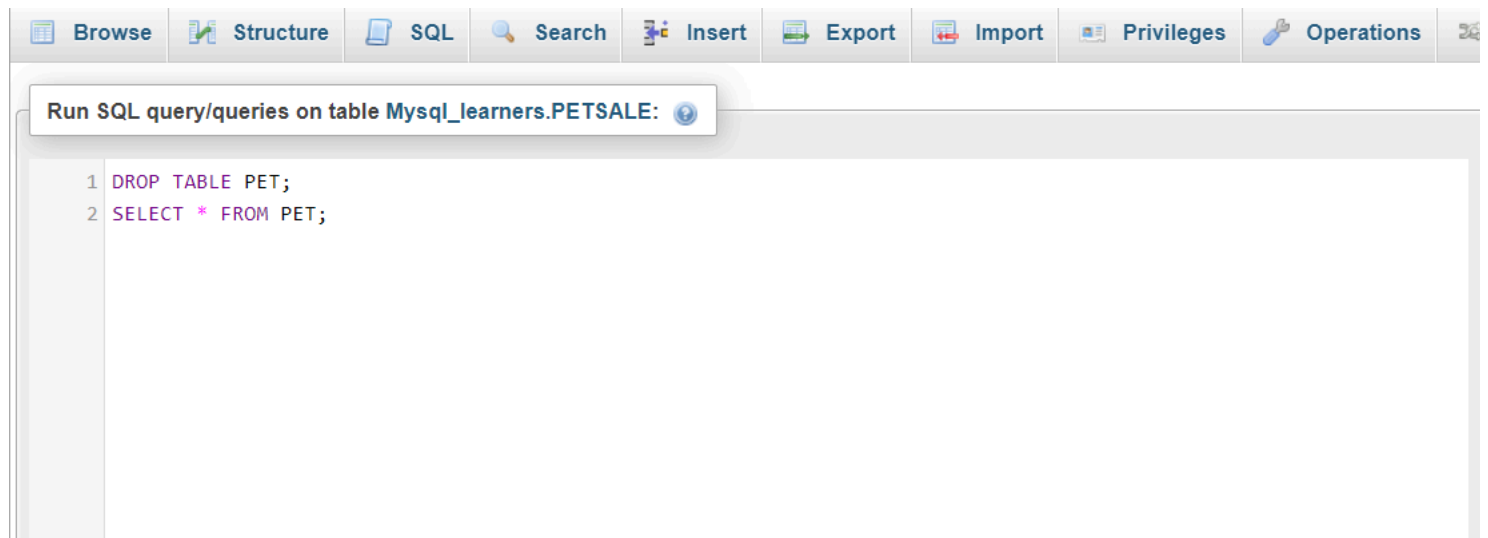
```
1 TRUNCATE TABLE PET ;  
2 SELECT * FROM PET;
```

On the right side, there is a vertical sidebar with a green checkmark icon at the top, followed by a "SE" button, an "ID" button, and a "Q" button.

In this exercise, you will use the DROP statement to delete an existing table created in exercise 1.

1. Delete the **PET** table and verify if the table still exists or not (SELECT statement won't work if a table doesn't exist). Copy the code below and paste it to the textarea of the **SQL** page. Click **Go**.

```
DROP TABLE PET;  
SELECT * FROM PET;
```



The screenshot shows the same database management tool interface as above, but with a different SQL query in the editor. The header bar still says "Run SQL query/queries on table Mysql_learners.PETSALE:". The text editor now contains two lines of SQL code:

```
1 DROP TABLE PET;  
2 SELECT * FROM PET;
```

The sidebar on the right is the same as in the previous screenshot.

Congratulations! You have completed this lab, and you are ready for the next topic.

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