

## Section 15 Programming

# CARTESIAN PRODUCT AND THE JOIN OPERATIONS

When must column names be prefixed by table names in join syntax?

When the same column name appears in more than one table of the query

Will the following statement work?

```
SELECT department_name, last_name  
FROM employees, departments  
WHERE department_id = department_id;
```

No, Oracle will return a column ambiguously defined error.

If table A have 10 rows and table B have 5 rows, how many rows will be returned if you perform a cartesian join on those two tables?

50

Oracle proprietary JOINS can use the WHERE clause for conditions other than the join-condition. True or False?

True

What is the result of a query that selects from two tables but includes no join condition?

A Cartesian product

If table A have 10 rows and table B have 5 rows, how many rows will be returned if you perform a equi-join on those two tables?

It depends on the data found in the two tables.

## NONEQUIJOINS

The following statement is an example of a nonequi-join?

```
SELECT e.last_name, e.salary, j.grade_level  
FROM employees e, job_grades j  
WHERE e.salary  
BETWEEN j.lowest_sal AND j.highest_sal;
```

True or False?

True

Which of the following operators is/are typically used in a nonequijoin?

>=, <=, BETWEEN ...AND

Which statement about joining tables with a non-equijoin is false?

A WHERE clause must specify a column in one table that is compared to a column in the second table

## OUTER JOINS

To perform a valid outer join between DEPARTMENTS and EMPLOYEES to list departments without employees select the correct WHERE clause for the following select statement:

```
SELECT d.department_name, e.last_name
```

```
FROM employees e, departments d
```

```
WHERE
```

```
e.department_id(+) = d.department_id
```

The following is a valid outer join statement:

```
SELECT c.country_name, d.department_name
```

```
FROM countries c, departments d
```

```
WHERE c.country_id (+) = d.country_id (+)
```

True or False?

False

Which symbol is used to perform an outer join?

(+)

The ID column in the CLIENT table that corresponds to the CLIENT\_ID column of the ORDER table contains null values for rows that need to be displayed. Which type of join should you use to display the data?

Outer join