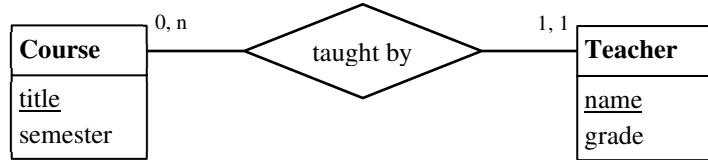


Bases de données avancées

TP: Objet

Consider the following entity-relationship (ER) diagram:



1. According to the above ER diagram, write the statement that implements the corresponding:
 - a. Relational schema. Explain in the comments your decisions, e.g., primary and foreign key(s), entity relationship(s), etc.
 - b. Object schema.
 - i. Keep the courses that each teacher is teaching.

Tip: Create a **new type for a course**, and a **new type of a table of courses** that will later serve as an attribute for the **teacher type**. The teacher table must finally be created as a **nested table** as shown below:

```

CREATE TABLE <table> OF <object> NESTED TABLE <attribute>
  STORE AS <nested_table>;
/
  
```

- ii. Add a method that returns the number of courses the teacher is teaching.

Tip: Create a member method to access the object instance's value as shown below:

```

CREATE OR REPLACE TYPE BODY <object> AS
  MEMBER FUNCTION <function> RETURN <data_type> IS [assign name datatype to
  return variable]
  BEGIN
    --Do something useful.
    ...
  END;
END;
/
  
```

2. Write both in the relational and object oriented case the following queries that return the:
 - a. Names of the teachers who teach in semester X.
 - b. Semesters during which teacher Y teaches.

Tip: To avoid duplicates, use the **SELECT DISTINCT** statement to return only different values.

Important

To test and demonstrate all of your solutions, populate all the created tables, i.e., add at least 5 courses and 3 teachers, and execute the corresponding statements. Write in the comments the expected results. *Include the INSERT statements in your deliverable file.*

Submission

Submit your sql script answering the previous questions, named as:

tp3_<groupe>_<name>_<surname>.sql

by the end of the TP.