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PL/SQL static code analysis

Unique rules to find Bugs, Vulnerabilities, Security Hotspots, and Code Smells in your PL/SQL code

All rules 188

Vulnerability 4

Bug 45

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Code Smell 137

Tags

Search by name...

"NULL" should not be compared directly

Bug

"MLSLABEL" should not be used

Bug

"VARCHAR2" and "NVARCHAR2" should be used

Bug

Related "IF/ELSIF" statements and "WHEN" clauses in a "CASE" should not have the same condition

Bug

Identical expressions should not be used on both sides of a binary operator

Bug

All code should be reachable

Bug

Loops with at most one iteration should be refactored

Bug

Variables and columns should not be self-assigned

Bug

"IF" statement conditions should not evaluate unconditionally to "TRUE" or to "FALSE"

Bug

The "result_cache" hint should be avoided

Bug

"GOTO" statements should not be used

Code Smell

"TO_NUMBER" should be used with a format model

Code Smell

Labels should not be reused in inner scopes

Code Smell

"NULL" should not be compared directly

Analyze your code

Bug Major sql

In a Zen-like manner, "NULL" is never equal to anything, even itself. Therefore comparisons using equality operators will always return `False`, even when the value actually `IS NULL`.

For that reason, comparison operators should never be used to make comparisons with `NULL`; `IS NULL` and `IS NOT NULL` should be used instead. This extends as well to empty string (`''`), which is equivalent to `NULL` for some database engines.

Noncompliant Code Example

```
SET SERVEROUTPUT ON

DECLARE
    name VARCHAR2(42) := ''; /* This is equivalent to name := NULL; */
BEGIN
    IF name = '' THEN /* Noncompliant; equivalent to name = NULL & therefore always FALSE*/
        DBMS_OUTPUT.PUT_LINE('True'); /* Unreachable */
    ELSE
        DBMS_OUTPUT.PUT_LINE('False');
    END IF;
END;
/
```

Compliant Solution

```
SET SERVEROUTPUT ON

DECLARE
    name VARCHAR2(42) := ''; /* This is equivalent to name := NULL; */
BEGIN
    IF name IS NULL THEN /* Compliant */
        DBMS_OUTPUT.PUT_LINE('True');
    ELSE
        DBMS_OUTPUT.PUT_LINE('False');
    END IF;
END;
/
```

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