

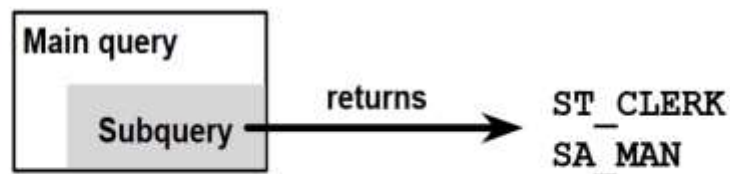
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## Subqueries

- **Single-row subquery**



- **Multiple-row subquery**



1. SELECT last\_name FROM employees WHERE salary > (SELECT salary FROM employees WHERE last\_name = 'Abel');

## Single-Row Subqueries

**Return only one row**

**Use single-row comparison operators**

Operator	Meaning
=	Equal to
>	Greater than
>=	Greater than or equal to
<	Less than
<=	Less than or equal to
<>	Not equal to

2.SELECT last\_name, job\_id FROM employees WHERE job\_id = (SELECT job\_id FROM employees WHERE employee\_id = 141);

3. SELECT last\_name, job\_id, salary FROM employees WHERE job\_id =(SELECT job\_id FROM employees WHERE employee\_id = 141) AND salary > (SELECT salary FROM employees WHERE employee\_id = 143);

### **Using Group Functions in a Subquery**

4.SELECT last\_name, job\_id, salary FROM employees WHERE salary =(SELECT MIN(salary) FROM employees);

### **The HAVING Clause with Subqueries**

5.SELECT department\_id, MIN(salary) FROM employees GROUP BY department\_id HAVING MIN(salary) >(SELECT MIN(salary) FROM employees WHERE department\_id = 50);

6. SELECT job\_id, AVG(salary) FROM employees GROUP BY job\_id HAVING AVG(salary) = (SELECT MIN(AVG(salary)) FROM employees

## **Multiple-Row Subqueries**

**Return more than one row**

**Use multiple-row comparison operators**

Operator	Meaning
IN	Equal to any member in the list
ANY	Compare value to each value returned by the subquery
ALL	Compare value to every value returned by the subquery

### **MULTIPLE ROW SUBQUERY**

7.SELECT last\_name, salary, department\_id FROM employees WHERE salary IN (SELECT MIN(salary) FROM employees GROUP BY department\_id);

**8.** SELECT last\_name, salary, department\_id FROM employees WHERE salary IN (2500, 4200, 4400, 6000, 7000, 8300, 8600, 17000);

### **Using the ANY Operator in Multiple-Row Subqueries**

**9.** SELECT employee\_id, last\_name, job\_id, salary FROM employees WHERE salary < ANY (SELECT salary FROM employees WHERE job\_id = 'IT\_PROG')

### **Using the ALL Operator**

**10.** SELECT employee\_id, last\_name, job\_id, salary FROM employees WHERE salary < ALL (SELECT salary FROM employees WHERE job\_id = 'IT\_PROG')