

实验八

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

- 查询各院系（不包括院系名称为空的）的数据结构平均成绩avg_ds_score、操作系统平均成绩avg_os_score，平均成绩四舍五入到个位，创建表test8_01，表结构及格式如下：

```
Create Table test8_01 As
Select
    dname,
    round(
        (
            Select
                avg(max_score)
            From
                (
                    Select
                        sid, cid, dname, max(score) max_score
                    From
                        pub.student_course
                    Natural Join pub.student
                    Join pub.course USING (cid)
                    Group By
                        sid, cid, dname
                )
            Where
                dname = s.dname
            And cid
                = (
                    Select
                        cid
                    From
                        pub.course
                    Where
                        name = '数据结构'
                )
        )
    ) avg_ds_score,
```

```

round(
    (
        Select
            avg(max_score)
        From
            (
                Select
                    sid, cid, dname, max(score) max_score
                From
                    pub.student_course
                Natural Join pub.student
                Join pub.course USING (cid)
                Group By
                    sid, cid, dname
            )
        Where
            dname = s.dname
            And cid
                = (
                    Select
                        cid
                    From
                        pub.course
                    Where
                        name = '操作系统'
                )
            )
    ) avg_os_score
From
    pub.student s
Where
    dname Is Not NULL;
s

```

- 查询“计算机科学与技术学院”的同时选修了数据结构、操作系统两门课的学生的学号sid、姓名name、院系名称dname、数据结构成绩ds_score、操作系统成绩os_score，创建表test8_02，表结构及格式如下

```

Create Table test8_02 As
Select
    sid,
    name,
    dname,
    (
        Select
            max(score)
        From
            pub.student_course
        Where
            sid = s.sid
    )

```

```

        And cid
        = (
            Select
                cid
            From
                pub.course
            Where
                name = '数据结构'
        )
    ) ds_score,
    (
        Select
            max(score)
        From
            pub.student_course
        Where
            sid = s.sid
            And cid
            = (
                Select
                    cid
                From
                    pub.course
                Where
                    name = '操作系统'
            )
        ) os_score
    From
        pub.student s
    Where dname = '计算机科学与技术学院'
        And Exists(
            Select
                score
            From
                pub.student_course
            Where
                sid = s.sid
                And cid
                = (
                    Select
                        cid
                    From
                        pub.course
                    Where
                        name = '数据结构'
                )
            )
        And Exists(
            Select
                score
            From
                pub.student_course

```

```

Where
    sid = s.sid
And cid
    = (
        Select
            cid
        From
            pub.course
        Where
            name = '操作系统'
    )
);

```

- 查询计算机科学与技术学院的选修了数据结构或者操作系统的学生的学号sid、姓名name、院系名称dname、数据结构成绩ds_score、操作系统成绩os_score，创建表test8_03，表结构及格式如下：

```

Create Table test8_03 As
Select
    sid,
    name,
    dname,
    (
        Select
            max(score)
        From
            pub.student_course
        Where
            sid = s.sid
            And cid
                = (
                    Select
                        cid
                    From
                        pub.course
                    Where
                        name = '数据结构'
                )
    ) ds_score,
    (
        Select
            max(score)
        From
            pub.student_course
        Where
            sid = s.sid
            And cid
                = (
                    Select

```

```

        cid
      From
        pub.course
      Where
        name = '操作系统'
    )
  ) os_score
From
  pub.student s
Where dname = '计算机科学与技术学院'
  And Exists(
    Select
      score
    From
      pub.student_course
    Where
      sid = s.sid
      And cid
        = (
          Select
            cid
          From
            pub.course
          Where
            name = '数据结构'
        )
    )
  Or Exists(
    Select
      score
    From
      pub.student_course
    Where
      sid = s.sid
      And cid
        = (
          Select
            cid
          From
            pub.course
          Where
            name = '操作系统'
        )
    )
);

```

- 查询计算机科学与技术学院所有学生的学号sid、姓名name、院系名称dname、数据结构成绩ds_score、操作系统成绩os_score，创建表test8_04，表结构及格式如下

```
Create Table test8_04 As
```

```

Select
    sid,
    name,
    dname,
    (
        Select
            max(score)
        From
            pub.student_course
        Where
            sid = s.sid
            And cid
                = (
                    Select
                        cid
                    From
                        pub.course
                    Where
                        name = '数据结构'
                )
    ) ds_score,
    (
        Select
            max(score)
        From
            pub.student_course
        Where
            sid = s.sid
            And cid
                = (
                    Select
                        cid
                    From
                        pub.course
                    Where
                        name = '操作系统'
                )
    ) os_score
From
    pub.student s
Where dname = '计算机科学与技术学院'

```