Database Programming

Outer Joins

Objectives

In this lesson, you will learn to:

- Create and execute a SELECT statement to access data from more than one table using an outer join

Purpose

The joins you've studied so far returned rows that either had a matching value in both tables or a value that in one table was between two values in a different table. Those rows that didn't satisfy these conditions were just left out. Sometimes, however, you want all the data from one of the tables to be returned even if no data matches in the other table. If you wanted to know all of the girls or boys who attended a dance, would simply counting the couples dancing work? In Oracle SQL, the missing data can be returned using an outer join.

Outer Join

An outer join is used to see rows that have a corresponding value in another table plus those rows in one of the tables that have no matching value in the other table. To indicate which table may have missing data, use a plus sign (+) after the table's column name in the WHERE clause of the query.

Outer Join (cont.)

Note that an outer join cannot use the IN operator or be linked to another condition by the OR operator.

EMPLOYEE_ID	LAST_NAME	DEPARTMENT_ID
100	King	90
101	Kochhar	90
102	De Haan	90
178	Grant	

DEPARTMENT_ID	DEPARTMENT_NAME
90	Executive
110	Accounting
190	Contracting
210	Human Resources

DEPARTMENT_ID	LAST_NAME
20	Hartstein
20	Fay
110	Higgins
110	Gietz
	Grant

Join With Plus Sign

The query below uses the plus sign to indicate the table whose column is missing data.

```
SELECT d.department_id, e.last_name
FROM employees e, departments d
WHERE e.department_id = d.department_id (+);
```

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Join With Plus Sign (cont.)

The syntax variations of the outer join are shown.

```
SELECT table1.column, table2.column
FROM table1, table2
WHERE table1.column(+) = table2.column;
```

```
SELECT table1.column, table2.column
FROM table1, table2
WHERE table1.column = table2.column(+);
```

```
SELECT table1.column, table2.column
FROM table1, table2
NEVER table1.column(+) = table2.column(+);
```

Terminology

Key terms used in this lesson included:

- Outer Joins

Summary

In this lesson you have learned to:

- Create and execute a SELECT statement to access data from more than one table using an outer join