1.

1)∏*employee.id, employee.person\_name*( *σemployee.person\_name = works.person\_name*Λ *works.company\_name = “BigBank”*(employee x works))

2)∏*employee.id, employee.person\_name, employee.city*( *σemployee.person\_name = works.person\_name Λ works.company\_name* = *“BigBank”* (employee x works)

3) ∏*employee.id, employee.person\_name, employee.street, employee.city*( *σemployee.person\_name = works.person\_name Λ works.company\_name* = *“BigBank”*  *Λ* *works.salary > 10000* (employee x works)

4) ∏*employee.id, employee.person\_name* ( *σ employee.person\_name* = *works.person\_name**Λ* *employee.city = company.city Λ* *works.company\_name = company.company\_name*(employee x works x company)

2.

1) ∏*employee.id, employee.person\_name*( *σemployee.person\_name = works.person\_name*Λ *works.company\_name ≠ “BigBank”*(employee x works))

2) ∏*employee.id, employee.person\_name* ( *σemployee.person\_name = works.person\_name Λ* *works.salary ≥ AVG(works.salary)* (employee x works)

3.If we are going to add new instructor to table of Instructor,in which we link to non-existing dept\_name in table of Department, it will prevent a error.

For example,we want to add new row in table Employee.

Add Employee(Id = 01234,Name = “Sam”,Dept\_name = “geology”, Salary = 60000)

4.Employee.id is primary key of Employee table