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Lab 5

Problem statement:

Consider the following database schema:

DEPT (Dnumber, Dname, Founded, Mgr_ssn, Budget)

EMPLOYEE (Ssn, Ename , Bdate, Dno, Salary)

Note that the attribute Founded represents the foundation date of the department. Implement PL/SQL blocks to do the following:

1-Create a stored function Count_Emp (Dnumber NUMBER) that returns the number of employees working for the department Dnumber.

2-Create a trigger to ensure that no department has more than 8employees.

3-Create a stored procedure that ensures that Year(DEPT.Founded) >=1960 for all departments; if a row violates this constraint then set its date to be'01-JAN-1960'.

Note that the two tables refer each other. You may create the tables first with the primary keys, then alter them to add the foreign keys. To insert records into tables, you can make one foreign key nullable for example the Dno in the EPLOYEE table could be null to enable adding employees then add departments records.

Steps:

1-Creat table DEPT.

2-Create table EMPLOYEE.

3-make function Count_EmP returns the number of employees working for the departmentDnumber.

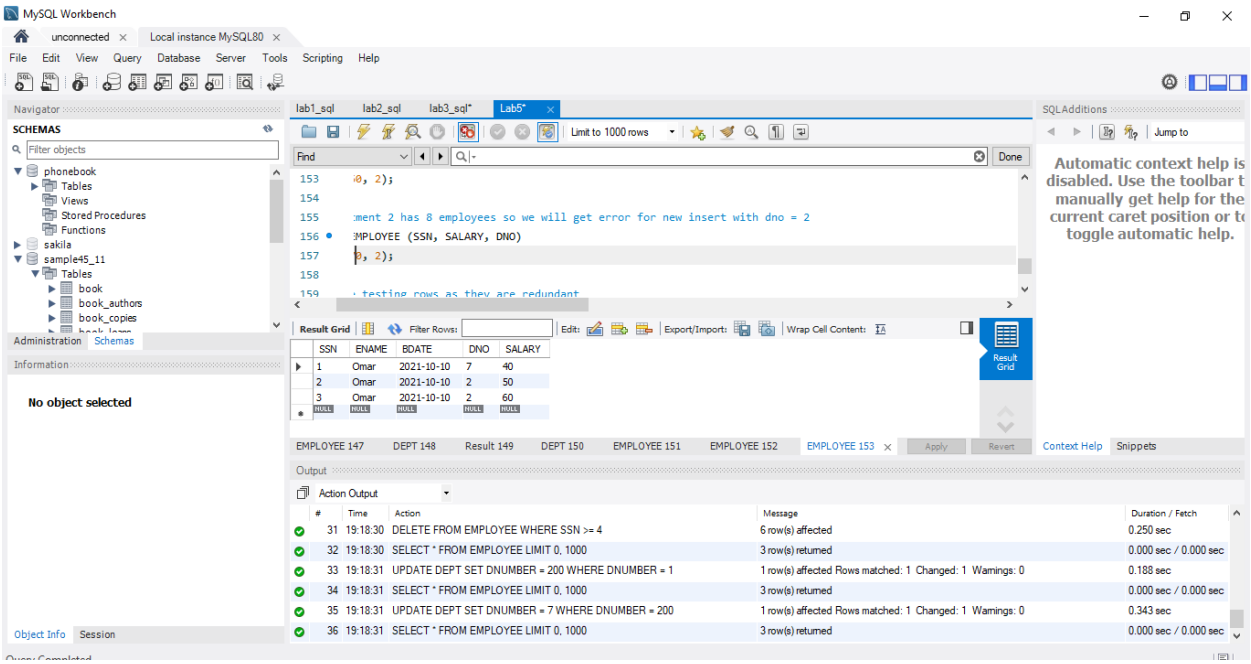
4-VALID_YEAR() to check date to be date to be'01-JAN-1960'.

5-CREATE TRIGGER BEFORE_INSERT_EMP.

6-CREATE TRIGGER AFTER_UPDATE_SALARY.

7-We make inserts, selects deletes and updates to test our work.

Sample runs:


MySQL Workbench
unconnected
Local instance MySQL80
File Edit View Query Database Server Tools Scripting Help
Navigator
SCHEMAS
Filter objects
phonebook
Tables
Views
Stored Procedures
Functions
sakila
sample45_11
Tables
book
book_authors
book_copies
Administration Schemas
Information
No object selected
Object Info Session
lab1_sql lab2_sql lab3_sql* Lab5*
Limit to 1000 rows
Find Done
153 0, 2);
154
155 ment 2 has 8 employees so we will get error for new insert with dno = 2
156 MPLOYEE (SSN, SALARY, DNO)
157 0, 2);
158
159 testing rows as they are redundant
Result Grid Filter Rows: Edit: Export/Import: Wrap Cell Content:
SSN ENAME BDATE DNO SALARY
1 Omar 2021-10-10 7 40
2 Omar 2021-10-10 2 50
3 Omar 2021-10-10 2 60
EMPLOYEE 147 DEPT 148 Result 149 DEPT 150 EMPLOYEE 151 EMPLOYEE 152 EMPLOYEE 153
Apply Revert
SQLAdditions
Jump to
Automatic context help is disabled. Use the toolbar t manually get help for the current caret position or t toggle automatic help.
Context Help Snippets
Output
Action Output
Time Action Message Duration / Fetch
31 19:18:30 DELETE FROM EMPLOYEE WHERE SSN >= 4 6 row(s) affected 0.250 sec
32 19:18:30 SELECT * FROM EMPLOYEE LIMIT 0, 1000 3 row(s) returned 0.000 sec / 0.000 sec
33 19:18:31 UPDATE DEPT SET DNUMBER = 200 WHERE DNUMBER = 1 1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0 0.188 sec
34 19:18:31 SELECT * FROM EMPLOYEE LIMIT 0, 1000 3 row(s) returned 0.000 sec / 0.000 sec
35 19:18:31 UPDATE DEPT SET DNUMBER = 7 WHERE DNUMBER = 200 1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0 0.343 sec
36 19:18:31 SELECT * FROM EMPLOYEE LIMIT 0, 1000 3 row(s) returned 0.000 sec / 0.000 sec

As we notice in the below screen we can not insert new employee as max num is 8 and we had inserted 8