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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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	stevevr@...	Montreal	Canada	5552222
1004	Kumar	Santosh	kumars@...	London	UK	5553333

Modify column data type

```
1. 1
2. 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. 1
2. 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	5551111
1002	James	Alice	alicej@...	Seattle	USA	5551112
1003	Wells	Steve	stevew@...	Montreal	Canada	5552222
1004	Kumar	Santosh	kumars@...	London	UK	5553333

TRUNCATE Table

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

```
1. 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
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