数据库 2013-14-1（B 闭）

1.

（1）将这三个事务并行执行（X=0）

① 先让 T2，T3 执行完成，其结果都为 0

T1 执行完后结果是 3

T1	T2	T3
Read（X）0		
	Read（x）	
		Read(x)
	X=x*3	
		X=x^3
	Write(x)0	
		Write(x)0
X=x+3(3)		
Write(x)(3)		

②

2. (1) select s.staffNo, S.name

from Staff s, Property p, Manage m

where s.staffNo=M.staffNo and m.Pno=p.Pno and p.Pname='Cozy house';

(2) select distinct s.Sname

from staff s, Manage m

where s.StaffNo = m.StaffNo and Payment>50

(3)select s.Sname avg(Payment) as averagePay

from Staff s, Manage m

where s.StaffNo=m.StaffNo

group by s.staffNo

(4)select Sname

from Staff s, Manage m

where s.StaffNo=M.StaffNo

group by StaffNo

having sum(payment)>1000

(5) select Sname

from staff

where not exists

((select Pno from Property)

except

(select Pno from Manage where Manage.Staffno=Staff.Staffno))

温馨提示：这里有必要告诉大家一个套路，凡是遇到 all 这种要求出拥有所有属性的元组（在关系代数里面通常用除法解决，但是查询语句没有除法）。

基本格式为：select （属性）

from table

where not exists

（（select 指定的属性 from table where 。。。）

except

（select 是否符合题上条件的属性 from table where 。。。）

用 2012-2013-1A 闭举例

Student(SSN,name)

Course(ID, instructor,title,credits,classroom)

Enroll(studentSSN,courseID,score)

(6)Find SSNs and names of the student who enrolled in the at least all classes that the student 'John' enrolled.

解析：这里要求的是找出所有至少选了所有 John 所选的课程的学生的 SSN 和 name

step1:选出 John 所选的所有课程

select courseID from Enroll , Student where SSN=studentSSN and name='John'

step2:选出所有参与选课的学生的 courseID

select courseID from Enroll where SSN=studentSSN

step3:用 not exists 判断某一学生所选的课程包含了 John 所选的全部课程

select SSN,name

from student

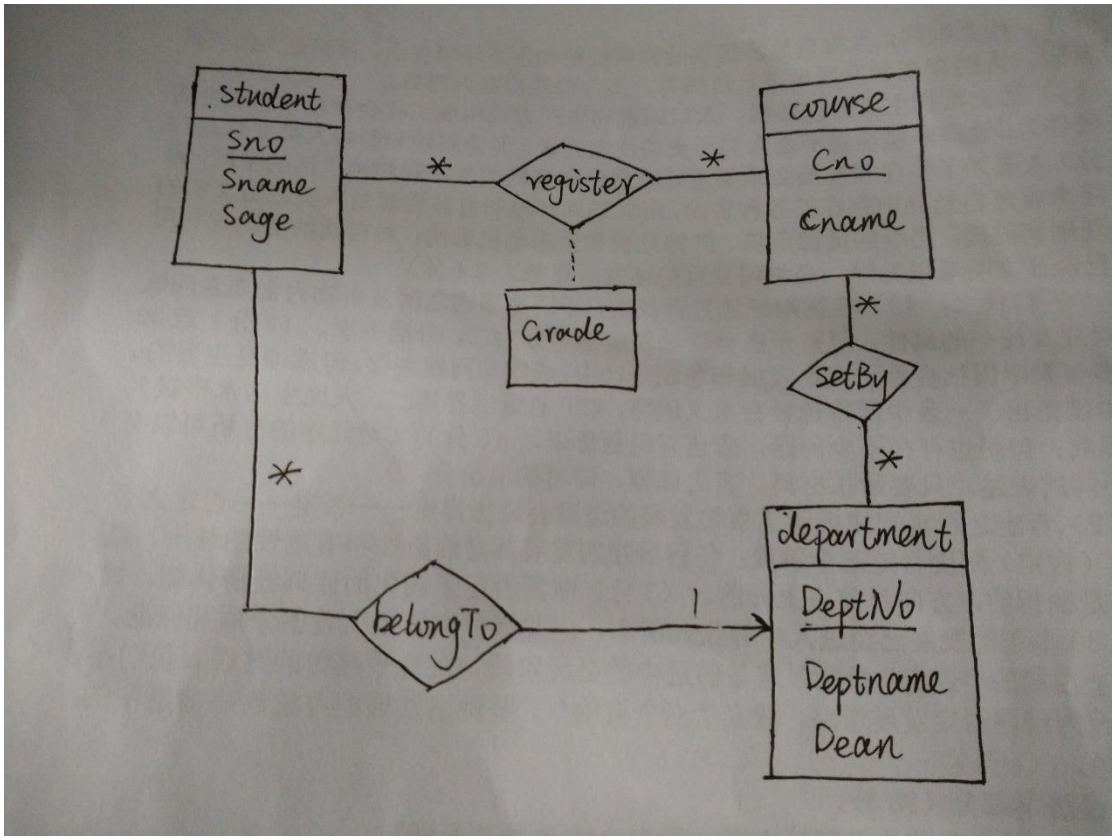
where not exists

((select courseID from student,Enroll where SSN=studentSSN and name =’John’)

except

(select courseID from Enroll where SSN=studentSSN))

3. (1)



(2)

实体

student(Sno, Sname,Sage,DeptNo)

course(Cno,Cname)

department(DeptNo,Deptname,Dean)

属性

setBy(Cno,DeptNo)

register(Cno,Sno,Grade)