In MySQL, the ALTER TABLE statement is used to modify the structure of an existing table. Here's the general syntax and several common use cases:

**General Syntax:**

|  |
| --- |
| ALTER TABLE table\_name  MODIFICATION\_TYPE column\_definition; |

**Common Use Cases:**

1. **Add a column:**

|  |
| --- |
| ALTER TABLE table\_name  ADD column\_name datatype; |

2. **Add multiple columns:**

|  |
| --- |
| ALTER TABLE table\_name  ADD COLUMN column1 datatype,  ADD COLUMN column2 datatype; |

3. **Modify a column datatype or definition:**

|  |
| --- |
| ALTER TABLE table\_name  MODIFY column\_name new\_datatype; |

4. **Change a column name and datatype (RENAME COLUMN):**

|  |
| --- |
| ALTER TABLE table\_name  CHANGE old\_column\_name new\_column\_name new\_datatype; |

5. **Rename a table:**

|  |
| --- |
| RENAME TABLE old\_table\_name TO new\_table\_name; |

6. **Drop (delete) a column:**

|  |
| --- |
| ALTER TABLE table\_name  DROP COLUMN column\_name; |

Here are the **DML (Data Manipulation Language)** operation syntaxes in MySQL for INSERT, UPDATE, and DELETE

**1.INSERT** – Add new records, here are **various syntaxes** of the INSERT statement in MySQL to add new records to a table:

**Basic INSERT INTO ... VALUES**

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| --- |
| INSERT INTO table\_name (column1, column2, ...)  VALUES (value1, value2, ...); |

**INSERT with ALL columns (column list optional if all columns provided)**

|  |
| --- |
| INSERT INTO table\_name  VALUES (value1, value2, ...); |

**Insert Multiple Rows**

|  |
| --- |
| INSERT INTO table\_name (column1, column2, ...)  VALUES  (value1a, value2a, ...),  (value1b, value2b, ...); |

**INSERT ... SET syntax** (alternative format)

|  |
| --- |
| INSERT INTO table\_name  SET column1 = value1, column2 = value2, ...; |

**2.UPDATE – Modify existing records**

**Syntax:**

|  |
| --- |
| UPDATE table\_name  SET column1 = value1, column2 = value2, ...  WHERE condition; |

Always use a WHERE clause to avoid updating all rows unintentionally.

**3.DELETE – Remove existing records**

**Syntax:**

|  |
| --- |
| DELETE FROM table\_name  WHERE condition; |

Without a WHERE clause, all records will be deleted.