CS246: Database Management Systems Lab

Lab # 11 (1 Questions, 50 Points)
Held on 03-Apr-2023
Lab Timings: 14:00 to 18:00 Hours   Pages: 2
Submission: 18:00 Hrs, 03-Apr-2023
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a. This lab assignment is based on the concepts covered in chapter 5 **Advanced SQL** in the CS245 theory class.

b. You can refer to the text book for SQL syntax.

Question 1:   (50 points)
stored procedure Using `MySQL` perform the following tasks:

Task 01 (1 mark) Create a database named *week11*

Task 02 (2 marks) **Create table**

a. A table `emp_boss_small` containing the following

1st column	`ename`	string of characters of fixed size 50
2nd column	`bname`	string of characters of fixed size 50

with `ename, bname` as primary key. `ename` stands for employee name; `bname` stands for boss name.

b. A table `emp_boss_large` whose description is similar to the `emp_boss_small` table.
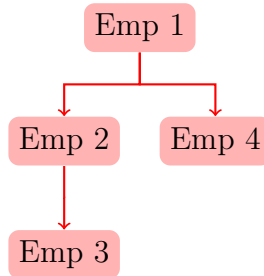
Task 03 (2 marks) **populate data**

a. Populate data from file `week-11-emp_small.csv` into table `emp_boss_small`

b. Populate data from file `week-11-emp_large.csv` into table `emp_boss_large`

Task 04 (35 marks) Develop a **stored procedure** `sp2` to list all the bosses of a given employee. Specifications for `sp2` are as follows:

a. (1 mark) Input argument for `sp2` are:
- `ename` string of characters of fixed size 50 having name of the employee.
- `data_size` string of characters of fixed size 20 corresponds to table name `emp_boss_small` or `emp_boss_large`.

b. No return output

c. (2 marks) Depending on `data_size`, create a corresponding table `output_small` or `output_large` only once.

d. (25 marks) For every `ename`, find all the bosses in the hierarchy.

e. (7 marks) Insert a record (`ename`, `boss`) in corresponding output table.
For example, if the table consists of records as shown below (table is represented as tree structure given below):

ename	boss
Emp 1	NA
Emp 2	Emp 1
Emp 3	Emp 2
Emp 4	Emp 1

- List of bosses for `Emp 3` are `Emp 2` and `Emp 1`.
- `sp2` received `Emp 3`, identifies the bosses as `Emp 2` and `Emp 1`.
- Inserts the records (`Emp 3`, `Emp 2`) and (`Emp 3`, `Emp 1`) in `output` table.

Task 05 (5 marks) Call `sp2` for every distinct employee in `emp_boss_small`.

Task 06 (5 marks) Call `sp2` for every distinct employee in `emp_boss_large`.

File naming text file name should be [Your roll number].sql

Independent efforts You should make an <u>honest and independent</u> effort in obtaining the solution to the above problem.

Mobile phones are not allowed inside the lab

Submission Procedure You should upload all the SQL files and python script files in MS assignments site.

Marking Scheme Mentioned against each task/sub task