LU07a - SQL-DML: Basics

Learning Objectives

1. Understand and Apply Data Insertion Concepts
2. Master the Use of UPDATE Statements with Filters
3. Safely Delete Records Using SQL DELETE Statements:
4. Demonstrate Practical Usage of SQL DML in Real-world Scenarios

Introduction to DML

To beginn with, the acronym DML stands for **Data Manipulation Language** and refers to how table contents are to be handled according to the rules of a relational database system such as MySQL.

Overview of MySQL DML

MySQL DML is used to manage the data in tables, as opposed to the structure of the tables themselves. The three main operations are:

1. INSERT: Used to add new records to a table.
2. UPDATE: Modifies existing data within a table.
3. DELETE: Removes data from a table.

Each of these commands can be executed **with or without filtering conditions**, affecting either specific rows or all rows within a table.

INSERT Statement

The INSERT command is used to add new records to a table. When using INSERT, it is essential to specify the table and columns where the data will be added.

Syntax

```
INSERT INTO table_name (column1, column2, column3)
VALUES (value1, value2, value3);
```

Example

```
INSERT INTO employees (employee_id, first_name, last_name, hire_date,
salary)
VALUES (1, 'John', 'Doe', '2023-09-18', 55000);
```

2. UPDATE Statement

The UPDATE command is used to modify existing data in a table. It can be executed with or without a WHERE clause, depending on whether you want to update specific rows or all rows.

2.1 UPDATE with Filter (WHERE Clause)

Using a WHERE clause allows you to target specific rows to update. This ensures that only rows meeting a certain condition are modified.

Syntax

```
UPDATE table_name
SET column1 = value1, column2 = value2
WHERE condition;
```

Example

```
UPDATE employees
SET salary = 60000
WHERE employee_id = 1;
```

Vocabulary

English	Deutsch
to refer to	beziehen auf
according	gemäss
opposed to	im Gegensatz zu
