Lab2

1.

1) $\pi_{id,person\_name}(\sigma_{company\_name="BigBank"}$(employee X works);

2) $\pi_{id,name\_name,city}(\sigma_{company\_name="BigBank"}$(employee X works);

3) $\pi_{id,person\_name,street,city}(\sigma_{company\_name="BigBank" \wedge salary>10000}$(employee X works);

4) $\pi_{id,person\_name}$(employee X works X company);

2. $\pi_{id,person\_name}(\sigma_{company\_name\neq"BigBank"}$(works);

3. As Instructor is child table of department for attribute dept_name, then adding something in instructor table which is not in department table will cause error. For example if we add economics as dept_name in instructor table but department table don't contain it then it is a violation of foreign key constraint.

As department is parent table of instructor for attribute dept_name, then deleting something in department table which is present in instructor table will cause error. For example if we delete economics as dept_name in department table but instructor table do contain it then it is a violation of foreign key constraint.

4. Primary key is an attribute in a table which can uniquely identify that table. In employee table the **person_name**, in works table **person_name** and in company table **company_name** are the primary keys.