# Faculty of Computing

## Year 2 Semester 1 (2025)

IT2140- Database Design and Development          Lab Sheet 08

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**Lab Sheet 08: Nested SQL (Subqueries)**

**Objective**

At the end of this lab session, students should be able to write syntactically correct nested SQL queries using IN, NOT IN, EXISTS, ANY, and ALL, employ both single-row and multiple-row subqueries .

**Exercises 1 - Single-Row Subqueries**

Write SQL queries for the following. Use =, ¡, ¿, ¡=, ¿=, ¡¿ with a subquery that returns a single value. **see Data_Set.sql for reference.**

a. List employees whose salary is greater than the salary of 'Lakmal'.

b. Show the eid, ename, salary of employees whose salary equals the minimum salary in the company.

c. Display departments (did) whose budget is greater than the average salary of all employees.

d. List employees whose salary is not equal to the average salary of all employees.

e. Display employees whose salary is less than the salary of the manager of department 'ITSD'.

**Exercises 2 - Multiple-Row Subqueries**

Write SQL queries for the following. Use **IN/NOT IN/ANY/ALL.** Each task should use a subquery that returns **multiple rows**. — **see Data_Set.sql for reference**

a. List employees who work in any department whose budget ≥ 1,000,000.    *(Hint: Use IN Operator)*

b. Display employees who are not working in the 'Academic' or 'Admin departments.

c. List employees whose salary is greater than ALL employee salaries in 'Admin'.

d. List employees whose salary is greater than ANY salary of employees who work in 'Finance'.

e. Show department IDs where **ALL** assigned employees have salary $\geq 30{,}000$.

**Submission Requirement:**

Complete **Exercises 1-d,c,e and Exercises 2-d,c,e** of this lab sheet and upload your SQL query answers to the **Git repository** provided by your instructor **before end of the day.**

**File Naming Guidelines:**

- Name your submission file as:

    Lab_8_Exercises_1_2.sql

**Additional Instructions:**

- Ensure your SQL queries are well-formatted and include comments where necessary.

- Test your queries before uploading to confirm they run without errors.

- Commit and push your file to the correct Git repository and branch as instructed.