Advanced Databases - Lab No. 5

Third Year of the "Computer Engineering" Program

Oracle - Triggers

Instructions for SQL Developer

1. Connect to the **SYSTEM** or **HR** schema in SQL Developer.
2. Open a SQL Worksheet for executing statements.

Exercise 1: BEFORE INSERT Trigger

Scenario: You want to automatically set the hire date for any new employee to the current date if it is not provided.

Tasks:

1. Create a trigger on the EMPLOYEES table.

2. The trigger should be a **BEFORE INSERT** trigger.

3. If the HIRE_DATE is NULL, set it to SYSDATE.

4. Insert a new employee without specifying the hire date and verify the trigger sets it.

Exercise 2: AFTER UPDATE Trigger

Scenario: You want to keep track of salary changes in a separate audit table SALARY_AUDIT.

Tasks:

1. Create an audit table SALARY_AUDIT with columns: EMPLOYEE_ID, OLD_SALARY, NEW_SALARY, CHANGE_DATE.

2. Create an **AFTER UPDATE** trigger on EMPLOYEES for the SALARY column.

3. When an employee's salary changes, insert a record into SALARY_AUDIT with old and new salary and the current date.

4. Update an employee's salary and verify the audit table is populated.