

Practices for Lesson 3: Declaring PL/SQL Variables

Chapter 3

Practice 3: Declaring PL/SQL Variables

In this practice, you declare PL/SQL variables.

1. Identify valid and invalid identifiers:
 - a. today
 - b. last_name
 - c. today's_date
 - d. Number_of_days_in_February_this_year
 - e. Isleap\$year
 - f. #number
 - g. NUMBER#
 - h. number1to7
2. Identify valid and invalid variable declaration and initialization:
 - a. number_of_copies PLS_INTEGER;
 - b. PRINTER_NAME constant VARCHAR2(10);
 - c. deliver_to VARCHAR2(10):=Johnson;
 - d. by_when DATE:= CURRENT_DATE+1;
3. Examine the following anonymous block, and then select a statement from the following that is true.

```
DECLARE
  v_fname VARCHAR2(20);
  v_lname VARCHAR2(15) DEFAULT 'fernandez';
BEGIN
  DBMS_OUTPUT.PUT_LINE(v_fname || ' ' || v_lname);
END;
```

- a. The block executes successfully and prints "fernandez."
- b. The block produces an error because the `fname` variable is used without initializing.
- c. The block executes successfully and prints "null fernandez."
- d. The block produces an error because you cannot use the `DEFAULT` keyword to initialize a variable of type `VARCHAR2`.
- e. The block produces an error because the `v_fname` variable is not declared.

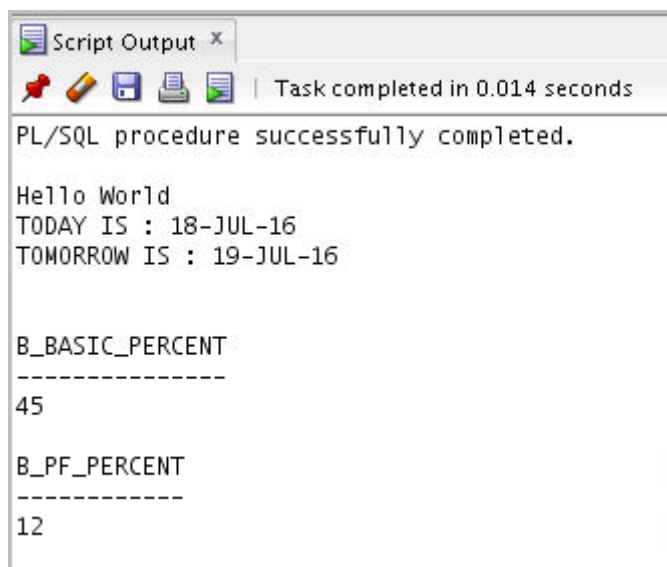
4. Modify an existing anonymous block and save it as a new script.
 - a. Open the `lab_02_02_soln.sql` script, which you created in Practice 2 titled "Introduction to PL/SQL."
 - b. In this PL/SQL block, declare the following variables:
 - 1) `v_today` of type `DATE`. Initialize `today` with `SYSDATE`.
 - 2) `v_tomorrow` of type `DATE`. Use the `%TYPE` attribute to declare this variable.
 - c. In the executable section:
 - 1) Initialize the `v_tomorrow` variable with an expression, which calculates tomorrow's date (add one to the value in `today`)
 - 2) Print the value of `v_today` and `v_tomorrow` after printing "Hello World"
 - d. Save your script as `lab_03_04_soln.sql`, and then execute.

The sample output is as follows (the values of `v_today` and `v_tomorrow` will be different to reflect your current today's and tomorrow's date):

```
PL/SQL procedure successfully completed.

Hello World
TODAY IS : 18-JUL-16
TOMORROW IS : 19-JUL-16
```

5. Edit the `lab_03_04_soln.sql` script.
 - a. Add code to create two bind variables named `b_basic_percent` and `b_pf_percent`. Both bind variables are of type `NUMBER`.
 - b. In the executable section of the PL/SQL block, assign the values 45 and 12 to `b_basic_percent` and `b_pf_percent`, respectively.
 - c. Terminate the PL/SQL block with `/` and display the value of the bind variables by using the `PRINT` command.
 - d. Execute and save your script as `lab_03_05_soln.sql`. The sample output is as follows:



```
Script Output x
Task completed in 0.014 seconds

PL/SQL procedure successfully completed.

Hello World
TODAY IS : 18-JUL-16
TOMORROW IS : 19-JUL-16

B_BASIC_PERCENT
-----
45

B_PF_PERCENT
-----
12
```