Database systems

Data Manipulation Language (DML)

Lecture: 4

M.Sc. Mustafa Yousif

Data Manipulation Language (DML)

A data manipulation language (DML) is a family of syntax elements similar to a Computer programming language used for selecting, inserting, deleting and updating data in a database.

- DML also known as query language

- Two classes of languages

    A- Procedural

        user specifies what data is required and how to get those data

    B- Nonprocedural

        user specifies what data is Required without specifying how to get those data

Data Manipulation Language (DML)

DML is a sub-language of SQL. It is used to manipulate the data stored in a table.

- DML provides the following statements for data manipulation:

➢ SELECT

➢ INSERT

➢ UPDATE

➢ DELETE

Data Manipulation Language (DML)

SELECT Statement

The SELECT statement is used to select data from a database. The data returned is stored in a result table, called the result-set.

Syntax

```
SELECT column1, column2, ...
FROM table_name;
```

Data Manipulation Language (DML)

SELECT Statement

Here, column1, column2, ... are the field names of the table you want to select data from. If you want to select all the fields available in the table, use the following syntax:

```sql
SELECT * FROM table_name;
```

Data Manipulation Language (DML)

SELECT Statements

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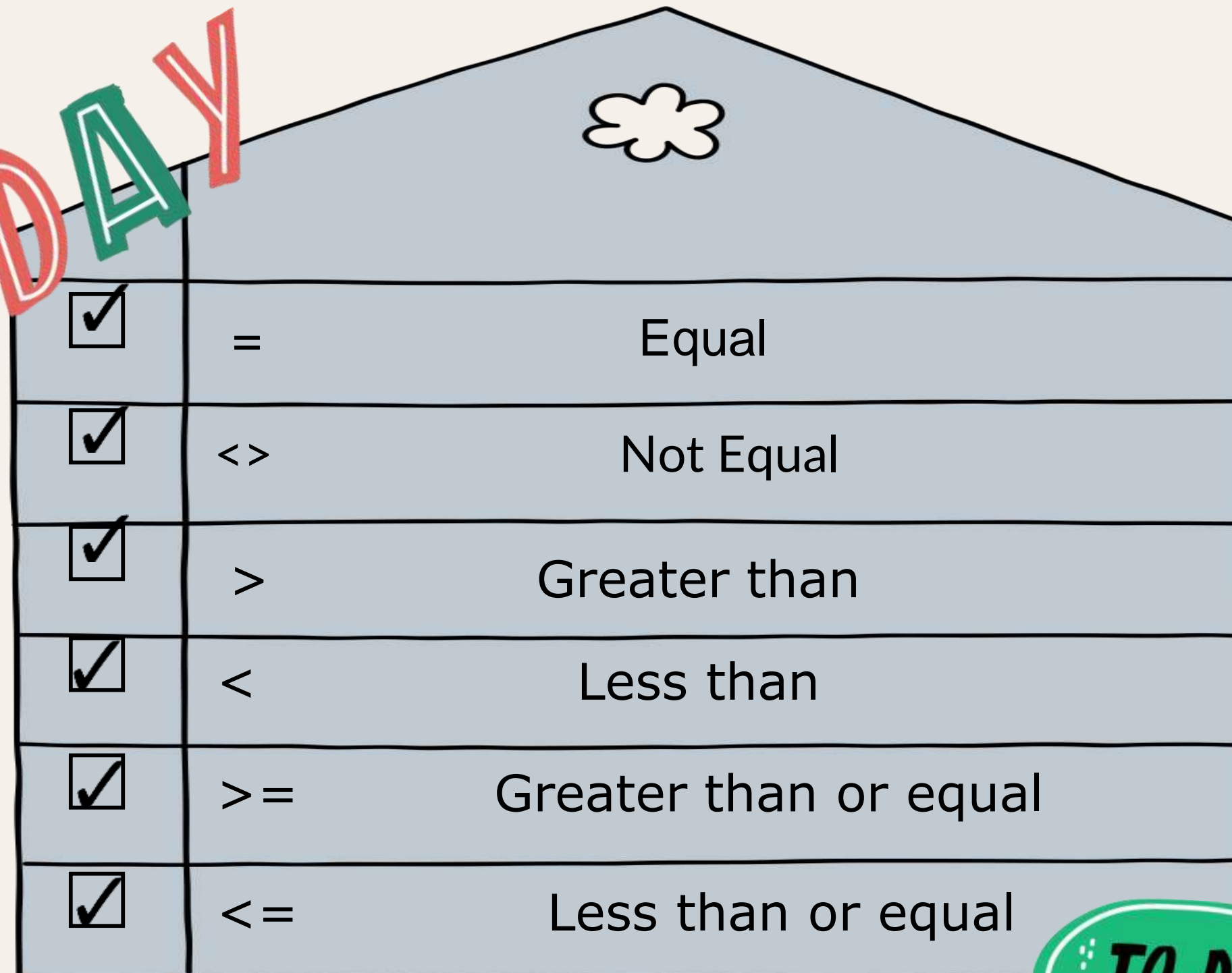The WHERE clause is used to filter records.

Syntax

```
SELECT column1, column2, ...
FROM table_name
WHERE condition;
```

For Example →

```
SELECT * FROM Customers
WHERE Country = 'Mexico';
```

Operators in The WHERE Clause

TODAY

☑	=	Equal
☑	<>	Not Equal
☑	>	Greater than
☑	<	Less than
☑	>=	Greater than or equal
☑	<=	Less than or equal

TO DO

INSERT Statement

INSERT statement is used to Insert a new record into a table.

Syntax

INSERT INTO *table_name* (*column1*, *column2*, ...)
VALUES (*value1*, *value2*, *value3*, ...);

DELETE Statement

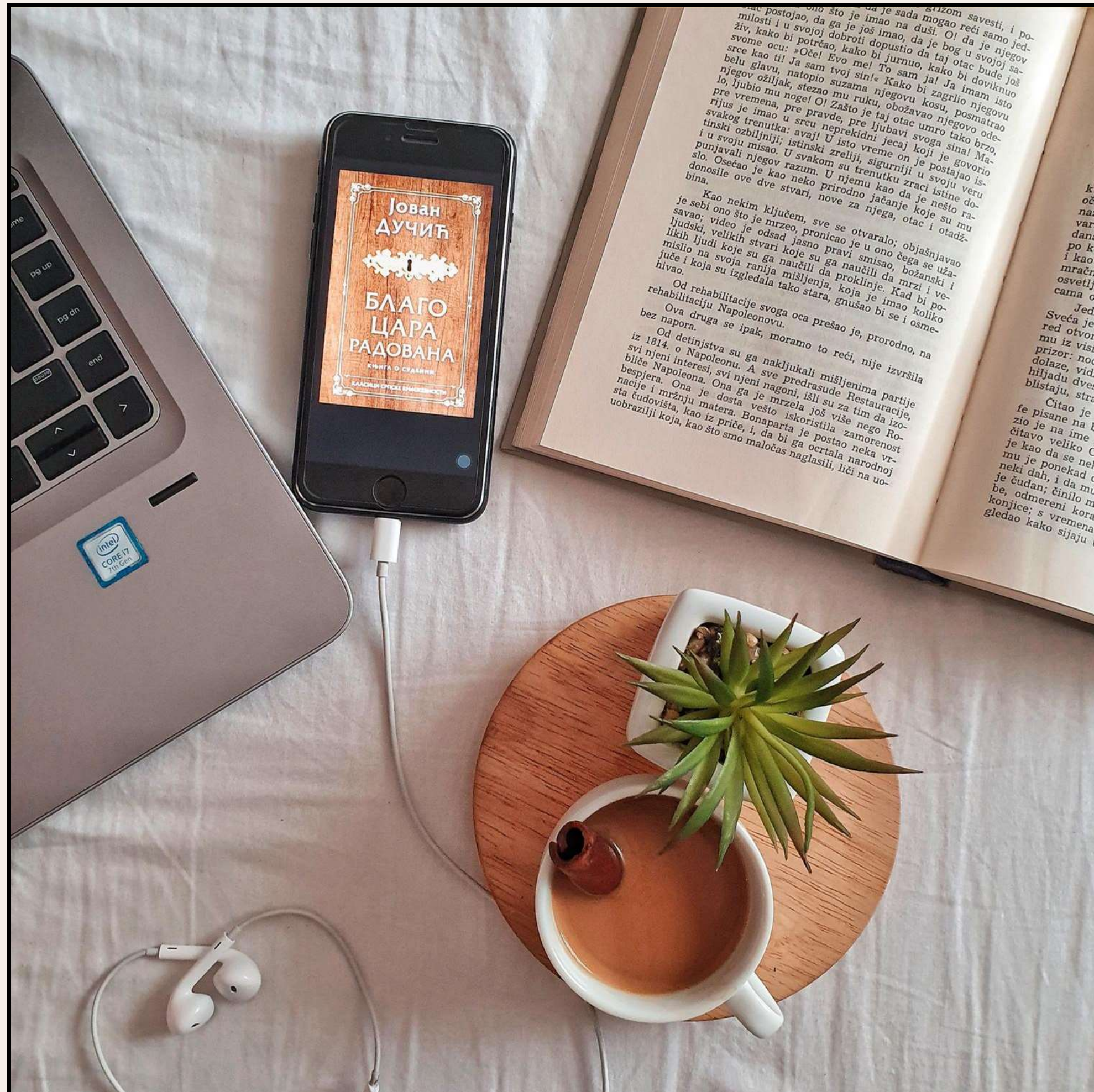The DELETE statement is used to delete existing records in a table.

Syntax

DELETE FROM *table_name* WHERE *condition*;

For Example:

DELETE FROM Customers WHERE CustomerName='Alfreds Futterkiste';

THANK YOU

Do You have any question!