FE 513 Practical Aspects of Database Design

Assignment II

Please complete the assignment using PostgreSQL and submit the SQL script. Also please provide a pdf report putting the results and codes together. It's a good way to write your report in the following manner: **(1) quote the original question (2) your PostgreSQL codes, (3) and result(snapshot are accepted) if it's not trivial to show.**

1 Basic Query (50pt)

1. Given the data of banks_al_2001.csv, define the table structure accordingly in the database.
2. Import data from banks_al_2001.csv
3. Query the table and count the number of banks for each quarter.
4. Query the table and report the average of asset for each bank.
5. Query the table and report the bank id who has the second largest asset for second quarter.
6. Query the table and report the bank id whose equity is over 10% of its asset in the first quarter(hint: equity = asset-liability).

2 Advance Query (50pt)

A company's executives are interested in seeing who earns the most money in each of the company's departments. A high earner in a department is an employee who has a salary in the top three unique salaries for that department. The following are two tables for department and employee.

Table 1: Employee

id	name	salary	departmentId
1	Joe	85000	1
2	Henry	80000	2
3	Sam	60000	2
4	Max	90000	1
5	Janet	69000	1
6	Randy	85000	1
7	Will	70000	1

'id' is the primary key column for this table. 'departmentId' is a foreign key of the ID from the Department table. Each row of this table indicates the ID, name, and salary of an employee. It also contains the ID of their department.

Table 2: Department

id	name
1	IT
2	Sales

'id' is the primary key column for this table. Each row of this table indicates the ID of a department and its name. Write an SQL query to find the employees who are high earners in each of the departments.

Return the result table in any order. The desired result table is shown below.

Table 3: Solution

department	name	salary
IT	Joe	85000
Sales	Henry	80000
Sales	Sam	60000
IT	Max	90000
IT	Randy	85000
IT	Will	70000