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FIT, IS, 2year

```
employee(person_name, street, city);  
works(person_name, company_name, salary);  
company(company_name, city);
```

Ex1

```
1)  $\Pi_{id, person\_name} (\sigma_{works.company\_name = "BigBank"} (works))$   
2)  $\Pi_{id, person\_name, city} (works \bowtie_{company\_name = "BigBank"} employee \bowtie works)$   
3)  $\Pi_{id, person\_name, address, city} (company\_name = "BigBank" \vee (and) salary >= \$10000 (employee \times works))$   
4)  $\Pi_{id, person\_name} (company\_name = city (employee \bowtie works \bowtie company))$ 
```

Ex2

```
1)  $\Pi_{id, person\_name} (company\_name \neq "BigBank" (works))$   
2)  $\Pi_{id, person\_name} (works) - works.salary \leq works2.salary (works)$ 
```

Ex3

Inserting tuple: (001, Darik, Physics, 730000);

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

Deleting tuple: (Math, Biba, 90000);

from the department table, where at least one student or instructor tuple has dept name as Math, would violate the foreign key constraint

Ex4

Primary keys:

Person_name, company_name;

Signs:

σ

\times

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Π

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