**LAB 1 Turdalin Nurassyl ID : 20B030619**

**1.**

1) ΠID, person\_name (σ company\_name = “BigBank” (**works**))

SQL : SELECT id,person\_name FROM works WHERE company\_name = “BigBank”;

2) ΠID, person name\_city (**employee** ⋈employee.id=works.id (σ company\_name = “BigBank” (**works**)))

SQL : SELECT ID,Person\_namy,city FROM employee AS E,works AS W

WHERE E.id = W.id and W.company\_name = “BigBank”;

3) ΠID, person\_name, street, city (σ (company\_name = “BigBank” ∧ salary > 10000) (**works** ⋈employee.id=works.id **employee**))

SQL : SELECT ID,person\_name,street,city FROM employee as E, works as W WHERE

E.id = W.id and (W.company\_name = “BigBank” and W.salary > 10000)

4) ΠID,person name (σ employee.city=company.city (**employee** ⋈employee.ID=works.ID **works** ⋈ works.company\_name=company.company\_name **company**))

SQL : SELECT ID,person\_name FROM employee as E, works as W, company as C WHERE W.id = E.id and E.city = C.city and W.company\_name = C.company\_name

**2.**

1) ΠID, person\_name (σ company\_name ≠, “BigBank” (**works**))

SQL : SELECT ID,person\_name FROM works WHERE company\_name != “BigBank”;

2) ΠID, person\_name (σ works.salary >= AVERAGE(works.salary) (**works** ⋈works.id = employee.id **employee**))

SQL : SELECT ID,person\_name FROM employee as E, works as W WHERE W.salary >= AVERAGE (W.salary) and W.id = E.id;

**3.** We take that we don’t have “KBTU PRIDE” department.

#1 And then if we insert such values as (001, Raymbek, KBTU PRIDE, 42500) we will have violation of the foreign key constraint.

#2 If we will try to delete some rows in department table that has dept\_name = KBTU PRIDE, we will get violation of the foreign key constraint.

**4.** primary key = person\_name or ID. Not completely clear.