

## Laboratory work 2

1) 1.  $\Pi_{ID, person\_name} (\sigma_{company\_name = "BigBank"} (WORKS))$

2.  $\Pi_{employee.ID, employee.person\_name, employee.city} (\sigma_{employee.ID = works.ID \wedge works.company\_name = "BigBank"} (employee \times works))$

or  $\Pi_{employee.ID, employee.person\_name, employee.city} (employee \bowtie_{employee.ID = works.ID \wedge works.company\_name = "BigBank"} WORKS)$

3.  $\Pi_{employee.ID, employee.person\_name, employee.street, employee.city} ($

$\sigma_{employee.ID = works.ID \wedge works.company\_name = "BigBank" \wedge works.salary > 10000} (employee \times works))$

or

$\Pi_{employee.ID, employee.person\_name, employee.street, employee.city} (employee \bowtie_{employee.ID = works.ID \wedge works.salary > 10000} WORKS)$

$\wedge \Pi_{employee.ID, employee.person\_name, employee.street, employee.city} (employee \bowtie_{employee.ID = works.ID \wedge works.salary > 10000} WORKS)$

4.  $\Pi_{employee.ID, employee.person\_name} (employee \bowtie_{employee.ID = works.ID} WORKS \bowtie_{works.company\_name = company\_name} COMPANY)$

$\wedge \Pi_{employee.ID, employee.person\_name, employee.city} (employee \bowtie_{employee.ID = works.ID} WORKS \bowtie_{works.company\_name = company\_name} COMPANY)$

2) 1.  $\Pi_{ID, person\_name} (WORKS) - \Pi_{ID, person\_name} (\sigma_{company\_name = "BigBank"} (WORKS))$

or  $\Pi_{ID, person\_name} (\sigma_{\neg company\_name = "BigBank"} (WORKS))$

2.  $\Pi_{ID, person\_name} (WORKS) - \Pi_{A.ID, A.person\_name} (\rho_A(WORKS) \bowtie$

$A.salary < B.salary \rho_B(WORKS))$  SELECT ID, Person-name from works except

select A.ID, A.Person-name from works as A works as B where A.salary < B.salary;

3) Delete from department where dept\_name = '...'  
if in instructor there already exist rows depending on it.

Insert into instructor values ('...', '...')

if there is a dept\_name that doesn't exist in department

4) Employee: ID or person-name

Works: ID or person-name

or (person-name, company-name)

Company: Company-name