这里假定数据库为mysql，表结构定义如下：

学生表（student）

|  |  |
| --- | --- |
| 字段名称 | 字段描述 |
| student\_no | 学号 |
| student\_name | 学生姓名 |
| age | 年龄 |
| sex | 性别 |

课程表（course）

|  |  |
| --- | --- |
| 字段名称 | 字段描述 |
| course\_no | 课程编号 |
| course\_name | 课程名称 |
| teacher\_no | 授课教师编号（对应教师表的教师编号） |

成绩表（score）

|  |  |
| --- | --- |
| 字段名称 | 字段描述 |
| student\_no | 学号（对应学生表的学号） |
| course\_no | 课程编号（对应课程表的课程编号） |
| score | 成绩 |

教师表（teacher）

|  |  |
| --- | --- |
| 字段名称 | 字段描述 |
| teacher\_no | 教师编号 |
| teacher\_name | 教师姓名 |

请根据第一页的表结构定义完成下列sql语句的编写，如果你认为有多种写法建议你将其都写出来。（30分）

第一题：查询 “001（课程编号）”课比“002（课程编号）”课成绩高的所有学生的学号。（5分）

select

(select score from score where course\_no = "001") a,

(select score from score where course\_no = "002") b,

student\_no

from score where a > b;

select

s1.student\_no

from score s1, score s2

where s1.course\_no = s2.course\_no

and s1.course\_no = ‘001’

and s2.course\_no = ‘002’

and s1.scoure > s2.scoure;

第二题：查询平均成绩大于60分的同学的学号和平均成绩。（5分）

SELECT

( SELECT avg( score ) FROM score GROUP BY student\_no ) avg\_score,

student\_no

FROM

score

WHERE

avg\_score > 60;

select

student\_no, avg(score)

from score

group by student\_no

having avg(score) > 60;

第三题：查询所有同学的学号、姓名、选课数、总成绩。（5分）

SELECT

t3.student\_no,

t3.student\_name,

sum( t1.score ) sum\_score,

count( course\_no ) course\_num

FROM

score t1

LEFT JOIN ( SELECT \* FROM student GROUP BY t3.student\_no ) t3 ON t1.student\_no = t3.student\_no;

Select

s.student\_no, s.student\_name, sc.course\_count. Sc.sum\_score

From student s

Left join (Select

student\_no, Count(course\_no) coure\_count, sum(score) sum\_score

From score

Group by student\_no) sc

On s.student\_no = sc.student\_no

第四题：查询姓‘李’的老师的个数。（5分）

SELECT

count( 1 ) teacher\_num

FROM

teacher

WHERE

teacher\_name LIKE '李%'

第五题：查询学过“叶平”老师所教的所有课的同学的学号、姓名。（5分）

SELECT

t4.student\_no,

t4.student\_name

FROM

teacher t1

LEFT JOIN course t2 ON t1.teacher\_no = t2.teacher\_no

LEFT JOIN score t3 ON t2.course\_no = t3.course\_no

LEFT JOIN student t4 ON t3.student\_no = t4.student\_no

WHERE

t1.teacher\_name = "叶平";

第六题：查询学过“011”并且也学过编号“002”课程的同学的学号、姓名。（5分）

SELECT

t3.student\_no,

t3.student\_name

FROM

(select

student\_no, IF(count(1) = 2 , 1, 0) flag

from

WHERE score

course\_no in ("011","002")

group by student\_no) t2

LEFT JOIN student t3 ON t2.student\_no = t3.student\_no;