1-1: Introduction to PL/SQL

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Contents

Vocabulary

1. Programming language features such as reusable/callable program units, modular blocks, cursors, constants, variables, assignment statements, conditional control statements, and loops

   Procedural Constructs

2. Oracle Corporations standard procedural language for relational databases which allows basic program logic and control flow to be combined with SQL statements

   PL/SQL

Try/Solve it

1. Match the criteria

Criteria	Language
3GL	**PL/SQL**
4GL	**SQL**
Is proprietary to Oracle Corporation	**PL/SQL**
Nonprocedural	**SQL**
Procedural	**PL/SQL**
Is ANSI-compliant	**SQL**

2. In your own words, describe why a procedural language like PL/SQL is needed.

   Error handling, transaction management, reusabillity.

3. List some examples of procedural constructs in PL/SQL.

   (a) Anonymous block
   (b) Variables
   (c) Functions
   (d) Conditional statements
   (e) Loops
   (f) Cursors
   (g) Exceptions
   (h) Triggers

4. In the following code, identify (circle or highlight) examples of these procedural constructs: variable, conditional control statement, reusable/callable program unit, and an assignment statement.

```
DECLARE
    v_first_name varchar2(40); -- variable declaration
    v_last_name varchar2(40); -- variable declaration
    v_first_letter varchar2(1); -- variable declaration
BEGIN
    SELECT first_name, last_name INTO v_first_name, v_last_name
        FROM students
        WHERE student_id = 105; -- conditional statement
    v_first_letter := get_first_letter(v_last_name); -- assignment statement
    IF 'N' > 'v_first_letter' THEN -- conditional statement
        DBMS_OUTPUT.PUT_LINE('The last name for ' || v_first_name || ' '
                             || v_last_name || ' is between A and M');
    ELSE
        DBMS_OUTPUT.PUT_LINE('The last name for ' || v_first_name || ' '
                             || v_last_name || ' is between N and Z');
    END IF;
END;
```

The comments of the code are the "highlights".