

```
cmichals@oraclelinux:~
Enter user-name: set SERVEROUTPUT on
SP2-0306: Invalid option.
Usage: CONN[ECT] [{logon|/|proxy} [AS {SYSDBA|SYSOPER|SYSASM|SYSBACKUP|SYSDG|SYSKM}] [edition=value]]
where <logon> ::= <username>[/<password>][@<connect_identifier>]
      <proxy> ::= <proxyuser>[<username>][/<password>][@<connect_identifier>]
Enter user-name: cmichals
Enter password:
Last Successful login time: Thu Feb 05 2015 17:28:49 -05:00

Connected to:
Oracle Database 12c Enterprise Edition Release 12.1.0.1.0 - 64bit Production
With the Partitioning, OLAP, Advanced Analytics and Real Application Testing options

SQL> set SERVEROUTPUT on
SQL> ;
SP2-0223: No lines in SQL buffer.
SQL> @plSQL1
Hello, World!Welcome...*****

PL/SQL procedure successfully completed.

SQL> █
```

```
--
===== 1 =====
-- this is a comment
--
/* this
   is
   a
   comment
*/
DECLARE
    btest BOOLEAN := FALSE;
    message varchar2(20) := 'Hello, World!';
BEGIN
    if btest then
        dbms_output.put_line(message || 'Welcome to COP 4703' || '*****, ' ||
'and have a since day!!');
    else
        dbms_output.put_line(message || 'Welcome...' || '*****, ');
    end if;

END;
/
```



```
cmichals@oraclelinux:~
Player: Lin
      Scored: 23
Player: Bass
      Scored: 9

PL/SQL procedure successfully completed.

SQL> @p1SQL2
      dbms_output.put_line('The sum is: ' || sum);
                                         *
ERROR at line 9:
ORA-06550: line 9, column 44:
PLS-00103: Encountered the symbol ")" when expecting one of the following:
(
ORA-06550: line 14, column 4:
PLS-00103: Encountered the symbol "end-of-file" when expecting one of the
following:
end not pragma final instantiable order overriding static
member constructor map

SQL> █
```

===== 2 =====

-- try this program as is, then change variable name sum2 to sum & retry,
-- explain what happened.

```
DECLARE
  firstValue integer := 5;
  secondValue integer := 15;
  sum2 integer;
  ratio real;
BEGIN
  sum2 := firstValue + secondValue ;

  dbms_output.put_line('The sum is: ' || sum2);

  ratio := firstValue/secondValue;

  dbms_output.put_line('Ratio is: ' || ratio);
END;
/
```

```
cmichals@oraclelinux:~  
SQL> @plSQL3  
13  
14  
15  
16  
17  
18 ;  
19 /  
;  
*  
ERROR at line 18:  
ORA-06550: line 18, column 1:  
PLS-00103: Encountered the symbol ";"  
  
SQL> @plSQL3  
i is: 1 and j is: 1  
i is: 1 and j is: 2  
i is: 1 and j is: 3  
i is: 2 and j is: 1  
i is: 2 and j is: 2  
i is: 2 and j is: 3  
i is: 3 and j is: 1  
i is: 3 and j is: 2  
i is: 3 and j is: 3  
  
PL/SQL procedure successfully completed.  
SQL> █
```

===== 3 =====

```
DECLARE  
    i number(1);  
    j number(1);  
BEGIN  
    << outer_loop >>  
    FOR i IN 1..3 LOOP  
        << inner_loop >>  
        FOR j IN 1..3 LOOP  
            dbms_output.put_line('i is: ' || i || ' and j is: ' || j);  
        END loop inner_loop;  
    END loop outer_loop;  
END;  
/
```

```
cmichals@oraclelinux:~  
SQL> @plSQL3  
i is: 1 and j is: 1  
i is: 1 and j is: 2  
i is: 1 and j is: 3  
i is: 2 and j is: 1  
i is: 2 and j is: 2  
i is: 2 and j is: 3  
i is: 3 and j is: 1  
i is: 3 and j is: 2  
i is: 3 and j is: 3  
  
PL/SQL procedure successfully completed.  
  
SQL> @plSQL4  
value is: 10  
value is: 11  
value is: 12  
value is: 13  
value is: 14  
value is: 15  
value is: 16  
value is: 17  
value is: 18  
value is: 19  
  
PL/SQL procedure successfully completed.  
  
SQL> █
```

===== 4 =====

```
DECLARE  
    val number(2) := 10;  
BEGIN  
    WHILE val < 20 LOOP  
        dbms_output.put_line('value is: ' || val );  
        val := val + 1;  
    END LOOP;  
END;  
/
```

```
cmichals@oraclelinux:~
PL/SQL procedure successfully completed.

SQL> @plSQL4
value is: 10
value is: 11
value is: 12
value is: 13
value is: 14
value is: 15
value is: 16
value is: 17
value is: 18
value is: 19

PL/SQL procedure successfully completed.

SQL> @plSQL5
value is: 10
value is: 11
value is: 12
value is: 13
value is: 14
value is: 16
value is: 17
value is: 18
value is: 19

PL/SQL procedure successfully completed.

SQL> █
```

===== 5 =====

```
DECLARE
    val number(2) := 10;
BEGIN
    -- while loop execution
    WHILE val < 20 LOOP
        dbms_output.put_line ('value is: ' || val);
        val := val + 1;
        IF val = 15 THEN
            val := val + 1;
            CONTINUE; -- skip the loop using the CONTINUE statement
        END IF;
    END LOOP;
END;
/
```

```
cmichals@oraclelinux:~  
SQL> @plSQL5  
value is: 10  
value is: 11  
value is: 12  
value is: 13  
value is: 14  
value is: 16  
value is: 17  
value is: 18  
value is: 19  
  
PL/SQL procedure successfully completed.  
  
SQL> @plSQL6  
Total =5 players  
Player: Wade  
        Scored: 25  
Player: Curry  
        Scored: 43  
Player: Alan  
        Scored: 12  
Player: Lin  
        Scored: 23  
Player: Bass  
        Scored: 9  
  
PL/SQL procedure successfully completed.  
  
SQL> █
```

===== 6 =====

```
DECLARE  
    type playersarray IS VARRAY(5) OF VARCHAR2(30);  
    type scores IS VARRAY(5) OF INTEGER;  
    names playersarray;  
    points scores;  
    total integer;  
BEGIN  
    names := playersarray ('Wade', 'Curry', 'Alan', 'Lin', 'Bass');  
    points:= scores (25, 43, 12, 23, 9);  
    total := names.count;  
    dbms_output.put_line('Total =|| total || ' players');  
    FOR i in 1 .. total LOOP  
        dbms_output.put_line('Player: ' || names(i) || '  
        Scored: ' || points(i));  
    END LOOP;  
END;  
/  
=====
```