

## 实验七-综合查询

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1. 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

First_name varchar(4)	frequency numeric(4)
国强	1034
红	1232
卫东	2323

```
1 create table test7_01 (  
2     First_name varchar(4),  
3     frequency numeric(4));  
4  
5 insert into test7_01 (  
6     select replace(a.name, substr(a.NAME, 0, 1), '') ,  
7         count(*) from pub.STUDENT a, pub.STUDENT b  
8     where replace(a.name, substr(a.NAME, 0, 1), '')  
9         = replace(b.name, substr(b.NAME, 0, 1), '')  
10    group by a.sid, a.name  
11 );
```

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

letter varchar(2)	frequency numeric(4)
锋	1034
红	1232
鹏	2323

```

1 create table test7_02 (
2 letter varchar(2),
3 frequency numeric(4)
4 );
5
6 insert into test7_02 (
7     select a.letter, count(*) from (
8         (select substr(name, 3, 1) letter
9         from pub.STUDENT
10        where substr(name, 3, 1) is not null)
11     union
12        (select substr(name, 2, 1) letter
13        from pub.STUDENT)
14    ) a,
15    ((select substr(name, 3, 1) letter
16       from pub.STUDENT
17       where substr(name, 3, 1) is not null)
18     union
19     all (select substr(name, 2, 1) letter
20         from pub.STUDENT)
21    ) b
22 where a.letter = b.letter
23 group by a.letter
24 );

```

3. 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  $\geq 60$  为及格计入学分，总学分  $\geq 10$  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

Dname varchar(30)	class varchar(10)	P_count1 int	P_count2 int	P_count int
计算机学院	2006			
计算机学院	2007			
软件学院	2006			

```

1  create table test7_03 as
2  with
3      sc1 as
4          (select sid, cid, max(score) score
5           from pub.STUDENT_COURSE
6           group by sid, cid),
7      pc1 as
8          (select s.dname, s.class,
9             s.sid, sum(credit) sum_credit
10          from pub.STUDENT s, sc1, pub.COURSE c
11          where s.sid = sc1.sid
12                and sc1.cid = c.cid
13                and sc1.score >= 60
14                and dname is not null
15          group by s.dname, s.class, s.sid),
16      pcnt1 as
17          (select dname, class,
18             count(sum_credit) p_count1
19          from pc1
20          where sum_credit >= 10
21          group by dname, class),
22      pcnt as
23          (select dname, class, count(*) p_count
24          from pub.STUDENT
25          where pub.STUDENT.DNAME is not null
26          group by dname, class),
27      pcnt2(dname, class, p_count2) as

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```

28         (select dname, class, p_count-p_count1
29         from pcnt natural join pcnt1)
30 select * from pcnt1
31     natural full join pcnt2
32     natural full join pcnt;
33
34 update test7_03 set p_count1 = 0
35 where p_count1 is null;
36
37 update test7_03 set p_count2 = p_count
38 where p_count1=0;

```

4. 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  $\geq 60$  为及格计入学分，2008 级及之前的班级总学分  $\geq 8$  为达标，2008 级之后的班级学分  $\geq 10$  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

```

1 create table test7_04 (
2     dname varchar(30),
3     class varchar(10),
4     P_count1 int,
5     P_count2 int,
6     P_count int );
7
8 insert into test7_04 (
9     select c.dname, c.CLASS, count(*), 0, 0
10    from pub.STUDENT c,
11         (select sid, sum(credit) sum_credit
12         from pub.student_course a, pub.COURSE b
13         where a.CID = b.CID
14             and a.SCORE > 59
15             group by sid) temp

```

```

16         where c.SID = temp.sid
17             and temp.sum_credit >= 8
18             and to_number(c.CLASS) <= 2008
19             and c.dname is not null
20         group by c.dname, c.class
21     );
22
23     insert into test7_04 (
24         select c.dname, c.CLASS, count(*), 0, 0
25         from pub.STUDENT c,
26             (select sid, sum(credit) sum_credit
27              from pub.student_course a, pub.COURSE b
28              where a.CID = b.CID
29                  and a.SCORE > 59
30                  group by sid) temp
31         where c.SID = temp.sid
32             and temp.sum_credit >= 10
33             and to_number(c.CLASS) > 2008
34             and c.dname is not null
35         group by c.dname, c.class
36     );
37
38     update test7_04
39     set p_count = (
40         select count(*) from pub.STUDENT c
41         where c.dname is not null
42             and c.dname = test7_04.dname
43             and c.class = test7_04.class
44         group by c.dname, c.class
45     );
46
47     update test7_04
48     set P_count2 = p_count - p_count1;

```