

Reading: Examples to ALTER and TRUNCATE tables using MySQL

Estimated time to complete: 5 minutes

In the previous video, the ALTER and TRUNCATE syntax applies to DB2. There are variations in syntax between different databases. This reading will explore some examples of ALTER and TRUNCATE statements using MySQL.

Objective(s)

At the end of this reading, you will be able to:

- Use the ALTER TABLE statement in the correct syntax.
- Use TRUNCATE statements in syntax.
- Execute examples of ALTER and TRUNCATE statements.

ALTER TABLE

ALTER TABLE statements can be used to add or remove columns from a table, to modify the data type of columns, to add or remove keys, and to add or remove constraints. The syntax of the ALTER TABLE statement is:

ADD COLUMN syntax

1. 1
 2. 2
- ```
1. ALTER TABLE table_name
2. ADD column_name data_type;
```

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A variation of the syntax for adding column is:

1. 1
  2. 2
- ```
1. ALTER TABLE table_name
2. ADD COLUMN column_name data_type;
```

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By default, all the entries are initially assigned the value NULL. You can then use UPDATE statements to add the necessary column values.

For example, to add a **telephone_number** column to the **author** table in the **library** database, the statement will be written as:

1. 1
 2. 2
- ```
1. ALTER TABLE author
2. ADD telephone_number BIGINT;
```

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Here, BIGINT is a data type for Big Integer.

After adding the entries to the new column, a sample output is shown below.

| author_id | lastname | firstname | email      | city     | country | telephone_number |
|-----------|----------|-----------|------------|----------|---------|------------------|
| 1001      | Thomas   | John      | johnt@...  | New York | USA     | 5551111          |
| 1002      | James    | Alice     | alicej@... | Seattle  | USA     | 5551112          |
| 1003      | Wells    | Steve     | steve@...  | Montreal | Canada  | 5552222          |
| 1004      | Kumar    | Santosh   | kumars@... | London   | UK      | 5553333          |

### Modify column data type

- 1
- 2

```
1. ALTER TABLE table_name
2. MODIFY column_name data_type;
```

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Sometimes, the data presented may be in a different format than required. In such a case, we need to modify the data\_type of the column. For example, using a **numeric** data type for **telephone\_number** means you cannot include **parentheses, plus signs, or dashes as part of the number**. For such entries, the appropriate choice of data\_type is CHAR.

To modify the data type, the statement will be written as:

- 1
- 2

```
1. ALTER TABLE author
2. MODIFY telephone_number CHAR(20);
```

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The entries can then be updated using UPDATE statements. An updated version of the "author" table is shown below.

| author_id | lastname | firstname | email      | city     | country | telephone_number |
|-----------|----------|-----------|------------|----------|---------|------------------|
| 1001      | Thomas   | John      | johnt@...  | New York | USA     | 555-1111         |
| 1002      | James    | Alice     | alicej@... | Seattle  | USA     | 555-1112         |
| 1003      | Wells    | Steve     | steve@...  | Montreal | Canada  | 555-2222         |
| 1004      | Kumar    | Santosh   | kumars@... | London   | UK      | 555-3333         |

### TRUNCATE Table

TRUNCATE TABLE statements are used to delete all of the rows in a table. The syntax of the statement is:

- 1

```
1. TRUNCATE TABLE table_name;
```

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So, to truncate the "author" table, the statement will be written as:

```
1. 1
1. TRUNCATE TABLE author;
```

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The output would be as shown in the image below.

| author_id | lastname | firstname | email | city | country |
|-----------|----------|-----------|-------|------|---------|
|           |          |           |       |      |         |
|           |          |           |       |      |         |
|           |          |           |       |      |         |
|           |          |           |       |      |         |

Note: The TRUNCATE statement will delete the rows and not the table.

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Change Log

| Date (YYYY-MM-DD) | Version | Changed By                 | Change Description      |
|-------------------|---------|----------------------------|-------------------------|
| 2023-10-07        | 1.6     | Misty Taylor               | ID Check                |
| 2023-09-09        | 1.6     | Abhishek Gagneja           | Updated instruction set |
| 2023-05-11        | 1.5     | Eric Hao & Vladislav Boyko | Updated Page Frames     |
| 2023-05-10        | 1.4     | Eric Hao & Vladislav Boyko | Updated Page Frames     |
| 2023-05-10        | 1.3     | Eric Hao & Vladislav Boyko | Updated Page Frames     |
| 2023-05-10        | 1.2     | Eric Hao & Vladislav Boyko | Updated Page Frames     |
| 2022-11-08        | 1.1     | D.M.Naidu                  | Initial version         |