

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.

|  |  |
| --- | --- |
| **NVL** | Converts nulls to an actual value |
| **COALESCE** | Returns the first non-null expression in the list |
| **NVL2** | 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 |
| **NULLIF** | Compares two expressions; if they are equal, the function returns null; if they are not equal, the function returns the first expression |

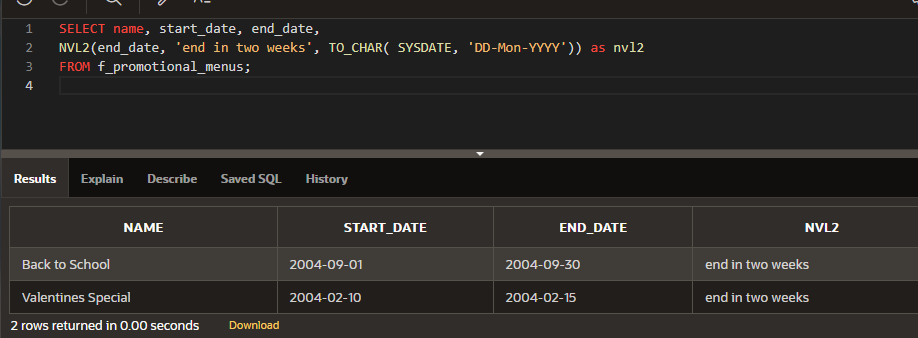
# Try It / Solve It

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, end\_date, NVL2(end\_date, 'end in two weeks', TO\_CHAR( SYSDATE, 'DD-Mon-YYYY')) as nvl2

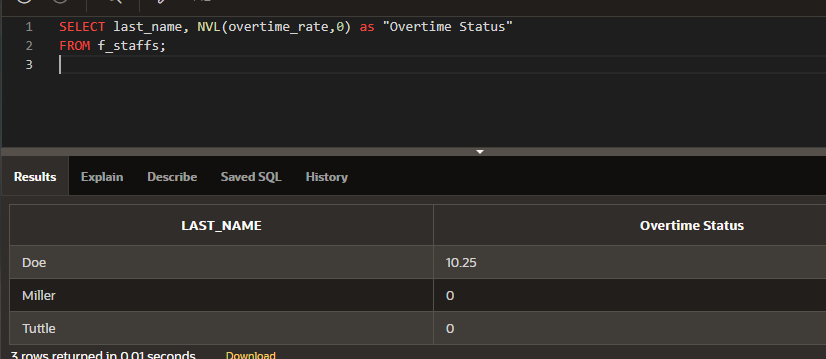
FROM f\_promotional\_menus;



1. 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) as "Overtime Status"

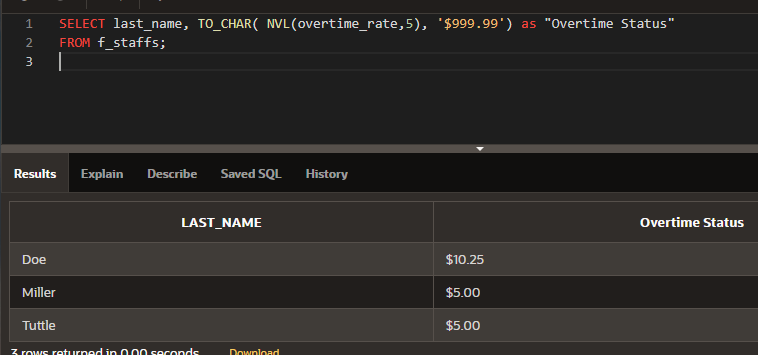
FROM f\_staffs;



1. 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, TO\_CHAR( NVL(overtime\_rate,5), '$999.99') as "Overtime Status"

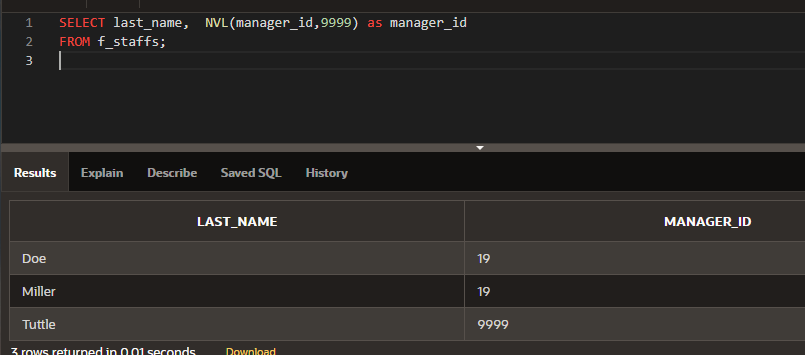
FROM f\_staffs;



1. 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.

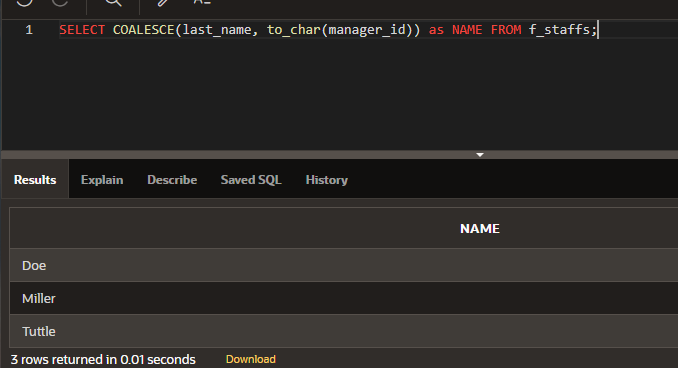
**S**ELECT last\_name,  NVL(manager\_id,9999) as manager\_id

FROM f\_staffs;



1. Which statement(s) below will return null if the value of v\_sal is 50?
   1. SELECT nvl(v\_sal, 50) FROM emp;
   2. SELECT nvl2(v\_sal, 50) FROM emp;
   3. SELECT nullif(v\_sal, 50) FROM emp;
   4. SELECT coalesce (v\_sal, Null, 50) FROM emp;
2. What does this query on the Global Fast Foods table return?

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



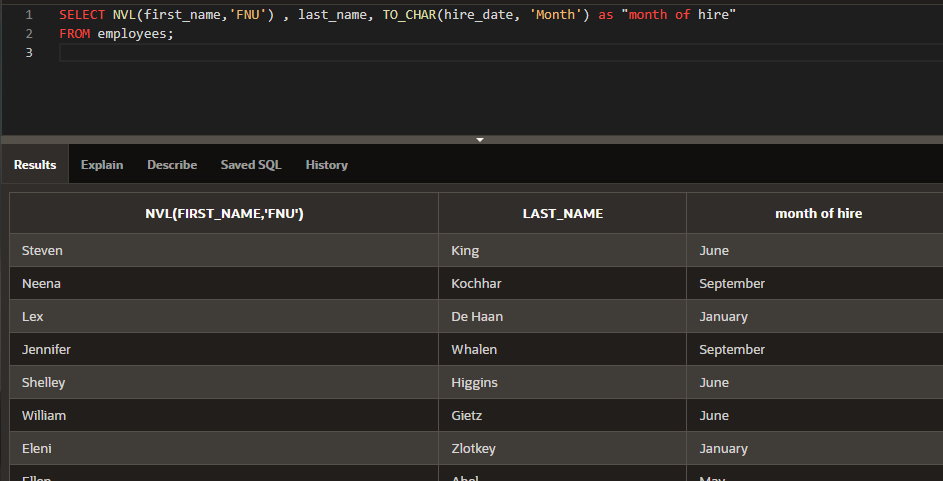
Возвращает ласт нэйм. Если ласт нэйм будет нулл, то вернет преобрахованный к varchar2 manager\_id

7.

* 1. 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 NVL(first\_name,'FNU') , last\_name, TO\_CHAR(hire\_date, 'Month') as "month of hire"

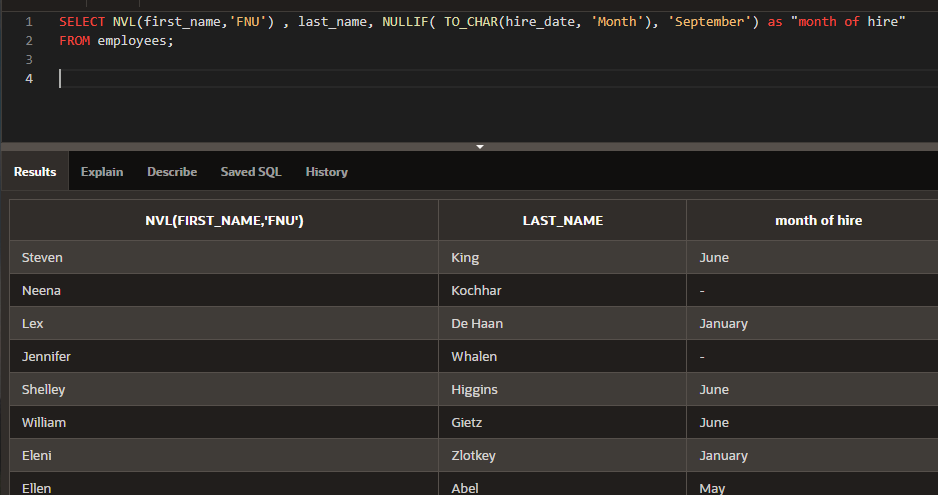
FROM employees;



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

SELECT NVL(first\_name,'FNU') , last\_name, NULLIF( TO\_CHAR(hire\_date, 'Month'), 'September') as "month of hire"

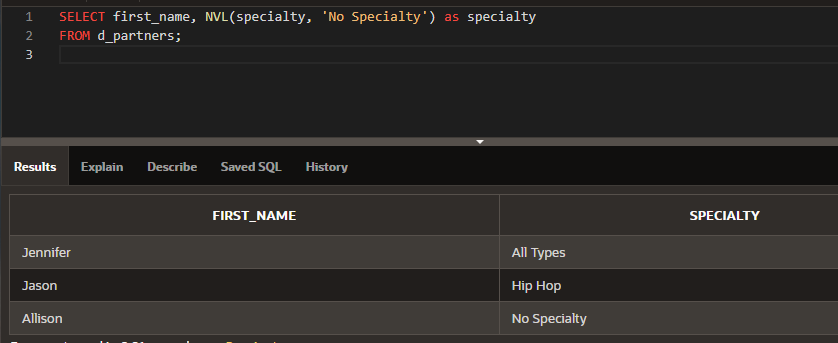
FROM employees;



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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