Université Sorbonne Paris Nord
École d'ingénieur Sup Galilée

TP1 : Quelques fonctions SQL et requêtes

Rapport de TP

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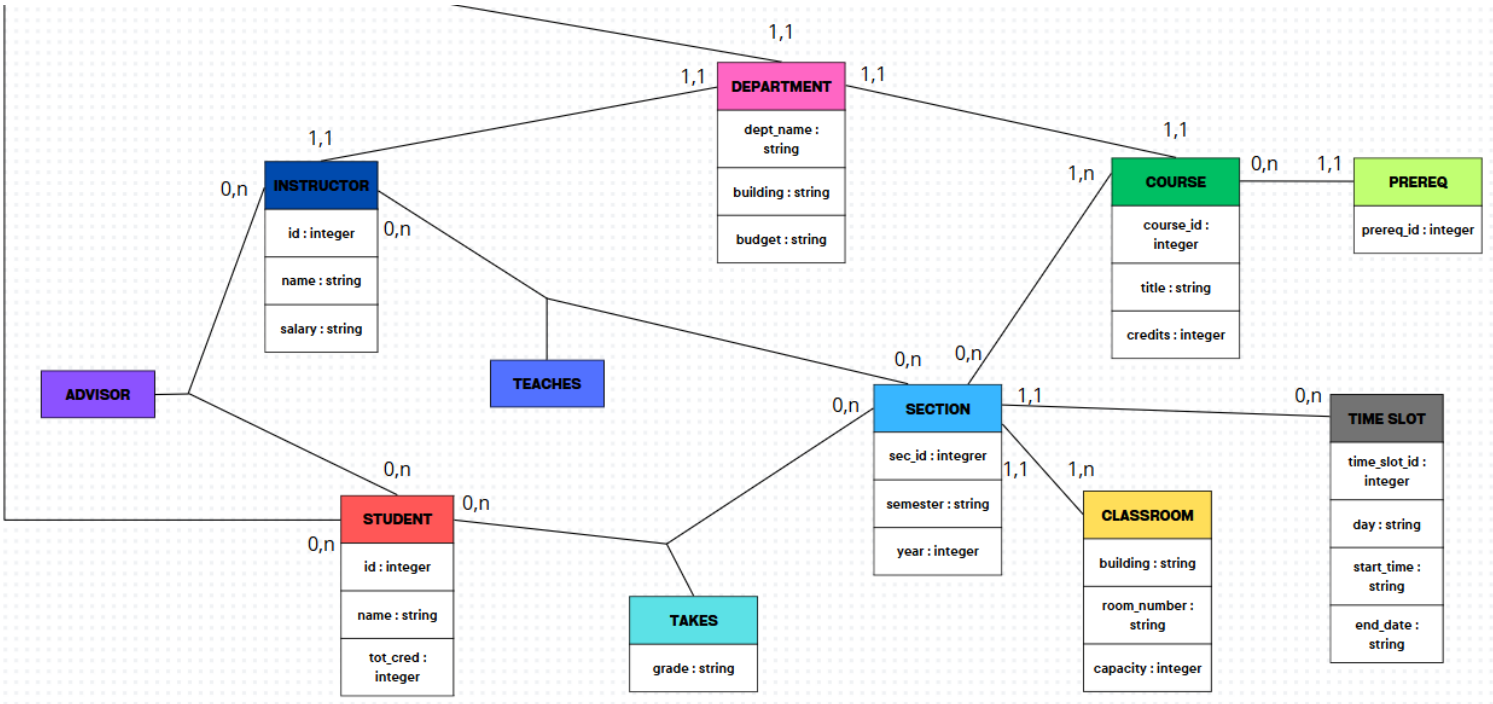
Exercice n° 1

Question 1.1 :

```
create table section
(
        course_id varchar (8),
        sec_id varchar (8),
    semester      varchar(6) check (semester in ('Fall', 'Winter', 'Spring', 'Summer')),
        year numeric (4 ,0),
        building varchar (15),
        room_number varchar (7),
        time_slot_id varchar (4),
        primary key (course_id , sec_id , semester , year),
        foreign key (course_id) references course(course_id),
        foreign key (building, room_number) references classroom(building, room_number)
);
```

On utilise check pour vérifier que « semester » vaut bien ‘Fall’ ou ‘Winter ou … .

Question 1.2 :



Exercice n° 2

-- 1

DESCRIBE section; SELECT * FROM section;

-- 2

SELECT * FROM course;

-- 3

SELECT title, dept_name FROM course;

-- 4

SELECT dept_name, budget FROM department;

-- 5

SELECT name, dept_name FROM teacher;

-- 6

SELECT name FROM teacher WHERE salary > 65000;

-- 7

SELECT name FROM teacher WHERE salary BETWEEN 55000 AND 85000;

-- 8

SELECT DISTINCT dept_name FROM teacher;

-- Bon si il y a un département sans prof on pourra pas le savoir

```
-- 9
SELECT name FROM teacher WHERE dept_name = 'Comp. Sci.' AND salary
> 65000;

-- 10
SELECT * FROM section WHERE semester = 'Spring' AND year = 2010;

-- 11
SELECT title FROM course WHERE dept_name = 'Comp. Sci.' AND credits >
3;

-- 12
SELECT DISTINCT t.name, t.dept_name, c.building FROM teacher t
JOIN department d ON t.dept_name = d.dept_name JOIN classroom c ON
d.building = c.building;

-- 13
SELECT DISTINCT st.name FROM student st JOIN takes t ON st.ID = t.ID
JOIN course c ON t.course_id = c.course_id WHERE c.dept_name = 'Comp.
Sci.';

--14
SELECT DISTINCT st.name FROM student st JOIN takes t ON st.ID = t.ID
JOIN teaches te ON t.course_id = te.course_id AND t.sec_id = te.sec_id
AND t.semester = te.semester AND t.year = te.year
JOIN teacher teac ON te.ID = teac.ID WHERE teac.name = 'Einstein'; /* Bon
si je recherche Eistein j'ai que dalle normal...*/
```

```
-- 15
SELECT c.course_id, t.name  FROM course c
JOIN teaches te ON c.course_id = te.course_id JOIN teacher t ON te.ID =
t.ID;

-- 16
SELECT s.course_id, s.sec_id, COUNT(t.ID) AS nb_eleve FROM section s
JOIN takes t ON s.course_id = t.course_id AND s.sec_id = t.sec_id AND
s.semester = t.semester AND s.year = t.year
WHERE s.semester = 'Spring' AND s.year = 2010 GROUP BY s.course_id,
s.sec_id;

-- 17
SELECT d.dept_name, MAX(t.salary) AS max_salary FROM department d
JOIN teacher t ON d.dept_name = t.dept_name GROUP BY d.dept_name;

-- 18
SELECT t.course_id , t.sec_id , t.semester , t.year , count(*) AS nb_eleve
FROM takes t
GROUP BY t.course_id , t.sec_id , t.semester, t.year ;

-- 19
SELECT s.building, COUNT(*) AS nb_cours FROM section s
WHERE (s.semester = 'Fall' AND s.year = 2009) OR (s.semester = 'Spring'
AND s.year = 2010)
GROUP BY s.building;
```

```
-- 20
SELECT d.dept_name, COUNT(*) AS nb_cours FROM department d
JOIN course ON d.dept_name = course.dept_name
JOIN section ON course.course_id = section.course_id
WHERE d.building = section.building GROUP BY d.dept_name;

-- 21
SELECT c.title, teacher.name AS prof FROM course c
JOIN teaches ON c.course_id = teaches.course_id
JOIN teacher ON teaches.id = teacher.id;
```