Advanced Database Models
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Practical exercise 2 - Object Types and Tables, Inheritance, Methods

1. Inheritance

Change the type definitions from the previous exercise as follows:

- add Person_Type with attributes name and address,
- change Student_Type to inherit these attributes from Person_Type by using the `CREATE TYPE <typename> UNDER ... (...)` syntax, and
- add a further type Employee as sub-type of Person_Type with additional attributes salary and office number.

Create according object tables for persons, students, and employees. Insert at least 2 objects in each table.

2. Querying Object Tables

Formulate a query to find all the names of persons living in Magdeburg! This can be done in two ways:

- create the union of the three tables with according projections, or
- as Oracle does not support table hierarchies (substitution specialization), it offers the alternative concept of view hierarchies using the syntax `CREATE VIEW <viewname> OF <typename> AS ...` and `CREATE VIEW <viewname> OF <typename> UNDER <supertypeview> AS ...`.

3. Object Type Methods

Methods can be declared in Oracle by specifying a `MEMBER FUNCTION <methodname> ([parameters]) RETURN <returntype>` and implementing it separately within a type body created using the statement `CREATE TYPE BODY <typename> IS ...`. Add the member functions yearly_salary to Employee_Type returning 12*salary and use it in a query that returns the computed value for all Employees.