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| **A picture containing logo  Description automatically generated** | **DEPARTMENT OF COMPUTER SYSTEMS ENGINEERING**  **MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO**  **Database Management Systems (4th Semester) 18CS**  **Lab Experiment 8** |

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| **Roll No:** |  | **Date of Conduct:** |  |
| **Submission Date:** |  | **Grade Obtained:** |  |

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| **Problem Recognition (0.3)** | **Completeness & accuracy (0.4)** | **Timeliness (0.3)** | **Score (1.0)** |
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# **Objective:** To study SQL sub-queries.

**Tools:** MySql

## What is subquery in SQL?

A subquery is a SQL query nested inside a larger query.

* A subquery may occur in :
  + - A SELECT clause
  + - A FROM clause
  + - A WHERE clause
* The subquery can be nested inside a SELECT, INSERT, UPDATE, or DELETE statement or inside another subquery.
* A subquery is usually added within the WHERE Clause of another SQL SELECT statement.
* You can use the comparison operators, such as >, <, or =. The comparison operator can also be a multiple-row operator, such as IN, ANY, or ALL.
* A subquery is also called an inner query or inner select, while the statement containing a subquery is also called an outer query or outer select.
* The inner query executes first before its parent query so that the results of an inner query can be passed to the outer query.

You can use a subquery in a SELECT, INSERT, DELETE, or UPDATE statement to perform the following tasks:

* Compare an expression to the result of the query.
* Determine if an expression is included in the results of the query.
* Check whether the query selects any rows.

**Syntax :**

SELECT column\_name [, column\_name ]

FROM table1 [, table2 ]

WHERE column\_name OPERATOR

(SELECT column\_name [, column\_name ]

FROM table1 [, table2 ]

[WHERE])

* The subquery (inner query) executes once before the main query (outer query) executes.
* The main query (outer query) use the subquery result.

**Lab Task**

1. Display the employee name and hire date for all employees in the same department as BLAKE. Exclude blake.
2. Display the employee name and salary for all employees who earn more than average salary.
3. Display the employee name, job and hire date for all employees who report to KING.
4. List the employee details whose salary is greater than the lowest salary of an employee belonging to deptno 20.
5. Which department has the highest Monthly remuneration bill (Salaries of employees)?
6. Display the employees that earn a salary that is higher than the salary of all the clerks. Sort the result on salary from highest to lowest.
7. Create a query to display the name, hire date and salary for all employees who have both the same salary and commission as employee SCOTT.
8. Display the names and salaries of those employees who earn highest salary in their department.