Laboratory work 1

Sultan-Murat Asparukh

1.1. Find the ID and name of each employees who works for “BigBank”.
ΠID, person_name (σcompany_name = “BigBank”(employee ⋈employee.person_name = works.person_name works))

1.2. Find the ID, name, and city of residence of each employee who works for “BigBank”.
ΠID, person_name, city (σcompany_name = “BigBank”(employee ⋈employee.person_name = works.person_name works))

1.3. Find the ID, name, street address, and city of residence of each employee who works for “BigBank” and earns more than $10000.
ΠID, person_name,street, city (σcompany_name = “BigBank” ^ salary > 10000(employee ⋈employee.person_name = works.person_name works))

1.4. Find the ID and name of each employee in this database who lives in the same city as the company for which she or he works.
ΠID, person_name(σemployee.city = company.city((employee ⋈employee.person_name = works.person_name works ⋈ Works.company_name = company.company_name company))

2.1. Find the ID and name of each employee who does not work for “BigBank”.
ΠID, person_name (σcompany_name ≠ “BigBank”(employee ⋈employee.person_name = works.person_name works))

2.2. Find the ID and name of each employee who earns at least as much as every employee in the database.
ΠID, person_name (σsalary >= avg(salary) (employee ⋈employee.person_name = works.person_name works))

3. If the user gives new values for nonexistent attributes in this table, insert command like adding new values into a table will cause an error.
Deleting a data from the primary key values, will make a violation due to the other data directly connected with primary key.

4. Attribute “ID” in table employee is the only appropriate primary key in this case.