IT/BIFX 530 Applied Database Systems

Homework #5: SQL

Consider the following relations. An employee can work in more than one department; the *pct time* field of the Works relation shows the percentage of time that a given employee works in a given department.

Emp(*eid:* integer, *ename:* string, *age:* integer, *salary:* real)
Works(*eid:* integer, *did:* integer, *pct_time:* integer)
Dept(*did:* integer, *dname:* string, *budget:* real, *managerid:* integer)

Write and execute the following queries in SQL:

1. Print the names and ages of each employee who works in the Hardware department.

2. For each department with more than 20 employees, print the did together with the number of employees that work in that department.

3. Print the name of each employee whose salary exceeds the average salary of all employees.

4. Find the managerids of managers who manage only departments with budgets greater than $1 million.

5. Find the employees who work in the 'Operations' department and print the information (eid, ename, age, and salary) for each employee. The output should be ordered by ename.

Steps:

1. Create the tables emp, dept, and works using the file make-tables.sql. Make sure that you open the .sql file and change it to your database before creating the tables. Tables can be created individually or in batch-mode.
2. Load data into the tables using **load data local infile 'emp.txt' into table emp fields terminated by ',';** as we introduced in the tutorial. Load data in the following order: emp, dept, works.
3. Create SQL code for the queries above.
4. Catch the run result by either taking a screenshot or by using copy and paste.

Submission Instructions

For each problem, include both your SQL code and running result in your submission. You can either take a screenshot or copy/paste the SQL code with results into a text file or Word document. Submit your solutions through the assignment link on Blackboard.