

实验七

姓名：苏柏瑞
学号：201600301108
班级：泰山学堂
实验题目：综合查询

实验题目

- 在学生表pub.student中统计名字（姓名的第一位是姓氏，其余为名字，不考虑复姓）的使用的频率，将统计结果放入test7_01中，表结构如下。

```
Create Table test7_01 As
Select substr(name, 2) first_name, count(substr(name, 2)) frequency From
pub.student
Group By (substr(name, 2));
```

- 在学生表pub.student中统计名字（姓名的第一位是姓氏，不作统计，名字指姓名的第二个之后的汉字）的每个字使用的频率，将统计结果放入test7_02中（特别提示：需要区别union和union all的不同），表结构如下。

```
Create Table test7_02 As
Select letter, count(letter) frequency From
(Select substr(name, 2, 1) letter From pub.student Union All
Select substr(name, 3, 1) letter From pub.student)
Group By letter
Having letter Is Not NULL;
```

- 创建“学院班级学分达标情况统计表1”test7_03，依据pub.student， pub.course， pub.student_course统计形成表中各项数据，成绩 ≥ 60 为及格计入学分，总学分 ≥ 10 为达标，院系为空值的数据不统计在下表中，表结构：院系名称dname、班级class、学分达标人数p_count1、学分未达标人数p_count2、总人数p_count。

```
Create Table test7_03 As
Select dname, class,
(Select count(sid) From pub.student s Where
dname = t.dname And
class = t.class And
(Select sum(credit) From pub.student_course Natural Join pub.student Join
pub.course USING (cid) Where
```

```

sid = s.sid And score >= 60) >= 10 ) p_count1,
(Select count(sid) From pub.student s Where
dname = t.dname And class = t.class) -
(Select count(sid) From pub.student s
Where dname = t.dname And
class = t.class And
(Select sum(credit) From pub.student_course Natural Join pub.student Join
pub.course USING (cid) Where
sid = s.sid And score >= 60)>= 10) p_count2,
(Select count(sid) From pub.student s Where
dname = t.dname And class = t.class ) p_count
From (Select Distinct dname, class
From pub.student
Where dname Is Not NULL) t;

```

- 创建“学院班级学分达标情况统计表2”test7_04，依据pub.student， pub.course， pub.student_course统计形成表中各项数据，成绩>=60为及格计入学分，2008级及之前的班级总学分>=8为达标，2008级之后的班级学分>=10未达标，院系为空值的数据不统计在下表中，表结构：院系名称dname、班级class、学分达标人数p_count1、学分未达标人数p_count2、总人数p_count。

```

Create Table test7_04 As
Select
    dname,
    class,
    Case
    When class <= 2008
    Then (
        Select
            count(sid)
        From
            pub.student s
        Where
            dname = t.dname
            And class = t.class
            And (
                Select
                    sum(credit)
                From
                    pub.student_course
                    Natural Join pub.student
                    Join pub.course USING (cid)
                Where
                    sid = s.sid And score >= 60
            )
            >= 8
    )
    Else (
        Select

```

```

        count(sid)
    From
        pub.student s
    Where
        dname = t.dname
        And class = t.class
        And (
            Select
                sum(credit)
            From
                pub.student_course
            Natural Join pub.student
            Join pub.course USING (cid)
            Where
                sid = s.sid And score >= 60
        )
        >= 10
    )
End
    p_count1,
Case
When class <= 2008
Then (
    (
        Select
            count(sid)
        From
            pub.student s
        Where
            dname = t.dname And class = t.class
    )
    - (
        Select
            count(sid)
        From
            pub.student s
        Where
            dname = t.dname
            And class = t.class
            And (
                Select
                    sum(credit)
                From
                    pub.student_course
                Natural Join pub.student
                Join pub.course USING (cid)
                Where
                    sid = s.sid And score >= 60
            )
        )
        >= 8
    )
)

```

```

Else (
    (
        Select
            count(sid)
        From
            pub.student s
        Where
            dname = t.dname And class = t.class
    )
    - (
        Select
            count(sid)
        From
            pub.student s
        Where
            dname = t.dname
            And class = t.class
            And (
                Select
                    sum(credit)
                From
                    pub.student_course
                Natural Join pub.student
                Join pub.course USING (cid)
                Where
                    sid = s.sid And score >= 60
            )
            >= 10
    )
)
End
p_count2,
(
    Select
        count(sid)
    From
        pub.student s
    Where
        dname = t.dname And class = t.class
)
p_count
From
(
    Select
        Distinct dname, class
    From
        pub.student
    Where
        dname Is Not NULL
) t;

```