



Database Programming with SQL 5-2: NULL Functions

Practice Activities Objectives

· Demonstrate and explain the evaluation of a nested function

· List at least four general functions that work with any data type and relate to handling null values

· Explain the use of the COALESCE and the NVL functions

· Explain the use of general functions to deal with null values in data

· Construct and execute a SQL query that correctly applies NVL, NVL2, NULLIF, and COALESCE single-row functions

Vocabulary

Identify the vocabulary word for each definition below.

Converts nulls to an actual value

NVL

Returns the first non-null expression in the list

COALESCE

Examines the first expression; if the first expression is not null, it returns the second expression; if the first expression is null, it returns the third expression NVL2

Compares two expressions; if they are equal, the function returns null; if they are not equal, the function returns the first expression

NULLIF;

Try It / Solve It

Use aliases to make the output more readable.

1. Create a report that shows the Global Fast Foods promotional name, start date, and end date from the f\_promotional\_menus table. If there is an end date, temporarily replace it with “end in two weeks.” If there is no end date, replace it with today’s date.

SELECT NAME, START\_DATE, NVL2(END\_DATE, 'END IN TWO WEEKS', SYSDATE)

FROM F\_PROMOTIONAL\_MENUS

2. Not all Global Fast Foods staff members receive overtime pay. Instead of displaying a null value for these employees, replace null with zero. Include the employee’s last name and overtime rate in the output. Label the overtime rate as “Overtime Status”.

SELECT lAST\_NAME, NVL(OVERTIME\_RATE, 0) "OVERTIME STATUS"

FROM F\_STAFFS

3. The manager of Global Fast Foods has decided to give all staff who currently do not earn overtime an overtime rate of $5.00. Construct a query that displays the last names and the overtime rate for each staff member, substituting $5.00 for each null overtime value.

SELECT lAST\_NAME, NVL2(OVERTIME\_RATE, TO\_char(OVERTIME\_RATE, '$9999.99'), '$5.00') "OVERTIME STATUS"

FROM F\_STAFFS

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4. Not all Global Fast Foods staff members have a manager. Create a query that displays the employee last name and 9999 in the manager ID column for these employees.

SELECT lAST\_NAME, NVL(MANAGER\_ID, '9999') "MANAGER ID"

FROM F\_STAFFS

5. Which statement(s) below will return null if the value of v\_sal is 50? a. SELECT nvl(v\_sal, 50) FROM emp;

b. SELECT nvl2(v\_sal, 50) FROM emp; c. SELECT nullif(v\_sal, 50) FROM emp;

d. SELECT coalesce (v\_sal, Null, 50) FROM emp;

6. What does this query on the Global Fast Foods table return?

SELECT COALESCE(last\_name, to\_char(manager\_id)) as NAME FROM f\_staffs;

THE LAST NAME

7.

a. Create a report listing the first and last names and month of hire for all employees in the EMPLOYEES table (use TO\_CHAR to convert hire\_date to display the month).

SELECT FIRST\_NAME, LAST\_NAME, TO\_CHAR(HIRE\_DATE, 'MONTH' )

FROM EMPLOYEES;

b. Modify the report to display null if the month of hire is September. Use the NULLIF function.

SELECT FIRST\_NAME, LAST\_NAME, NULLIF(TO\_CHAR(HIRE\_DATE, 'MONTH' ), 'SEPTEMBER')

FROM EMPLOYEES;

8. For all null values in the specialty column in the DJs on Demand d\_partners table, substitute “No Specialty.” Show the first name and s

SELECT FIRST\_NAME, NVL(SPECIALTY, 'No Specialty') as specialty

FROM d\_partners;

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