

## Database Programming with SQL

### 10-4: Correlated Subqueries

#### Practice Activities

##### Objectives

- Identify when correlated subqueries are needed
- Construct correlated subqueries
- Construct named subqueries using the WITH clause

##### Try It / Solve It

1. Explain the main difference between correlated and non-correlated subqueries?
2. Write a query that lists the highest earners for each department. Include the last\_name, department\_id, and the salary for each employee.
3. Examine the following select statement and finish it so that it will return the last\_name, department\_id, and salary of employees who have at least one person reporting to them. So we are effectively looking for managers only. In the partially written SELECT statement, the WHERE clause will work as it is. It is simply testing for the existence of a row in the subquery.

```
SELECT (enter columns here)
FROM (enter table name here) outer
WHERE 'x' IN (SELECT 'x'
              FROM (enter table name here) inner
              WHERE inner(enter column name here) = inner(enter column name here))
```

Finish off the statement by sorting the rows on the department\_id column.

4. Using a WITH clause, write a SELECT statement to list the job\_title of those jobs whose maximum salary is more than half the maximum salary of the entire company. Name your subquery MAX\_CALC\_SAL. Name the columns in the result JOB\_TITLE and JOB\_TOTAL, and sort the result on JOB\_TOTAL in descending order.

Hint: Examine the jobs table. You will need to join JOBS and EMPLOYEES to display the job\_title.