

数据库第4次作业——Chap5

软件2203班——丁海桐——202226010304

大学教务管理数据库中有如下5个表:

Student (studentNo, name, sex, birthday, phone, deptNo)

Course (courseNo, name, textbook, credit, hours, deptNo)

Teacher (teacherNo, name, rank, email, phone, deptNo)

Department(deptNo, name, Address, telephone, dean _no)

Enroll (studentNo, courseNo, semester, classNo, teacherNo, score)

1.对如下两个SQL语句，判定要执行它时需要哪些权限。

```
INSERT INTO enroll (studentNo, courseNo, semester)
(SELECT studentNo, 'H61030009', '2018-1'
FROM student
WHERE deptNo = '21' AND studentNo
LIKE ' 2016_ _248');
```

- 对于Enroll表的 INSERT 权限，允许向Enroll表中插入数据。
- 对于Student表 SELECT 权限，允许从Student表中检索数据。

```
SELECT t1. name,t1. teacherNo, SUM(c.hours) AS sumHours
FROM teacher AS t1, teach AS t2, course AS c, dept AS d
WHERE t1. deptNo = d. deptNo AND
      t1.teacherNo = t2.teacherNo AND
      t2.courseNo =C.courseNo AND
      d.name = '信息学院'AND
      t2.semester LIKE '20198'
GROUP BY t1.name,t1.teacherNo
HAVING sumHours < 192;
```

- 对于Teacher、Teach、Course、Dept表的 SELECT 权限，允许从这些表中检索数据。

2.用SQL语句回答如下问题:

1) 创建角色teacher、administrator、student。

```
CREATE ROLE teacher;
CREATE ROLE administrator;
CREATE ROLE student;
```

2) 创建用户s1、s2、t1、a1。

```
CREATE USER s1 IDENTIFIED BY '123456';
CREATE USER s2 IDENTIFIED BY '123456';
CREATE USER t1 IDENTIFIED BY '123456';
CREATE USER t2 IDENTIFIED BY '123456';
```

3) 将角色student指派给用户s1和s2。

```
GRANT student TO s1, s2;
```

4) 将角色assistant和teacher指派给用户a1。

```
GRANT assistant, teacher TO a1;
```

5) 将角色teacher指派给用户t1。

```
GRANT teacher TO t1;
```

6) 给角色assistant赋权：对Teacher表有添加、修改、删除的权限。

```
GRANT INSERT, UPDATE, DELETE ON Teacher TO assistant;
```

7.) 以角色assistant的身份给角色student赋权：对Enroll表具有INSERT权限，添加时限定仅为studentNo、courseNo、semester这三个字段赋值。

```
SET CURRENT_ROLE AS assistant;
```

```
GRANT INSERT(studentNo, courseNo, semester) ON Enroll TO student BY CURRENT_ROLE;
```

8) 解除用户a1的assistant角色。

```
REVOKE assistant FROM a1;
```

9) 删除用户s2。

```
DROP USER s2;
```