Lab: Database Programmability and Transactions

This document defines the **lab exercise assignments** for the PostgreSQL course @ Software University.

Submit your solutions in the SoftUni Judge System.

You are provided with the **softuni_db.sql** file. Create a database **soft_uni** and import the sql file into its **Query Tab**. Execute all queries. Use this database in the following assignments.

1. Count Employees by Town

Create a function **fn_count_employees_by_town(town_name)** that accepts **town_name VARCHAR(20)** as a parameter and returns the **count of employees** living there.

Submit your query about **function creation only**.

Example

The following example is for employees living in "**Sofia**".

count
3

2. Employees Promotion

Create a stored procedure **sp_increase_salaries(department_name)** to increase the **salary** of all employees working at a given department (provided as a parameter). Increase salaries by **5%**.

Submit your query about **stored procedure creation only**.

Example

The following example is given with employees in the "**Finance**" department ordered by **first_name**, then by **salary**.

first_name	salary
Barbara	27720.0000
Bryan	19950.0000
Candy	19950.0000
…	…

3. Employees Promotion by ID

Create a stored procedure(transaction) **sp_increase_salary_by_id(id)** that increases a given employee's **salary** (by **id** as a parameter) by **5%**. Consider that you cannot promote an employee who **doesn't exist** – if that happens**, no changes** to the database shall be made.
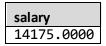
Submit your query about **transaction creation only**.

Example

The following example is given with **employee_id = 17**.

salary
14175.0000

4. Triggered

Create a table **deleted_employees(employee_id PK, first_name, last_name, middle_name, job_title, deparment_id, salary)** that will hold information about fired (deleted) employees from the **employees** table. Add a **trigger** to the **employees** table that inserts the corresponding information into **deleted_employees** table.

- **deleted_employees** table:
    - **employee_id** – primary key
    - **first_name** - max-length 20
    - **last_name** - max-length 20
    - **middle_name** - max-length 20
    - **job_title** – max-length 50
    - **department_id** – integer
    - **salary** – numeric (19,4)

Submit your queries about **table creation, trigger function, and the trigger itself**.