Name: Ankur Prajapati

StudentID: N01324892

Lab Assignment - 2

Practice 1: writing executable Statements

A) Evaluation of code:

Question	Data Type	Value
A	NUMBER (3)	2
B	VARCHAR2 (50)	Western Europe
C	NUMBER (3)	3
D	VARCHAR2 (255)	Product 11001 is in stock
E	VARCHAR2 (50)	Western Western Europe

B) Evaluation of Code:

Question	Data Type	Value
A	NUMBER (7)	201
B	VARCHAR2 (25)	Unisports
C	VARCHAR2 (50)	GOOD
D	VARCHAR2 (50)	Womansport
E		Will give an Error
F	VARCHAR2 (50)	EXCELLENT

C) Edit the above Script:

Part a answer:

--VARIABLE b_basic_percent NUMBER
--VARIABLE b_pf_percent NUMBER

Part b answer:

/*:b_basic_percent := 45;
:b_pf_percent := 12;*/

```
----------------------------------------------------Lab ----------------------------------------

SET SERVEROUTPUT ON
--VARIABLE b_basic_percent NUMBER
--VARIABLE b_pf_percent NUMBER
BEGIN
    /*:b_basic_percent := 45;
    :b_pf_percent := 12;*/

END;
/
PRINT b_basic_percent
PRINT b_pf_percent
```

Practice 2: Use above Script and Edit it as follow:

1. Declaration of Variable

```
48
49  SET SERVEROUTPUT ON
50  --VARIABLE b_basic_percent NUMBER
51  --VARIABLE b_pf_percent NUMBER
52  DECLARE
53      v_basic_percent NUMBER := 45;
54      v_pf_percent NUMBER := 12;
55  BEGIN
```

2. Declaration of 2 additional variables

```
SET SERVEROUTPUT ON
--VARIABLE b_basic_percent NUMBER
--VARIABLE b_pf_percent NUMBER
DECLARE
    v_basic_percent NUMBER := 45;
    v_pf_percent NUMBER := 12;
    v_fname VARCHAR2(15);
    v_emp_sal NUMBER(10);
BEGIN
```

2(d)

```
    /*: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;
```

2(e)

```
    SELECT first_name, salary INTO v_fname, v_emp_sal FROM employees
END;
    DBMS_OUTPUT.PUT_LINE(' Hello ' || v_fname);
    /*DBMS_OUTPUT.PUT_LINE('Today is:' || v_today);
    DBMS_OUTPUT.PUT_LINE('Tomorrow is: ' || v_tomorrow);*/
/
--PRINT b_basic_percent
--PRINT b_pf_percent
```

2(f)

```
48
49  SET SERVEROUTPUT ON
50  --VARIABLE b_basic_percent NUMBER
51  --VARIABLE b_pf_percent NUMBER
52  DECLARE
53      v_basic_percent NUMBER := 45;
54      v_pf_percent NUMBER := 12;
55      v_fname VARCHAR2(15);
56      v_emp_sal NUMBER(10);
57  BEGIN
58      /*:b_basic_percent := 45;
59      :b_pf_percent := 12;*/
60      SELECT first_name, salary INTO v_fname, v_emp_sal FROM employees WHERE employee_id = 110;
61      DBMS_OUTPUT.PUT_LINE(' Hello ' || v_fname);
62      DBMS_OUTPUT.PUT_LINE(' Your Salary is: ' || v_emp_sal);
63      DBMS_OUTPUT.PUT_LINE(' Your Contribution towards PF: ' || v_emp_sal * v_basic_percent/100 * v_pf_percent/ 100);
64  END;
65      /*DBMS_OUTPUT.PUT_LINE('Today is:' || v_today);
66      DBMS_OUTPUT.PUT_LINE('Tomorrow is: ' || v_tomorrow);*/
67  /
68  --PRINT b_basic_percent
69  --PRINT b_pf_percent
70
```

2(g)

```
47  ------------------------------------------------Lab ----------------------------------------
48
49  SET SERVEROUTPUT ON
50  --VARIABLE b_basic_percent NUMBER
51  --VARIABLE b_pf_percent NUMBER
52  DECLARE
53      v_basic_percent NUMBER := 45;
54      v_pf_percent NUMBER := 12;
55      v_fname VARCHAR2(15);
56      v_emp_sal NUMBER(10);
57  BEGIN
58      /*:b_basic_percent := 45;
59      :b_pf_percent := 12;*/
60      SELECT first_name, salary INTO v_fname, v_emp_sal FROM employees WHERE employee_id = 110;
61      DBMS_OUTPUT.PUT_LINE(' Hello ' || v_fname);
62      DBMS_OUTPUT.PUT_LINE(' Your Salary is: ' || v_emp_sal);
63      DBMS_OUTPUT.PUT_LINE(' Your Contribution towards PF: ' || v_emp_sal * v_basic_percent/100 * v_pf_percent/ 100);
64  END;
65      /*DBMS_OUTPUT.PUT_LINE('Today is:' || v_today);
66      DBMS_OUTPUT.PUT_LINE('Tomorrow is: ' || v_tomorrow);*/
67  /
68  --PRINT b_basic_percent
69  --PRINT b_pf_percent
70
71
72
```

Script Output

Task completed in 0.147 seconds

```
Hello John
 Your Salary is: 8200
 Your Contribution towards PF: 442.8


PL/SQL procedure successfully completed.
```

Practice 3:

a) Identify the Errors in the code:

```
DECLARE
   "WORLD" VARCHAR2(10) := 'world';
   "DECLARE" VARCHAR2(10) := 'declare';
BEGIN
   DBMS_OUTPUT.Put_Line(World);
   DBMS_Output.Put_Line("Declare");
end;
/
```

Error:
identifier 'Declare' must be declared.
Gives a compilation Error.

b) Add a single Line comment to wherever applicable

```
DECLARE
    some_condition BOOLEAN; --Declaration of variable named some_condition with data type Boolean
    pi NUMBER := 3.1415926;
    radius NUMBER := 10;--Assign value 10 to radius
    area NUMBER;--Declaration of variable Area
BEGIN
```

c) Add the multi-line comments to the following block.

```
BEGIN
    /*
    Making the condition True
    for the some_condition variable
    */
    IF 2 + 2 = 4 THEN
        some_condition := TRUE;
    /*
    Calculating Area for a circle
    */
    area := pi * radius**2;
    DBMS_OUTPUT.PUT_LINE('The area of the circle is:' || area);
END;
```

d) Analyse the code and comment on the operator precedence and parentheses used in expressions:

1. DBMS_OUTPUT.PUT_LINE('8 + 20 / 4 = ' || (8 + 20 / 4)); and
   DBMS_OUTPUT.PUT_LINE(('20 / 4 + 8 = ' || (20 / 4 + 8)));

In these first / gets executed and after that + gets executed.

2. DBMS_OUTPUT.PUT_LINE(('7 + 9 / 3 = ' || (7 + 9 / 3)));

In this first / gets executed and then after that +.

3. DBMS_OUTPUT.PUT_LINE((‘7 + 9 / 3 = ’ || (7 + 9) / 3));
   In this () will be executed first that means 7+9 and after that the / gets executed that means 16/3.

4. DBMS_OUTPUT.PUT_LINE(‘(salary * 0.08) + (commission * 0.12) = ’ || (salary * 0.08) + (commission * 0.12));

   In this both the () gets executed first.

   That means (salary * 0.08) and (commission * 0.12)

   After that the + get executed: (salary * 0.08) + (commission * 0.12)

5. DBMS_OUTPUT.PUT_LINE(‘salary * 0.08 + commission * 0.12 = ’ || (salary * 0.08 + commission * 0.12));

   In this the * gets executed first and after that the + gets executed.