Pl/Sql Oracle Database Source code

**Variable Declaration and Initialization**

1. SET SERVEROUTPUT ON;
2. DECLARE
3. v varchar2(20) := 2 + 25 \* 3;
4. BEGIN
5. dbms\_output.put\_line(v);
6. END;
7. -----------------------===================-----------------------
8. DECLARE
9. v\_text varchar2(50) NOT NULL DEFAULT 'Hello';
10. v\_number1 number := 50;
11. v\_number2 number(2) := 50.42;
12. v\_number3 number(10,2) := 50.42;
13. v\_number4 PLS\_INTEGER := 50;
14. v\_number5 BINARY\_float := 50.42;
15. v\_DATE1 DATE := '22-NOV-18 12:01:32';
16. v\_DATE2 timestamp := systimestamp;
17. v\_DATE3 timestamp(9) WITH TIME ZONE := systimestamp;
18. v\_DATE4 interval day(4) to second (3) := '124 02:05:21.012 ';
19. v\_DATE5 interval year to month := '12-3';
20. BEGIN
21. V\_TEXT := 'PL/SQL' || 'Course';
22. DBMS\_OUTPUT.PUT\_LINE(V\_TEXT);
23. DBMS\_OUTPUT.PUT\_LINE(v\_number1);
24. DBMS\_OUTPUT.PUT\_LINE(v\_number2);
25. DBMS\_OUTPUT.PUT\_LINE(v\_number3);
26. DBMS\_OUTPUT.PUT\_LINE(v\_number4);
27. DBMS\_OUTPUT.PUT\_LINE(v\_number5);
28. DBMS\_OUTPUT.PUT\_LINE(v\_DATE1);
29. DBMS\_OUTPUT.PUT\_LINE(v\_DATE2);
30. DBMS\_OUTPUT.PUT\_LINE(v\_DATE3);
31. DBMS\_OUTPUT.PUT\_LINE(v\_DATE4);
32. DBMS\_OUTPUT.PUT\_LINE(v\_DATE5);
33. END;
34. ----------------==================================---------------
35. ----------------USING BOOLEAN DATA TYPE in PL/SQL----------------
36. ----------------==================================---------------
37. DECLARE
38. v\_boolean boolean := true;
39. BEGIN
40. dbms\_output.put\_line(sys.diutil.bool\_to\_int(v\_boolean));
41. END;

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PL SQL Variable Scope (Code Samples)

1. ------------------------VARIABLE SCOPE--------------------------
2. begin <<outer>>
3. DECLARE
4. --v\_outer VARCHAR2(50) := 'Outer Variable!';
5. v\_text VARCHAR2(20) := 'Out-text';
6. BEGIN
7. DECLARE
8. v\_text VARCHAR2(20) := 'In-text';
9. v\_inner VARCHAR2(30) := 'Inner Variable';
10. BEGIN
11. --dbms\_output.put\_line('inside -> ' || v\_outer);
12. --dbms\_output.put\_line('inside -> ' || v\_inner);
13. dbms\_output.put\_line('inner -> ' || v\_text);
14. dbms\_output.put\_line('outer -> ' || outer.v\_text);
15. END;
16. --dbms\_output.put\_line('inside -> ' || v\_inner);
17. --dbms\_output.put\_line(v\_outer);
18. dbms\_output.put\_line(v\_text);
19. END;
20. END outer;

Control Structures & IF Statements (Code Samples)

1. SET SERVEROUTPUT ON;
2. DECLARE
3. v\_number NUMBER := 30;
4. BEGIN
5. IF v\_number < 10 THEN
6. dbms\_output.put\_line('I am smaller than 10');
7. ELSIF v\_number < 20 THEN
8. dbms\_output.put\_line('I am smaller than 20');
9. ELSIF v\_number < 30 THEN
10. dbms\_output.put\_line('I am smaller than 30');
11. ELSE
12. dbms\_output.put\_line('I am equal or greater than 30');
13. END IF;
14. END;
16. /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Example 2 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/
17. DECLARE
18. v\_number NUMBER  := 5;
19. v\_name VARCHAR2(30) := 'Adam';
20. BEGIN
21. IF v\_number < 10 OR v\_name = 'Carol' THEN
22. dbms\_output.put\_line('HI');
23. dbms\_output.put\_line('I am smaller than 10');
24. ELSIF v\_number < 20 THEN
25. dbms\_output.put\_line('I am smaller than 20');
26. ELSIF v\_number < 30 THEN
27. dbms\_output.put\_line('I am smaller than 30');
28. ELSE
29. IF v\_number IS NULL THEN
30. dbms\_output.put\_line('The number is null..');
31. ELSE
32. dbms\_output.put\_line('I am equal or greater than 30');
33. END IF;
34. END IF;
35. END;

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Case Expressions (Code Samples)

1. DECLARE
2. v\_job\_code VARCHAR2(10) := 'SA\_MAN';
3. v\_salary\_increase NUMBER;
4. BEGIN
5. v\_salary\_increase := CASE v\_job\_code
6. WHEN 'SA\_MAN' THEN 0.2
7. WHEN 'SA\_REP' THEN 0.3
8. ELSE 0
9. END;
10. dbms\_output.put\_line('Your salary increase is : '|| v\_salary\_increase);
11. END;

1. /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Searched Case Expression \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/
2. DECLARE
3. v\_job\_code VARCHAR2(10) := 'IT\_PROG';
4. v\_department VARCHAR2(10) := 'IT';
5. v\_salary\_increase NUMBER;
6. BEGIN
7. v\_salary\_increase:=CASE
8. WHEN v\_job\_code = 'SA\_MAN' THEN 0.2
9. WHEN v\_department = 'IT' AND v\_job\_code = 'IT\_PROG' THEN 0.3
10. ELSE 0
11. END;
12. dbms\_output.put\_line('Your salary increase is : '|| v\_salary\_increase);
13. END;
14. /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/
16. /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* CASE Statements \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/
17. DECLARE
18. v\_job\_code VARCHAR2(10) := 'IT\_PROG';
19. v\_department VARCHAR2(10) := 'IT';
20. v\_salary\_increase NUMBER;
21. BEGIN
22. CASE
23. WHEN v\_job\_code = 'SA\_MAN' THEN
24. v\_salary\_increase := 0.2;
25. dbms\_output.put\_line('The salary increase for a Sales Manager is: '|| v\_salary\_increase);
26. WHEN v\_department = 'IT' AND v\_job\_code = 'IT\_PROG' THEN
27. v\_salary\_increase := 0.2;
28. dbms\_output.put\_line('The salary increase for a Sales Manager is: '|| v\_salary\_increase);
29. ELSE
30. v\_salary\_increase := 0;
31. dbms\_output.put\_line('The salary increase for this job code is: '|| v\_salary\_increase);
32. END CASE;
33. END;

Loops:

1. DECLARE
2. v\_counter NUMBER(2) := 1;
3. BEGIN
4. LOOP
5. dbms\_output.put\_line('My counter is : '|| v\_counter);
6. v\_counter := v\_counter + 1;
7. --IF v\_counter = 10 THEN
8. -- dbms\_output.put\_line('Now I reached : '|| v\_counter);
9. -- EXIT;
10. --END IF;
11. EXIT WHEN v\_counter > 10;
12. END LOOP;
13. END;

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While Loop

1. DECLARE
2. v\_counter NUMBER(2) := 1;
3. BEGIN
4. WHILE v\_counter <= 10 LOOP
5. dbms\_output.put\_line('My counter is : '|| v\_counter);
6. v\_counter := v\_counter + 1;
7. -- EXIT WHEN v\_counter > 3;
8. END LOOP;
9. END;

For Loop

1. BEGIN
2. FOR i IN REVERSE 1..3 LOOP
3. dbms\_output.put\_line('My counter is : ' || i);
4. END LOOP;
5. END;

Nested Loop

1. DECLARE
2. v\_inner NUMBER := 1;
3. BEGIN
4. FOR v\_outer IN 1..5 LOOP
5. dbms\_output.put\_line(' value is : ' || v\_outer );
6. v\_inner := 1;
7. LOOP
8. v\_inner := v\_inner+1;
9. dbms\_output.put\_line(‘value is : ' || v\_inner );
10. EXIT WHEN v\_inner \* v\_outer >= 15;
11. END LOOP;
12. END LOOP;
13. END;

Continue

1. DECLARE
2. v\_inner NUMBER := 1;
3. BEGIN
4. FOR v\_outer IN 1..10 LOOP
5. dbms\_output.put\_line('My outer value is : ' || v\_outer );
6. v\_inner := 1;
7. WHILE v\_inner \* v\_outer < 15 LOOP
8. v\_inner := v\_inner + 1;
9. CONTINUE WHEN MOD(v\_inner \* v\_outer,3) = 0;
10. dbms\_output.put\_line(' My inner value is : ' || v\_inner );
11. END LOOP;
12. END LOOP;
13. END;

Goto

1. DECLARE
2. v\_searched\_number NUMBER := 22;
3. v\_is\_prime BOOLEAN := true;
4. BEGIN
5. FOR x IN 2..v\_searched\_number-1 LOOP
6. IF v\_searched\_number MOD x = 0 THEN
7. dbms\_output.put\_line(v\_searched\_number|| ' is not a prime number..');
8. v\_is\_prime := false;
9. GOTO end\_point;
10. END IF;
11. END LOOP;
12. IF v\_is\_prime THEN
13. dbms\_output.put\_line(v\_searched\_number|| ' is a prime number..');
14. END IF;
15. <<end\_point>>
16. dbms\_output.put\_line('Check complete..');
17. END;