Practice Class 9

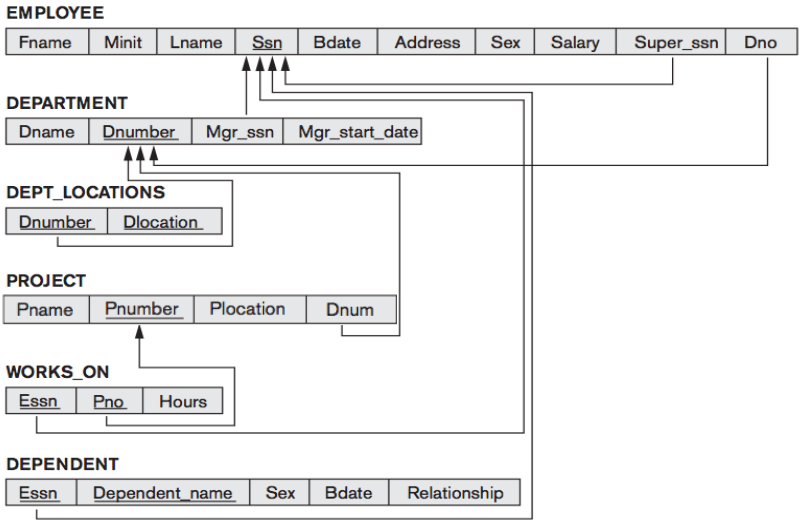
Objectives

SQL Programming:
Stored Procedure (SP), User-Defined Function (UDF), Trigger e Cursor.

Note: You must follow the response template provided.

Assignment 9.1

Refer to the Company's relational database used in previous practical class guides:



a) Build a stored procedure that accepts an employee's ssn, removes it from the employee table, removes your entries from the works_on table, and removes its dependents. What additional concerns should you have about the storage procedure besides those mentioned above?

b) Create a stored procedure that returns a record-set with the employees managing departments, as well as the ssn and number of years (as manager) of the oldest employee on that list.

c) Build a trigger that does not allow a particular employee to be defined as a manager for more than one department.

d) Create a trigger that does not allow a certain employee to have a salary greater than the salary of your department manager. In these cases, the trigger should adjust the employee's salary to an amount equal to the manager's salary minus one unit.

e) Create a UDF that, for a given employee (ssn), returns the name and location of the projections in which you work.

f) Create a UDF that, for a given department (dno), returns employees with a salary higher than the average salary of that department.

g) Create a UDF that, for a given department, returns a record-set with the projects and

department. For each project, we must have an attribute with its monthly labor budget and another column with the accumulated value of the budget.

Note: Assume that an employee works 40 hours a week to calculate the cost of its allocation to the project.

For example: `select * from dbo. employeeDeptHighAverage(3);`

```
pname          pnumber     plocation      dnum        budget               totalbudget
-------------- ----------- -------------- ----------- -------------------- --------------------
Aveiro Digital 1           Aveiro         3           2625,00              2625,00
Dicoogle       3           Aveiro         3           1337,50              3962,50
GOPACS         4           Aveiro         3           781,25               4743,75

(3 row(s) affected)
```

Recommendation: Use a cursor.

h) It is required to create a trigger that, when you delete a department, passes to a department_deleted with the same structure as the department. If this table does not exist, you must create a new one and enter the record. Implement the solution with a trigger of each type (*after* and *instead of)*. Discuss the advantages and disadvantages of each implementation.

Use the following statement to verify that a particular table exists:

```
IF (EXISTS (SELECT * FROM INFORMATION_SCHEMA. TABLES
    WHERE TABLE_SCHEMA = 'myschema' AND  TABLE_NAME = 'mytable'))
```

i) For stored procedures and UDFs, and number their added value and the characteristics that distinguishes them. Give examples of situations in which each of these tools should be used;