JESUÏTES El Clot
Escola del Clot

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CFGS Desenvolupament d'Aplicacions Web
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M02. Bases de dades UF4 BBDD objecte-relacional
Activitat 2.1

Database Programming with PL/SQL
2-1: Using Variables in PL/SQL
Practice Activities

Vocabulary
Identify the vocabulary word for each definition below:

Variables	Used for storage of data and manipulation of stored values.
Parámetros	Values passed to a program by a user or by another program to customize the program.

Try It / Solve It

1. Fill in the blanks.

   A. Variables can be assigned to the output of a _____PL/SQL_____.

   B. Variables can be assigned values in the ____declaration____ section of a PL/SQL block.

   C. Variables can be passed as _____value_____ to subprograms.

2. Identify valid and invalid variable declaration and initialization:
   **Subrayados en rojo los inválidos*

```
number_of_copies    PLS_INTEGER;
printer_name        CONSTANT VARCHAR2(10);
deliver_to          VARCHAR2(10) := Johnson;
by_when             DATE := SYSDATE+1;
```

3. Examine the following anonymous block and choose the appropriate statement.

```
DECLARE
 fname VARCHAR2(25);
 lname VARCHAR2(25) DEFAULT 'fernandez';
BEGIN
 DBMS_OUTPUT.PUT_LINE(fname || ' ' || lname);
END;
```

A. The block will execute successfully and print ‘ fernandez’.
B. The block will give an error because the fname variable is used without initializing.
C. The block will execute successfully and print ‘null fernandez’.
D. The block will give an error because you cannot use the DEFAULT keyword to initialize a variable of the VARCHAR2 type.
E. The block will give an error because the FNAME variable is not declared.

4. In Application Express: (**nota: Poseu les captures de pantalla conforme ho heu executat, mostrant l’execució del script en mode detallat)**

A. Create the following function:

```
CREATE FUNCTION num_characters (p_string IN VARCHAR2)
RETURN INTEGER AS
 v_num_characters INTEGER;
BEGIN
 SELECT LENGTH(p_string) INTO v_num_characters
   FROM dual;
 RETURN v_num_characters;
END;
```

```
FUNCTION NUM_CHARACTERS compiled
```

B. Create and execute the following anonymous block:

```
DECLARE
 v_length_of_string INTEGER;
BEGIN
 v_length_of_string := num_characters('Oracle Corporation');
 DBMS_OUTPUT.PUT_LINE(v_length_of_string);
END;
```

```
anonymous block completed
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```

5. Write an anonymous block that uses a country name as input and prints the highest and lowest elevations for that country. Use the COUNTRIES table. Execute your block three times using United States of America, French Republic, and Japan**.(nota: s'ha de crear i omplir una taula countries amb els valors que vulgueu i amb el noms dels països que diu l'enunciat. A partir d'aquesta taula feu el codi en PL/SQL amb la funcionalitat que diu l'enunciat)**

```
SET SERVEROUTPUT ON;
DECLARE
  v_highest number;
  v_lowest number;
BEGIN
    SELECT c_lowest_elevation,c_highest_elevation
    INTO v_lowest,v_highest
    FROM countries_plsql
    WHERE c_name='Japan';
    DBMS_OUTPUT.PUT_LINE('the lowest elevation is ' || v_lowest);
    DBMS_OUTPUT.PUT_LINE('the highest elevation is ' || v_highest);
END;
```

```
anonymous block completed
the lowest elevation is 100
the highest elevation is 150
```