

1. employee.id, employee.person\_name( $\sigma$  employee.person\_name = works.person\_name  $\wedge$  works.company\_name = " BigBank "( employee x works ) )

employee.id, employee.person\_name, employee.city( $\sigma$  employee.person\_name = works.person\_name  $\wedge$  works.company\_name = " BigBank " ( employee x works ) )

employee.id, employee.person\_name, employee.city( $\sigma$  employee.person\_name = works.person\_name  $\wedge$  works.salary > 10000  $\wedge$  works.company\_name = 'BigBank'( employee x works ) )

employee.id, employee.person\_name(  $\sigma$  employee.city = company.city(employee x company))

2. employee.id , employee.person\_name(employee.person\_name = works.person\_name  $\wedge$   $\neg$  works.company = " BigBank "(employee x works))

Did not understand the exercise

3. Inserting a tuple:

(11111, Lory, Math, 50,000)

into the instructor table, where the department table does not have the department Math, would violate the foreign key constraint.

Deleting the tuple:

(Physics, Billy , 70000)

from the department table, where at least one student or instructor tuple has dept\_name as Physics, would violate the foreign key constraint.

4. Employee – id, person\_name

Works – person\_name

Company – company\_name