**PL/SQL static code analysis**

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

### [Inserts should include values for non-null columns](https://rules.sonarsource.com/plsql/RSPEC-3618)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-3618)

### [Variables should be declared only once in a scope](https://rules.sonarsource.com/plsql/RSPEC-2567)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-2567)

### [Size should be specified for string variables](https://rules.sonarsource.com/plsql/RSPEC-2545)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-2545)

### [Predefined exceptions should not be overridden](https://rules.sonarsource.com/plsql/RSPEC-2531)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-2531)

### ["NOT NULL" variables should be initialized](https://rules.sonarsource.com/plsql/RSPEC-2526)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-2526)

### ["NCHAR" and "NVARCHAR2" size should not be specified in bytes](https://rules.sonarsource.com/plsql/RSPEC-2522)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-2522)

### ["END LOOP" should be followed by a semicolon](https://rules.sonarsource.com/plsql/RSPEC-2483)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-2483)

### [Constraints should not be applied to types that cannot be constrained](https://rules.sonarsource.com/plsql/RSPEC-2473)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-2473)

### [Improper constraint forms should not be used](https://rules.sonarsource.com/plsql/RSPEC-2470)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-2470)

### [Scale should not be specified for float types](https://rules.sonarsource.com/plsql/RSPEC-2463)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-2463)

### [Constant declarations should contain initialization assignments](https://rules.sonarsource.com/plsql/RSPEC-2455)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-2455)

### ["RAISE\_APPLICATION\_ERROR" should only be used with error codes from -20,000 to -20,999](https://rules.sonarsource.com/plsql/RSPEC-2450)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-2450)

### ["FETCH ... BULK COLLECT INTO" should not be used without a "LIMIT" clause](https://rules.sonarsource.com/plsql/RSPEC-2449)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-2449)

### [Anchored types should not be constrained](https://rules.sonarsource.com/plsql/RSPEC-2448)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-2448)

### ["DELETE" and "UPDATE" statements should contain "WHERE" clauses](https://rules.sonarsource.com/plsql/RSPEC-1590)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-1590)

### ["FORALL" statements should use the "SAVE EXCEPTIONS" clause](https://rules.sonarsource.com/plsql/RSPEC-1074)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-1074)

### [Pipelined functions should have at least one "PIPE ROW" statement and not return an expression (PLS-00633)](https://rules.sonarsource.com/plsql/RSPEC-1058)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-1058)

### [GOTO should not be used to jump backwards](https://rules.sonarsource.com/plsql/RSPEC-999)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-999)

### [Quoted identifiers should not be used](https://rules.sonarsource.com/plsql/RSPEC-2537)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2537)

### [Loop start and end labels should match](https://rules.sonarsource.com/plsql/RSPEC-2476)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2476)

### [Block start and end labels should match](https://rules.sonarsource.com/plsql/RSPEC-2475)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2475)

### [Cipher algorithms should be robust](https://rules.sonarsource.com/plsql/RSPEC-5547)

[Vulnerability](https://rules.sonarsource.com/plsql/RSPEC-5547)

### ["COMMIT" should not be used inside a loop](https://rules.sonarsource.com/plsql/RSPEC-3830)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-3830)

### [Individual "WHERE" clause conditions should not be unconditionally true or false](https://rules.sonarsource.com/plsql/RSPEC-3651)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-3651)

### [Nullable subqueries should not be used in "NOT IN" conditions](https://rules.sonarsource.com/plsql/RSPEC-3641)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-3641)

### ["COMMIT" and "ROLLBACK" should not be called from non-autonomous transaction triggers](https://rules.sonarsource.com/plsql/RSPEC-2558)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-2558)

### [Positional and named arguments should not be mixed in invocations](https://rules.sonarsource.com/plsql/RSPEC-2534)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-2534)

### [Functions should end with "RETURN" statements](https://rules.sonarsource.com/plsql/RSPEC-2466)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-2466)

### [Collections should not be iterated in "FOR" loops](https://rules.sonarsource.com/plsql/RSPEC-2464)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-2464)

### [Using weak hashing algorithms is security-sensitive](https://rules.sonarsource.com/plsql/RSPEC-4790)

[Security Hotspot](https://rules.sonarsource.com/plsql/RSPEC-4790)

### [Dynamically executing code is security-sensitive](https://rules.sonarsource.com/plsql/RSPEC-1523)

[Security Hotspot](https://rules.sonarsource.com/plsql/RSPEC-1523)

### [SQL "JOIN" conditions should involve all joined tables](https://rules.sonarsource.com/plsql/RSPEC-5141)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-5141)

### ["SELECT" statements used as argument of "EXISTS" statements should be selective](https://rules.sonarsource.com/plsql/RSPEC-4801)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-4801)

### ["LIKE" clauses should not be used without wildcards](https://rules.sonarsource.com/plsql/RSPEC-3643)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-3643)

### [Weak "REF CURSOR" types should not be used](https://rules.sonarsource.com/plsql/RSPEC-2570)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2570)

### [Whitespace and control characters in string literals should be explicit](https://rules.sonarsource.com/plsql/RSPEC-2479)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2479)

### [Blocks containing "EXECUTE IMMEDIATE" should trap all exceptions](https://rules.sonarsource.com/plsql/RSPEC-2461)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2461)

### ["EXCEPTION\_INIT -20,NNN" calls should be centralized](https://rules.sonarsource.com/plsql/RSPEC-2458)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2458)

### ["CREATE OR REPLACE" should be used instead of "CREATE"](https://rules.sonarsource.com/plsql/RSPEC-2456)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2456)

### [Block labels should appear on the same lines as "END"](https://rules.sonarsource.com/plsql/RSPEC-2452)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2452)

### ["LOOP ... END LOOP;" constructs should be avoided](https://rules.sonarsource.com/plsql/RSPEC-2340)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2340)

### ["IF" statements should not be nested too deeply](https://rules.sonarsource.com/plsql/RSPEC-134)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-134)

### ["CASE" expressions should end with "ELSE" clauses](https://rules.sonarsource.com/plsql/RSPEC-131)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-131)

### [String literals should not be duplicated](https://rules.sonarsource.com/plsql/RSPEC-1192)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1192)

### [Constant names should comply with a naming convention](https://rules.sonarsource.com/plsql/RSPEC-115)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-115)

### [Output parameters should be assigned](https://rules.sonarsource.com/plsql/RSPEC-4196)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-4196)

### ["ROWNUM" should not be used at the same query level as "ORDER BY"](https://rules.sonarsource.com/plsql/RSPEC-4062)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-4062)

### [All branches in a conditional structure should not have exactly the same implementation](https://rules.sonarsource.com/plsql/RSPEC-3923)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-3923)

### [Strings should only be moved to variables or columns which are large enough to hold them](https://rules.sonarsource.com/plsql/RSPEC-3921)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-3921)

### ["WHERE" clause conditions should not be contradictory](https://rules.sonarsource.com/plsql/RSPEC-3633)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-3633)

### [Unary prefix operators should not be repeated](https://rules.sonarsource.com/plsql/RSPEC-2761)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-2761)

### [DML events clauses should not include multiple "OF" clauses](https://rules.sonarsource.com/plsql/RSPEC-2560)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-2560)

### ["PACKAGE BODY" initialization sections should not contain "RETURN" statements](https://rules.sonarsource.com/plsql/RSPEC-2539)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-2539)

### ["NULL" should not be compared directly](https://rules.sonarsource.com/plsql/RSPEC-2527)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-2527)

### ["MLSLABEL" should not be used](https://rules.sonarsource.com/plsql/RSPEC-2487)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-2487)

### ["VARCHAR2" and "NVARCHAR2" should be used](https://rules.sonarsource.com/plsql/RSPEC-2453)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-2453)

### [Related "IF/ELSIF" statements and "WHEN" clauses in a "CASE" should not have the same condition](https://rules.sonarsource.com/plsql/RSPEC-1862)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-1862)

### [Identical expressions should not be used on both sides of a binary operator](https://rules.sonarsource.com/plsql/RSPEC-1764)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-1764)

### [All code should be reachable](https://rules.sonarsource.com/plsql/RSPEC-1763)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-1763)

### [Loops with at most one iteration should be refactored](https://rules.sonarsource.com/plsql/RSPEC-1751)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-1751)

### [Variables and columns should not be self-assigned](https://rules.sonarsource.com/plsql/RSPEC-1656)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-1656)

### ["IF" statement conditions should not evaluate unconditionally to "TRUE" or to "FALSE"](https://rules.sonarsource.com/plsql/RSPEC-1145)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-1145)

### [The "result\_cache" hint should be avoided](https://rules.sonarsource.com/plsql/RSPEC-1070)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-1070)

### ["GOTO" statements should not be used](https://rules.sonarsource.com/plsql/RSPEC-907)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-907)

### ["TO\_NUMBER" should be used with a format model](https://rules.sonarsource.com/plsql/RSPEC-5047)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-5047)

### [Labels should not be reused in inner scopes](https://rules.sonarsource.com/plsql/RSPEC-4280)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-4280)

### ["FUNCTIONS" should not have "OUT" parameters](https://rules.sonarsource.com/plsql/RSPEC-3874)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-3874)

### [Variables should be nullable](https://rules.sonarsource.com/plsql/RSPEC-2568)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2568)

### ["VARCHAR2" should be used](https://rules.sonarsource.com/plsql/RSPEC-2566)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2566)

### [Native SQL joins should be used](https://rules.sonarsource.com/plsql/RSPEC-2565)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2565)

### ["FORALL" should be used](https://rules.sonarsource.com/plsql/RSPEC-2564)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2564)

### ["FETCH ... BULK COLLECT INTO" should be used](https://rules.sonarsource.com/plsql/RSPEC-2563)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2563)

### [Column aliases should be defined using "AS"](https://rules.sonarsource.com/plsql/RSPEC-2562)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2562)

### [Procedures and functions should be encapsulated in packages](https://rules.sonarsource.com/plsql/RSPEC-2547)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2547)

### [Procedures should have parameters](https://rules.sonarsource.com/plsql/RSPEC-2536)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2536)

### ["EXECUTE IMMEDIATE" should be used instead of DBMS\_SQL procedure calls](https://rules.sonarsource.com/plsql/RSPEC-2535)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2535)

### ["NATURAL JOIN" queries should not be used](https://rules.sonarsource.com/plsql/RSPEC-2521)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2521)

### ["END" statements of labeled loops should be labeled](https://rules.sonarsource.com/plsql/RSPEC-2484)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2484)

### [In labeled loops "EXIT" should exit the label](https://rules.sonarsource.com/plsql/RSPEC-2482)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2482)

### ["EXIT WHEN" should be used rather than "IF ... THEN EXIT; END IF;"](https://rules.sonarsource.com/plsql/RSPEC-2481)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2481)

### ["FOR" loop end conditions should not be hard-coded](https://rules.sonarsource.com/plsql/RSPEC-2480)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2480)

### [Large item lists should not be used with "IN" clauses](https://rules.sonarsource.com/plsql/RSPEC-2472)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2472)

### ["GOTO" should not be used within loops](https://rules.sonarsource.com/plsql/RSPEC-2469)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2469)

### ["FULL OUTER JOINS" should be used with caution](https://rules.sonarsource.com/plsql/RSPEC-2465)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2465)

### ["CASE" should be used rather than "DECODE"](https://rules.sonarsource.com/plsql/RSPEC-2460)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2460)

### ["CROSS JOIN" queries should not be used](https://rules.sonarsource.com/plsql/RSPEC-2457)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2457)

### ["END" statements of labeled blocks should be labeled](https://rules.sonarsource.com/plsql/RSPEC-2451)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2451)

### [Two branches in a conditional structure should not have exactly the same implementation](https://rules.sonarsource.com/plsql/RSPEC-1871)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1871)

### [Unused assignments should be removed](https://rules.sonarsource.com/plsql/RSPEC-1854)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1854)

### ["LIKE" clauses should not start with wildcard characters](https://rules.sonarsource.com/plsql/RSPEC-1739)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1739)

### [Column names should be used in a SQL "ORDER BY" clause](https://rules.sonarsource.com/plsql/RSPEC-1735)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1735)

### [Procedures and functions should be documented](https://rules.sonarsource.com/plsql/RSPEC-1638)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1638)

### [SQL statements should not join too many tables](https://rules.sonarsource.com/plsql/RSPEC-1631)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1631)

### [Function and procedure names should comply with a naming convention](https://rules.sonarsource.com/plsql/RSPEC-1542)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1542)

### [Columns to be read with a "SELECT" statement should be clearly defined](https://rules.sonarsource.com/plsql/RSPEC-1499)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1499)

### ["CASE" structures should not have too many "WHEN" clauses](https://rules.sonarsource.com/plsql/RSPEC-1479)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1479)

### [Deprecated LONG and LONG RAW datatypes should no longer be used](https://rules.sonarsource.com/plsql/RSPEC-1478)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1478)

### [Sections of code should not be commented out](https://rules.sonarsource.com/plsql/RSPEC-125)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-125)

### [Unused procedure and function parameters should be removed](https://rules.sonarsource.com/plsql/RSPEC-1172)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1172)

### [SQL EXISTS subqueries should not be used](https://rules.sonarsource.com/plsql/RSPEC-1138)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1138)

### [Track uses of "FIXME" tags](https://rules.sonarsource.com/plsql/RSPEC-1134)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1134)

### [Variables should not be shadowed](https://rules.sonarsource.com/plsql/RSPEC-1117)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1117)

### [Redundant pairs of parentheses should be removed](https://rules.sonarsource.com/plsql/RSPEC-1110)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1110)

### [Functions and procedures should not have too many parameters](https://rules.sonarsource.com/plsql/RSPEC-107)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-107)

### [Collapsible "if" statements should be merged](https://rules.sonarsource.com/plsql/RSPEC-1066)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1066)

### [Unused labels should be removed](https://rules.sonarsource.com/plsql/RSPEC-1065)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1065)

### [Compound triggers should define at least two triggers](https://rules.sonarsource.com/plsql/RSPEC-1056)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1056)

### ["EXIT" should not be used in loops](https://rules.sonarsource.com/plsql/RSPEC-909)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-909)

### [Jump statements should not be redundant](https://rules.sonarsource.com/plsql/RSPEC-3626)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-3626)

### ["EXCEPTION WHEN ... THEN" clauses should do more than "RAISE"](https://rules.sonarsource.com/plsql/RSPEC-2737)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2737)

### [Single line comments should start with "--"](https://rules.sonarsource.com/plsql/RSPEC-2544)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2544)

### [An "ORDER BY" direction should be specified explicitly](https://rules.sonarsource.com/plsql/RSPEC-2530)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2530)

### [Oracle's join operator (+) should not be used](https://rules.sonarsource.com/plsql/RSPEC-2529)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2529)

### ["cursor%NOTFOUND" should be used instead of "NOT cursor%FOUND"](https://rules.sonarsource.com/plsql/RSPEC-2525)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2525)

### [Object attributes should comply with a naming convention](https://rules.sonarsource.com/plsql/RSPEC-2520)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2520)

### [Record fields should comply with a naming convention](https://rules.sonarsource.com/plsql/RSPEC-2519)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2519)

### [Cursors should follow a naming convention](https://rules.sonarsource.com/plsql/RSPEC-2517)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2517)

### [Types should follow a naming convention](https://rules.sonarsource.com/plsql/RSPEC-2492)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2492)

### [Cursor parameters should follow a naming convention](https://rules.sonarsource.com/plsql/RSPEC-2491)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2491)

### [Exceptions should follow a naming convention](https://rules.sonarsource.com/plsql/RSPEC-2490)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2490)

### [Exceptions should not be ignored](https://rules.sonarsource.com/plsql/RSPEC-2486)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2486)

### [Variables should not be initialized with "NULL"](https://rules.sonarsource.com/plsql/RSPEC-2471)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2471)

### [Boolean checks should not be inverted](https://rules.sonarsource.com/plsql/RSPEC-1940)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1940)

### [Unused local variables should be removed](https://rules.sonarsource.com/plsql/RSPEC-1481)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1481)

### [Package names should comply with a naming convention](https://rules.sonarsource.com/plsql/RSPEC-120)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-120)

### [Variables should comply with a naming convention](https://rules.sonarsource.com/plsql/RSPEC-117)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-117)

### [Return of boolean expressions should not be wrapped into an "if-then-else" statement](https://rules.sonarsource.com/plsql/RSPEC-1126)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1126)

### [Boolean literals should not be redundant](https://rules.sonarsource.com/plsql/RSPEC-1125)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1125)

### [Comments should not be nested](https://rules.sonarsource.com/plsql/RSPEC-1103)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1103)

### ["DBMS\_UTILITY.FORMAT\_ERROR\_STACK" and "FORMAT\_ERROR\_BACKTRACE" should be used together](https://rules.sonarsource.com/plsql/RSPEC-1059)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1059)

### [Procedures should not contain "RETURN" statements](https://rules.sonarsource.com/plsql/RSPEC-1005)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1005)

### [Track uses of "TODO" tags](https://rules.sonarsource.com/plsql/RSPEC-1135)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1135)

### [Neither DES (Data Encryption Standard) nor DESede (3DES) should be used](https://rules.sonarsource.com/plsql/RSPEC-2278)

[Vulnerability](https://rules.sonarsource.com/plsql/RSPEC-2278)

### ["SYNCHRONIZE" should not be used](https://rules.sonarsource.com/plsql/RSPEC-4577)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-4577)

### [Global public variables should not be defined](https://rules.sonarsource.com/plsql/RSPEC-2007)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2007)

### [A primary key should be specified during table creation](https://rules.sonarsource.com/plsql/RSPEC-1614)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1614)

### [Track lack of copyright and license headers](https://rules.sonarsource.com/plsql/RSPEC-1451)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1451)

### [SHA-1 and Message-Digest hash algorithms should not be used in secure contexts](https://rules.sonarsource.com/plsql/RSPEC-2070)

[Vulnerability](https://rules.sonarsource.com/plsql/RSPEC-2070)

### [Sensitive "SYS" owned functions should not be used](https://rules.sonarsource.com/plsql/RSPEC-1057)

[Vulnerability](https://rules.sonarsource.com/plsql/RSPEC-1057)

### ["FORMS\_DDL('COMMIT')" and "FORMS\_DDL('ROLLBACK')" should not be used](https://rules.sonarsource.com/plsql/RSPEC-4576)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-4576)

### ["DBMS\_OUTPUT.PUT\_LINE" should not be used](https://rules.sonarsource.com/plsql/RSPEC-2459)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2459)

### ["WHEN OTHERS" should not be the only exception handler](https://rules.sonarsource.com/plsql/RSPEC-2221)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2221)

### ["INSERT" statements should explicitly list the columns to be set](https://rules.sonarsource.com/plsql/RSPEC-1745)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1745)

### ["%TYPE" and "%ROWTYPE" should not be used in package specification](https://rules.sonarsource.com/plsql/RSPEC-1703)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1703)

### [Functions and procedures should not be too complex](https://rules.sonarsource.com/plsql/RSPEC-1541)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1541)

### ["IF ... ELSEIF" constructs should end with "ELSE" clauses](https://rules.sonarsource.com/plsql/RSPEC-126)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-126)

### ["WHEN OTHERS" clauses should be used for exception handling](https://rules.sonarsource.com/plsql/RSPEC-1041)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1041)

### ["CREATE\_TIMER" should not be used](https://rules.sonarsource.com/plsql/RSPEC-4584)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-4584)

### ["TO\_DATE" and "TO\_TIMESTAMP" should be used with a datetime format model](https://rules.sonarsource.com/plsql/RSPEC-4575)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-4575)

### [Features deprecated in Oracle 12 should not be used](https://rules.sonarsource.com/plsql/RSPEC-4421)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-4421)

### [Tables should be aliased](https://rules.sonarsource.com/plsql/RSPEC-2548)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2548)

### ["SIMPLE\_INTEGER" should be used instead of "PLS\_INTEGER"](https://rules.sonarsource.com/plsql/RSPEC-2543)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2543)

### [Queries should not "SELECT" too many columns](https://rules.sonarsource.com/plsql/RSPEC-2542)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2542)

### ["ROWID" and "UROWID" data types should not be used](https://rules.sonarsource.com/plsql/RSPEC-2541)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2541)

### ["RETURN" should not be used from within a loop](https://rules.sonarsource.com/plsql/RSPEC-2538)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2538)

### ["NUMBER" variables should be declared with precision](https://rules.sonarsource.com/plsql/RSPEC-2528)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2528)

### [Nested subqueries should be avoided](https://rules.sonarsource.com/plsql/RSPEC-2524)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2524)

### [Nested loops should be labeled](https://rules.sonarsource.com/plsql/RSPEC-2477)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2477)

### [Nested blocks should be labeled](https://rules.sonarsource.com/plsql/RSPEC-2474)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2474)

### ["RESULT\_CACHE" should not be used](https://rules.sonarsource.com/plsql/RSPEC-2468)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2468)

### [Columns should be aliased](https://rules.sonarsource.com/plsql/RSPEC-2454)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2454)

### [Track parsing failures](https://rules.sonarsource.com/plsql/RSPEC-2260)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2260)

### [Files should not be too complex](https://rules.sonarsource.com/plsql/RSPEC-1908)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1908)

### [Function and procedure parameters should comply with a naming convention](https://rules.sonarsource.com/plsql/RSPEC-1654)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1654)

### [Magic literals should not be used](https://rules.sonarsource.com/plsql/RSPEC-1583)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1583)

### ["UNION" should be used with caution](https://rules.sonarsource.com/plsql/RSPEC-1571)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1571)

### ["GROUP BY" should not be used in SQL "SELECT" statements](https://rules.sonarsource.com/plsql/RSPEC-1559)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1559)

### [Track breaches of an XPath rule](https://rules.sonarsource.com/plsql/RSPEC-140)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-140)

### [Track uses of "NOSONAR" comments](https://rules.sonarsource.com/plsql/RSPEC-1291)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1291)

### [Track comments matching a regular expression](https://rules.sonarsource.com/plsql/RSPEC-124)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-124)

### [Statements should be on separate lines](https://rules.sonarsource.com/plsql/RSPEC-122)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-122)

### ["WHEN" clauses should not have too many lines](https://rules.sonarsource.com/plsql/RSPEC-1151)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1151)

### [Magic numbers should not be used](https://rules.sonarsource.com/plsql/RSPEC-109)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-109)

### [Files should not have too many lines of code](https://rules.sonarsource.com/plsql/RSPEC-104)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-104)

### [Lines should not be too long](https://rules.sonarsource.com/plsql/RSPEC-103)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-103)

### [Explicitly opened cursors should be closed](https://rules.sonarsource.com/plsql/RSPEC-1573)

[Bug](https://rules.sonarsource.com/plsql/RSPEC-1573)

### [Identifiers should be written in lower case](https://rules.sonarsource.com/plsql/RSPEC-5245)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-5245)

### ["PLS\_INTEGER" types should be used](https://rules.sonarsource.com/plsql/RSPEC-4081)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-4081)

### [Reserved words should be written in upper case](https://rules.sonarsource.com/plsql/RSPEC-2561)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2561)

### [Parameter "IN" mode should be specified explicitly](https://rules.sonarsource.com/plsql/RSPEC-2532)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2532)

### [Lines in a multiline comment should start with "\*"](https://rules.sonarsource.com/plsql/RSPEC-2488)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2488)

### [CASE should be used for sequences of simple tests](https://rules.sonarsource.com/plsql/RSPEC-2145)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-2145)

### [SQL tables should be joined with the "JOIN" keyword](https://rules.sonarsource.com/plsql/RSPEC-1741)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1741)

### [Constraint names should comply with a naming convention](https://rules.sonarsource.com/plsql/RSPEC-1615)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1615)

### [Reserved words should be written in lower case](https://rules.sonarsource.com/plsql/RSPEC-141)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-141)

### [Comments should not be located at the end of lines of code](https://rules.sonarsource.com/plsql/RSPEC-139)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-139)

### [Lines should not end with trailing whitespaces](https://rules.sonarsource.com/plsql/RSPEC-1131)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1131)

### [The "RELIES\_ON" clause should not be used](https://rules.sonarsource.com/plsql/RSPEC-1071)

[Code Smell](https://rules.sonarsource.com/plsql/RSPEC-1071)