

# LU08.A01 - Preparatory work

## Requirements

- Work type: Individual
- Timeframe: 10 Minutes
- Means of aid:
  - Only teaching materials, no websearch, no use of ai.
- Expected result:
  - Conduct the database schema (instance) as foundation for our employee's data.
  - Establishment of a MySQL **table employees** including all relevant attributes.

## Assignments

### A: DATA SCHEMA

First of all we need a database schema (database workspace). Execute the following two lines on your MySQL installation.

```
CREATE DATABASE hr_database;  
SHOW DATABASES;  
USE hr_database;
```

### B: CREATE TABLE

To exercise the DML commands, we need a suitable table including a reasonable amount of data. The following SQL statement will create a table **employee** regarding all necessary attributes of an „average employee“.

```
CREATE TABLE EMPLOYEES (  
    employee_ID INT PRIMARY KEY,          -- Employee ID as the primary key  
    name VARCHAR(50) NOT NULL,            -- Name of the employee (max length 50  
characters)  
    surname VARCHAR(50) NOT NULL,         -- Surname of the employee (max length  
50 characters)  
    birthdate DATE NOT NULL,              -- Birthdate of the employee  
    sex CHAR(1),                          -- Sex of the employee (M/F/0 for  
other)  
    pronomen VARCHAR(10),                 -- Pronoun of the employee  
    employment_date DATE NOT NULL,        -- Date when the employee was hired  
    salary DECIMAL(10, 2) NOT NULL,       -- Salary of the employee (up to 10  
digits, 2 decimal places)  
    department VARCHAR(50) NOT NULL      -- Department where the employee works  
);
```

## Explanation

1. **employee\_ID** is the primary key and ensures that each employee has a unique ID.
2. **name** and **surname** are 'VARCHAR' fields that store the name and surname of the employee.
3. **birthdate** and **employment\_date** use the 'DATE' data type to store the birth and employment dates.
4. **sex** is stored as a 'CHAR(1)' type to represent gender with one letter ('M' for male, 'F' for female, etc.).
5. **pronomen** stores the employee's pronouns.
6. **salary** is stored as a 'DECIMAL' value to account for financial precision.
7. **department** is a VARCHAR(50) field that stores the name of the department the employee is associated with. It has a NOT NULL constraint to ensure that every employee is assigned to a department.

## Solution

[Lösung](#)

## Vocabulary

| English          | German    |
|------------------|-----------|
| preparatory work | Vorarbeit |



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