

Laboratory Work 2

1. employee (person-name, street, city)

works (person-name, company-name, salary)

company (company-name, city)

Figure

- $\Pi_{ID, \text{person_name}} (\delta \text{company_name} = \text{"Bigbank"} (\text{works}))$
 - $\Pi_{ID, \text{person_name}, \text{city}} (\text{employee} \bowtie \delta \text{company_name} = \text{"Bigbank"}) \wedge \text{works.ID} = \text{employee.ID} (\text{works})$
 - $\Pi_{ID, \text{person_name}, \text{street}, \text{city}} (\text{employee} \bowtie \delta \text{company_name} = \text{"Bigbank"} \wedge \text{salary} > 70000 (\text{works}))$
 - $\Pi_{ID, \text{person_name}} (\text{employee} \bowtie \delta \text{employee_city} = \text{company_city} (\text{works}) \bowtie (\text{company}))$
2. $\Pi_{ID, \text{person_name}} (\delta \text{company_name} \neq \text{"Bigbank"} (\text{works}))$
 $\Pi_{\text{person_name}} (\delta \text{works.salary} > \text{all } \wedge \text{company_name} = \text{"Bigbank"} (\text{works}))$

3 Inserting a tuple:

(22777, Biology, Math, 100000) into the instructor table, where the department table does not have the department Math, would violate the foreign key constraint

Deleting the tuple!

(Philosophy, Nurari, 80000) from the department table,
where at least one student or instructor tuple has dept
name as Philosophy, would violate the foreign key
constraint.

4. Employee : ID or person-name or (person-name, company-name)
+
if person works in 2 company

Works : ID or person-name

Company : company-name