**Practice 3**

**PL/SQL Block**

DECLARE  
 v\_weight NUMBER(3) := 600;  
 v\_message VARCHAR2(255) := 'Product 10012';  
BEGIN  
 DECLARE  
 v\_weight NUMBER(3) := 1;  
 v\_message VARCHAR2(255) := 'Product 11001';  
 v\_new\_locn VARCHAR2(50) := 'Europe';  
 BEGIN  
 v\_weight := v\_weight + 1;  
 v\_new\_locn := 'Western ' || v\_new\_locn;  
  
 END;  
 v\_weight := v\_weight + 1;  
 v\_message := v\_message || ' is in stock';  
 v\_new\_locn := 'Western ' || v\_new\_locn;  
  
END;  
/

1. Evaluate the preceding PL/SQL block and determine the data type and value of each of the following variables according to the rules of scoping.

a. The value of v\_weight at position 1 is:

b. The value of v\_new\_locn at position 1 is:

c. The value of v\_weight at position 2 is:

d. The value of v\_message at position 2 is:

e. The value of v\_new\_locn at position 2 is:

**Scope Example**

DECLARE  
 v\_customer VARCHAR2(50) := 'Womansport';  
 v\_credit\_rating VARCHAR2(50) := 'EXCELLENT';  
BEGIN  
 DECLARE  
 v\_customer NUMBER(7) := 201;  
 v\_name VARCHAR2(25) := 'Unisports';   
 BEGIN  
 v\_credit\_rating :='GOOD';   
 …  
 END;  
 …  
END;  
/

2. In the preceding PL/SQL block, determine the values and data types for each of the following cases.

a. The value of v\_customer in the nested block is:

b. The value of name in the nested block is:

c. The value of v\_credit\_rating in the nested block is:

d. The value of v\_customer in the main block is:

e. The value of name in the main block is:

f. The value of v\_credit\_rating in the main block is:

3. Edit lab\_02\_05\_soln.sql.

a. Use single-line comment syntax to comment the lines that create the bind variables.

b. Use multiple-line comments in the executable section to comment the lines that assign values to the bind variables.

c. Declare the v\_basic\_percent and v\_pf\_percent variables and initialize them to 45 and 12, respectively. Also, declare two variables: v\_fname of type VARCHAR2 and size 15, and v\_emp\_sal of type NUMBER and size 10.

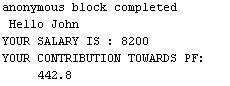
d. Include the following SQL statement in the executable section:

SELECT first\_name, salary   
INTO v\_fname, v\_emp\_sal FROM employees   
WHERE employee\_id=110;

e. Change the line that prints “Hello World” to print “Hello” and the first name. You can comment the lines that display the dates and print the bind variables, if you want to.

f. Calculate the contribution of the employee toward provident fund (PF).  
PF is 12% of the basic salary and basic salary is 45% of the salary. Use the bind variables for the calculation. Try and use only one expression to calculate the PF. Print the employee’s salary and his contribution toward PF.

g. Execute and save your script as lab\_03\_03\_soln.sql. Sample output is as follows:



ANSWERS

1) a) VALUE=2

DATATYPE=NUMBER

b) VALUE=WesternEurope

DATATYPE=VARCHAR2

c) VALUE=601

DATATYPE=NUMBER

d) VALUE=Product 10012is in stock

DATATYPE=VARCHAR2

e) ERROR MESSAGE

2) a) VALUE=201

DATATYPE=NUMBER

b) VALUE=Unisports

DATATYPE=VARCHAR2

c) VALUE=GOOD

DATATYPE=VARCHAR2

d) VALUE=Womansport

DATATYPE=VARCHAR2

e) ERROR MESSAGE

f) VALUE=EXCELLENT

DATATYPE=VARCHAR

3) a) SET SERVEROUTPUT ON

--VARIABLE B\_BASIC\_PERCENT NUMBER;

--VARIABLE B\_PF\_PERCENT NUMBER;

DECLARE

V\_TODAY DATE:=SYSDATE;

V\_TOMORROW V\_TODAY %TYPE;

BEGIN

DBMS\_OUTPUT.PUT\_LINE('HELLO WORLD');

DBMS\_OUTPUT.PUT\_LINE(V\_TODAY);

V\_TOMORROW:=V\_TODAY+1;

DBMS\_OUTPUT.PUT\_LINE(V\_TOMORROW);

:B\_BASIC\_PERCENT:=45;

:B\_PF\_PERCENT:=12;

END;

/

PRINT :B\_BASIC\_PERCENT;

PRINT :B\_PF\_PERCENT;

b) SET SERVEROUTPUT ON

VARIABLE B\_BASIC\_PERCENT NUMBER;

VARIABLE B\_PF\_PERCENT NUMBER;

DECLARE

V\_TODAY DATE:=SYSDATE;

V\_TOMORROW V\_TODAY %TYPE;

BEGIN

DBMS\_OUTPUT.PUT\_LINE('HELLO WORLD');

DBMS\_OUTPUT.PUT\_LINE(V\_TODAY);

V\_TOMORROW:=V\_TODAY+1;

DBMS\_OUTPUT.PUT\_LINE(V\_TOMORROW);

/\*:B\_BASIC\_PERCENT:=45;

:B\_PF\_PERCENT:=12;\*/

END;

/

PRINT :B\_BASIC\_PERCENT;

PRINT :B\_PF\_PERCENT;

c) SET SERVEROUTPUT ON

--VARIABLE B\_BASIC\_PERCENT NUMBER;

--VARIABLE B\_PF\_PERCENT NUMBER;

DECLARE

V\_TODAY DATE:=SYSDATE;

V\_TOMORROW V\_TODAY %TYPE;

V\_BASIC\_PERCENT NUMBER:=45;

V\_PF\_PERCENT NUMBER:=12;

V\_FNAME VARCHAR2(15);

V\_EMP\_SAL NUMBER(10);

BEGIN

DBMS\_OUTPUT.PUT\_LINE('HELLO WORLD');

DBMS\_OUTPUT.PUT\_LINE(V\_TODAY);

V\_TOMORROW:=V\_TODAY+1;

DBMS\_OUTPUT.PUT\_LINE(V\_TOMORROW);

/\*:B\_BASIC\_PERCENT:=45;

:B\_PF\_PERCENT:=12;\*/

END;

/

--PRINT :B\_BASIC\_PERCENT;

--PRINT :B\_PF\_PERCENT;

d) SET SERVEROUTPUT ON

--VARIABLE B\_BASIC\_PERCENT NUMBER;

--VARIABLE B\_PF\_PERCENT NUMBER;

DECLARE

V\_TODAY DATE:=SYSDATE;

V\_TOMORROW V\_TODAY %TYPE;

V\_BASIC\_PERCENT NUMBER:=45;

V\_PF\_PERCENT NUMBER:=12;

V\_FNAME VARCHAR2(15);

V\_EMP\_SAL NUMBER(10);

BEGIN

DBMS\_OUTPUT.PUT\_LINE('HELLO WORLD');

DBMS\_OUTPUT.PUT\_LINE(V\_TODAY);

V\_TOMORROW:=V\_TODAY+1;

DBMS\_OUTPUT.PUT\_LINE(V\_TOMORROW);

/\*:B\_BASIC\_PERCENT:=45;

:B\_PF\_PERCENT:=12;\*/

SELECT FIRST\_NAME,SALARY INTO V\_FNAME,V\_EMP\_SAL FROM EMPLOYEES WHERE EMPLOYEE\_ID=110;

END;

/

--PRINT :B\_BASIC\_PERCENT;

--PRINT :B\_PF\_PERCENT;

e) SET SERVEROUTPUT ON

--VARIABLE B\_BASIC\_PERCENT NUMBER;

--VARIABLE B\_PF\_PERCENT NUMBER;

DECLARE

V\_TODAY DATE:=SYSDATE;

V\_TOMORROW V\_TODAY %TYPE;

V\_BASIC\_PERCENT NUMBER:=45;

V\_PF\_PERCENT NUMBER:=12;

V\_FNAME VARCHAR2(15);

V\_EMP\_SAL NUMBER(10);

BEGIN

SELECT FIRST\_NAME,SALARY INTO V\_FNAME,V\_EMP\_SAL FROM EMPLOYEES WHERE EMPLOYEE\_ID=110;

DBMS\_OUTPUT.PUT\_LINE('HELLO' ||' '|| V\_FNAME);

--DBMS\_OUTPUT.PUT\_LINE(V\_TODAY);

V\_TOMORROW:=V\_TODAY+1;

--DBMS\_OUTPUT.PUT\_LINE(V\_TOMORROW);

/\*:B\_BASIC\_PERCENT:=45;

:B\_PF\_PERCENT:=12;\*/

END;

/

--PRINT :B\_BASIC\_PERCENT;

--PRINT :B\_PF\_PERCENT;

f) SET SERVEROUTPUT ON

VARIABLE B\_BASIC\_PERCENT NUMBER;

VARIABLE B\_PF\_PERCENT NUMBER;

DECLARE

V\_TODAY DATE:=SYSDATE;

V\_TOMORROW V\_TODAY %TYPE;

V\_BASIC\_PERCENT NUMBER:=45;

V\_PF\_PERCENT NUMBER:=12;

V\_FNAME VARCHAR2(15);

V\_EMP\_SAL NUMBER(10);

BEGIN

SELECT FIRST\_NAME,SALARY INTO V\_FNAME,V\_EMP\_SAL FROM EMPLOYEES WHERE EMPLOYEE\_ID=110;

:B\_PF\_PERCENT:=(V\_EMP\_SAL\*0.45)\*0.12;

DBMS\_OUTPUT.PUT\_LINE('SALARY:'||' '||V\_EMP\_SAL);

DBMS\_OUTPUT.PUT\_LINE('PF:'||' '||:B\_PF\_PERCENT);

DBMS\_OUTPUT.PUT\_LINE('HELLO' || V\_FNAME);

--DBMS\_OUTPUT.PUT\_LINE(V\_TODAY);

V\_TOMORROW:=V\_TODAY+1;

--DBMS\_OUTPUT.PUT\_LINE(V\_TOMORROW);

/\*:B\_BASIC\_PERCENT:=45;

:B\_PF\_PERCENT:=12;\*/

END;

/

--PRINT :B\_BASIC\_PERCENT;

--PRINT :B\_PF\_PERCENT;