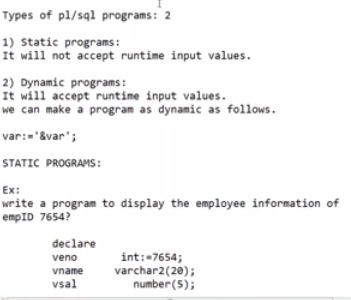
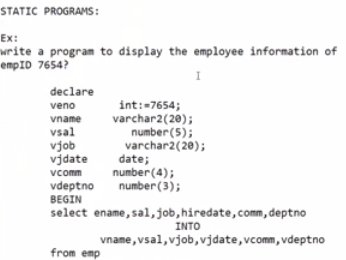
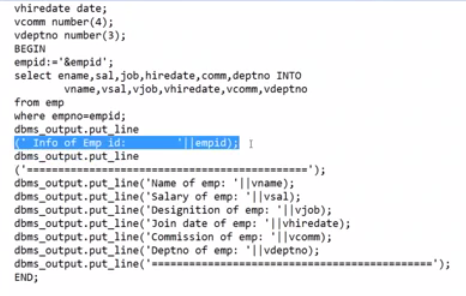
DYNAMIC PROGRAMS : using &

Displaying the values into next line using chr(10).









SQL> --this is caslled dynamic prog, bcz we are using run time input values.

SQL> -- chr(10) means, switch the immediate content into new line

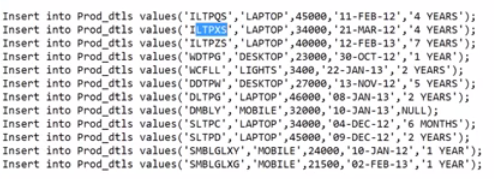
SQL> --chr(10)|| is exact syntax, but in unix it is chr(13)||

SQL> -- here we are getting output

SQL> --but we need to declare 6 variables to get the 6 values from tabvle.

SQL> -- if the table contains 100 columns , then we need to declare 100 variables to get 100 values from table.

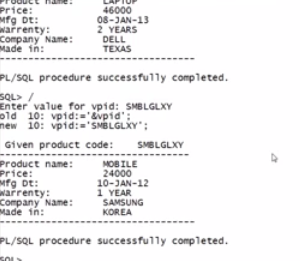
SQL> -- so, execution time increases and then performance decreases.



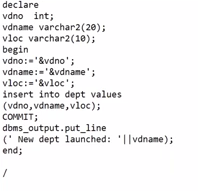












There are 2 drawbacks in today topic

1. When we are giving datatypes to declared variables, we don’t know the exact datatype of a column in table, just we are guessing and declaring some random deatatype.
2. Here we need to declare many number of variables for a single record.

These 2 drawbacks can be resolved by %type and %rowtype will be discussed in next session.

SQL> -- so, we have %ROWTYPE ... Then we can reduce no. of variables to be declared and then we can get better performance.

SQL> -- so, we have %ROWTYPE ... Then we can reduce no. of variables to be declared and then we can get better performance.

SQL> --%rowtype nothing but , it denotes all columns in a table. %rowtype variable contains one row values depending on the condition.

--- my spool file

SQL> select \* from emp;

EMPNO ENAME JOB MGR HIREDATE SAL COMM

---------- ---------- --------- ---------- --------- ---------- ----------

DEPTNO

----------

7839 KING PRESIDENT 17-NOV-81 5000

10

7698 BLAKE MANAGER 7839 01-MAY-81 2850

30

7782 CLARK MANAGER 7839 09-JUN-81 2450

10

EMPNO ENAME JOB MGR HIREDATE SAL COMM

---------- ---------- --------- ---------- --------- ---------- ----------

DEPTNO

----------

7566 JONES MANAGER 7839 02-APR-81 2975

20

7788 SCOTT ANALYST 7566 19-APR-87 3000

20

7902 FORD ANALYST 7566 03-DEC-81 3000

20

EMPNO ENAME JOB MGR HIREDATE SAL COMM

---------- ---------- --------- ---------- --------- ---------- ----------

DEPTNO

----------

7369 SMITH CLERK 7902 17-DEC-80 800

20

7499 ALLEN SALESMAN 7698 20-FEB-81 1600 300

30

7521 WARD SALESMAN 7698 22-FEB-81 1250 500

30

EMPNO ENAME JOB MGR HIREDATE SAL COMM

---------- ---------- --------- ---------- --------- ---------- ----------

DEPTNO

----------

7654 MARTIN SALESMAN 7698 28-SEP-81 1250 1400

30

7844 TURNER SALESMAN 7698 08-SEP-81 1500 0

30

7876 ADAMS CLERK 7788 23-MAY-87 1100

20

EMPNO ENAME JOB MGR HIREDATE SAL COMM

---------- ---------- --------- ---------- --------- ---------- ----------

DEPTNO

----------

7900 JAMES CLERK 7698 03-DEC-81 950

30

7934 MILLER CLERK 7782 23-JAN-82 1300

10

14 rows selected.

SQL> set linsize 200

SP2-0158: unknown SET option "linsize"

SQL> setlinsize 200

SP2-0734: unknown command beginning "setlinsize..." - rest of line ignored.

SQL> setlinelingth 200

SP2-0734: unknown command beginning "setlinelin..." - rest of line ignored.

SQL> setlineline 200

SP2-0734: unknown command beginning "setlinelin..." - rest of line ignored.

SQL> setlinelinelength 200

SP2-0734: unknown command beginning "setlinelin..." - rest of line ignored.

SP2-0044: For a list of known commands enter HELP

and to leave enter EXIT.

SQL> desc emp;

Name Null? Type

----------------------------------------- -------- ----------------------------

EMPNO NOT NULL NUMBER(4)

ENAME VARCHAR2(10)

JOB VARCHAR2(9)

MGR NUMBER(4)

HIREDATE DATE

SAL NUMBER(7,2)

COMM NUMBER(7,2)

DEPTNO NUMBER(2)

SQL> declare

2 vname varchar2(15);

3 vjob varchar2(15);

4 vmgr varchar2(15);

5 vhiredate date;

6 vsal number(10);

7 vcomm number(20);

8 vdeptno number(10);

9 empno number :=7654;

10 begin

11 select ename, job, mgr, hiredate, sal, comm, deptno

12 into vename, vjob, vmgr, vhiredate, vsal, vcomm, vdeptno

13 from emp

14 where empno=7654

15 dbms\_output.put\_line(' :',||v);

16 dbms\_output.put\_line('job is :',||vjob);

17 dbms\_output.put\_line('manager is :',||vmgr);

18 dbms\_output.put\_line('salary is :',||vsal);

19 dbms\_output.put\_line('commission is :',||vcomm);

20 dbms\_output.put\_line('department number is :',||vdeptno);

21 end;

22 /

dbms\_output.put\_line(' :',||v);

\*

ERROR at line 15:

ORA-06550: line 14, column 18:

PL/SQL: ORA-00933: SQL command not properly ended

ORA-06550: line 11, column 1:

PL/SQL: SQL Statement ignored

ORA-06550: line 16, column 33:

PLS-00103: Encountered the symbol "|" when expecting one of the following:

( - + case mod new not null <an identifier>

<a double-quoted delimited-identifier> <a bind variable>

continue avg count current exists max min prior sql

ORA-06550: line 17, column 37:

PLS-00103: Encountered the symbol "|" when expecting one of the following:

( - + case mod new not null <an identifier>

<a double-quoted delimited-identifier> <a bind variable>

continue avg count current exists max min prior sql

ORA-06550: line 18, column 36:

PLS-00103: Encountered the symbol "|" when expecting one of the following:

( - + case mod new not null <an identifier>

<a double-quoted delimited-identifier> <a bind variable>

continue avg count current exists max min prior sql

ORA-06550: line 19, column 40:

PLS-00103: Encountered the symbol "|" when e

SQL> ed

Wrote file afiedt.buf

1 declare

2 vname varchar2(15);

3 vjob varchar2(15);

4 vmgr varchar2(15);

5 vhiredate date;

6 vsal number(10);

7 vcomm number(20);

8 vdeptno number(10);

9 empno number :=7654;

10 begin

11 select ename, job, mgr, hiredate, sal, comm, deptno

12 into vename, vjob, vmgr, vhiredate, vsal, vcomm, vdeptno

13 from emp

14 where empno=7654

15 dbms\_output.put\_line('employee name is :'||vname);

16 dbms\_output.put\_line('job is :'||vjob);

17 dbms\_output.put\_line('manager is :'||vmgr);

18 dbms\_output.put\_line('salary is :'||vsal);

19 dbms\_output.put\_line('commission is :'||vcomm);

20 dbms\_output.put\_line('department number is :'||vdeptno);

21\* end;

SQL> /

dbms\_output.put\_line('employee name is :'||vname);

\*

ERROR at line 15:

ORA-06550: line 14, column 18:

PL/SQL: ORA-00933: SQL command not properly ended

ORA-06550: line 11, column 1:

PL/SQL: SQL Statement ignored

SQL> ed

Wrote file afiedt.buf

1 declare

2 vname varchar2(15);

3 vjob varchar2(15);

4 vmgr varchar2(15);

5 vhiredate date;

6 vsal number(10);

7 vcomm number(20);

8 vdeptno number(10);

9 empno number :=7654;

10 begin

11 select ename, job, mgr, hiredate, sal, comm, deptno

12 into vename, vjob, vmgr, vhiredate, vsal, vcomm, vdeptno

13 from emp

14 where empno=7654;

15 dbms\_output.put\_line('employee name is :'||vname);

16 dbms\_output.put\_line('job is :'||vjob);

17 dbms\_output.put\_line('manager is :'||vmgr);

18 dbms\_output.put\_line('salary is :'||vsal);

19 dbms\_output.put\_line('commission is :'||vcomm);

20 dbms\_output.put\_line('department number is :'||vdeptno);

21\* end;

SQL> /

into vename, vjob, vmgr, vhiredate, vsal, vcomm, vdeptno

\*

ERROR at line 12:

ORA-06550: line 12, column 6:

PLS-00201: identifier 'VENAME' must be declared

ORA-06550: line 12, column 58:

PL/SQL: ORA-00904: : invalid identifier

ORA-06550: line 11, column 1:

PL/SQL: SQL Statement ignored

SQL> ed

Wrote file afiedt.buf

1 declare

2 vname varchar2(15);

3 vjob varchar2(15);

4 vmgr varchar2(15);

5 vhiredate date;

6 vsal number(10);

7 vcomm number(20);

8 vdeptno number(10);

9 empno number :=7654;

10 begin

11 select name, job, mgr, hiredate, sal, comm, deptno

12 into vname, vjob, vmgr, vhiredate, vsal, vcomm, vdeptno

13 from emp

14 where empno=7654;

15 dbms\_output.put\_line('employee name is :'||vname);

16 dbms\_output.put\_line('job is :'||vjob);

17 dbms\_output.put\_line('manager is :'||vmgr);

18 dbms\_output.put\_line('salary is :'||vsal);

19 dbms\_output.put\_line('commission is :'||vcomm);

20 dbms\_output.put\_line('department number is :'||vdeptno);

21\* end;

SQL> /

select name, job, mgr, hiredate, sal, comm, deptno

\*

ERROR at line 11:

ORA-06550: line 11, column 8:

PL/SQL: ORA-00904: "NAME": invalid identifier

ORA-06550: line 11, column 1:

PL/SQL: SQL Statement ignored

SQL> ed

Wrote file afiedt.buf

1 declare

2 vname varchar2(15);

3 vjob varchar2(15);

4 vmgr varchar2(15);

5 vhiredate date;

6 vsal number(10);

7 vcomm number(20);

8 vdeptno number(10);

9 empno number :=7654;

10 begin

11 select ename, job, mgr, hiredate, sal, comm, deptno

12 into vname, vjob, vmgr, vhiredate, vsal, vcomm, vdeptno

13 from emp

14 where empno=7654;

15 dbms\_output.put\_line('employee name is :'||vname);

16 dbms\_output.put\_line('job is :'||vjob);

17 dbms\_output.put\_line('manager is :'||vmgr);

18 dbms\_output.put\_line('salary is :'||vsal);

19 dbms\_output.put\_line('commission is :'||vcomm);

20 dbms\_output.put\_line('department number is :'||vdeptno);

21\* end;

SQL> /

employee name is :MARTIN

job is :SALESMAN

manager is :7698

salary is :1250

commission is :1400

department number is :30

PL/SQL procedure successfully completed.

SQL> -- here we are getting output

SQL> --but we need to declare 6 variables to get the 6 values from tabvle.

SQL> -- if the table contains 100 columns , then we need to declare 100 variables to get 100 values from table.

SQL> -- so, execution time increases and then performance decreases.

SQL> -- so, we have %ROWTYPE ... Then we can reduce no. of variables to be declared and then we can get better performance.

SQL> --%rowtype nothing but , it denotes all columns in a table. %rowtype variable contains one row values depending on the condition.

SQL> ed

Wrote file afiedt.buf

1 declare

2 vname varchar2(15);

3 vjob varchar2(15);

4 vmgr varchar2(15);

5 vhiredate date;

6 vsal number(10);

7 vcomm number(20);

8 vdeptno number(10);

9 empno number :=&empid;

10 begin

11 select ename, job, mgr, hiredate, sal, comm, deptno

12 into vname, vjob, vmgr, vhiredate, vsal, vcomm, vdeptno

13 from emp

14 where empno=7654;

15 dbms\_output.put\_line('employee name is :'||vname);

16 dbms\_output.put\_line('job is :'||vjob);

17 dbms\_output.put\_line('manager is :'||vmgr);

18 dbms\_output.put\_line('salary is :'||vsal);

19 dbms\_output.put\_line('commission is :'||vcomm);

20 dbms\_output.put\_line('department number is :'||vdeptno);

21\* end;

SQL> /

Enter value for empid: 7788

old 9: empno number :=&empid;

new 9: empno number :=7788;

employee name is :MARTIN

job is :SALESMAN

manager is :7698

salary is :1250

commission is :1400

department number is :30

PL/SQL procedure successfully completed.

SQL> /

Enter value for empid: 7369

old 9: empno number :=&empid;

new 9: empno number :=7369;

employee name is :MARTIN

job is :SALESMAN

manager is :7698

salary is :1250

commission is :1400

department number is :30

PL/SQL procedure successfully completed.

SQL> --this is caslled dynamic prog, bcz we are using run time input values.

SQL> -- chr(10) means, switch the immediate content into new line

SQL> --chr(10)|| is exact syntax, but in unix it is chr(13)||

SQL> ed

Wrote file afiedt.buf

1 declare

2 vname varchar2(15);

3 vjob varchar2(15);

4 vmgr varchar2(15);

5 vhiredate date;

6 vsal number(10);

7 vcomm number(20);

8 vdeptno number(10);

9 empno number :=&empid;

10 begin

11 select ename, job, mgr, hiredate, sal, comm, deptno

12 into vname, vjob, vmgr, vhiredate, vsal, vcomm, vdeptno

13 from emp

14 where empno=7654;

15 dbms\_output.put\_line(chr(10)||'employee name is :'||vname||chr(10)||);

16 dbms\_output.put\_line('job is :'||vjob||chr(10)||);

17 dbms\_output.put\_line('manager is :'||vmgr||chr(10)||);

18 dbms\_output.put\_line('salary is :'||vsal||chr(10)||);

19 dbms\_output.put\_line('commission is :'||vcomm||chr(10)||);

20 dbms\_output.put\_line('department number is :'||vdeptno||chr(10)||);

21\* end;

SQL> /

Enter value for empid: 7788

old 9: empno number :=&empid;

new 9: empno number :=7788;

dbms\_output.put\_line(chr(10)||'employee name is :'||vname||chr(10)||);

\*

ERROR at line 15:

ORA-06550: line 15, column 69:

PLS-00103: Encountered the symbol ")" when expecting one of the following:

( - + case mod new null <an identifier>

<a double-quoted delimited-identifier> <a bind variable>

continue avg count current max min prior sql stddev sum

variance execute forall merge time timestamp interval date

<a string literal with character set specification>

<a number> <a single-quoted SQL string> pipe

<an alternatively-quoted string literal with character set specification>

<an alternatively-quoted SQL

ORA-06550: line 16, column 49:

PLS-00103: Encountered the symbol ")" when expecting one of the following:

( - + case mod new null <an identifier>

<a double-quoted delimited-identifier> <a bind variable>

continue avg count current max min prior sql stddev sum

ORA-06550: line 17, column 53:

PLS-00103: Encountered the symbol ")" when expecting one of the following:

( - + case mod new null <an identifier>

<a double-quoted delimited-identifier> <a bind variable>

SQL> ed

Wrote file afiedt.buf

1 declare

2 vname varchar2(15);

3 vjob varchar2(15);

4 vmgr varchar2(15);

5 vhiredate date;

6 vsal number(10);

7 vcomm number(20);

8 vdeptno number(10);

9 empno number :=&empid;

10 begin

11 select ename, job, mgr, hiredate, sal, comm, deptno

12 into vname, vjob, vmgr, vhiredate, vsal, vcomm, vdeptno

13 from emp

14 where empno=7654;

15 dbms\_output.put\_line(chr(10)||'employee name is :'||vname||chr(10)||'job is :'||vjob||chr(10)||'manager is :'||vmgr||chr(10)||'salary is :'||vsal||chr(10)||commission is :'||vcomm||chr(10)||'department number is :'||vdeptno||chr(10)||);

16\* end;

SQL> /

Enter value for empid: 7788

old 9: empno number :=&empid;

new 9: empno number :=7788;

ERROR:

ORA-01756: quoted string not properly terminated

SQL> ed

Wrote file afiedt.buf

1 declare

2 vname varchar2(15);

3 vjob varchar2(15);

4 vmgr varchar2(15);

5 vhiredate date;

6 vsal number(10);

7 vcomm number(20);

8 vdeptno number(10);

9 empno number :=&empid;

10 begin

11 select ename, job, mgr, hiredate, sal, comm, deptno

12 into vname, vjob, vmgr, vhiredate, vsal, vcomm, vdeptno

13 from emp

14 where empno=7654;

15 dbms\_output.put\_line(chr(10)||'employee name is :'||vname||chr(10)||'job is :'||vjob||chr(10)||'manager is :'||vmgr||chr(10)||'salary is :'||vsal||chr(10)||'commission is :'||vcomm||chr(10)||'department number is :'||vdeptno||chr(10)||);

16\* end;

SQL> /

Enter value for empid: 7788

old 9: empno number :=&empid;

new 9: empno number :=7788;

dbms\_output.put\_line(chr(10)||'employee name is :'||vname||chr(10)||'job is :'||vjob||chr(10)||'manager is :'||vmgr||chr(10)||'salary is :'||vsal||chr(10)||'commission is :'||vcomm||chr(10)||'department number is :'||vdeptno||chr(10)||);

\*

ERROR at line 15:

ORA-06550: line 15, column 236:

PLS-00103: Encountered the symbol ")" when expecting one of the following:

( - + case mod new null <an identifier>

<a double-quoted delimited-identifier> <a bind variable>

continue avg count current max min prior sql stddev sum

variance execute forall merge time timestamp interval date

<a string literal with character set specification>

<a number> <a single-quoted SQL string> pipe

<an alternatively-quoted string literal with character set specification>

<an alternatively-quoted SQL

SQL> ed

Wrote file afiedt.buf

1 declare

2 vname varchar2(15);

3 vjob varchar2(15);

4 vmgr varchar2(15);

5 vhiredate date;

6 vsal number(10);

7 vcomm number(20);

8 vdeptno number(10);

9 empno number :=&empid;

10 begin

11 select ename, job, mgr, hiredate, sal, comm, deptno

12 into vname, vjob, vmgr, vhiredate, vsal, vcomm, vdeptno

13 from emp

14 where empno=7654;

15 dbms\_output.put\_line(chr(10)||'employee name is :'||vname||chr(10)||

16 'job is :'||vjob||chr(10)||'manager is :'||vmgr||chr(10)||

17 'salary is :'||vsal||chr(10)||

18 'commission is :'||vcomm||chr(10)||

19 'department number is :'||vdeptno);

20\* end;

SQL> /

Enter value for empid: 7788

old 9: empno number :=&empid;

new 9: empno number :=7788;

employee name is :MARTIN

job is :SALESMAN

manager is :7698

salary is

:1250

commission is :1400

department number is :30

PL/SQL procedure successfully completed.

SQL> /

Enter value for empid: 7654

old 9: empno number :=&empid;

new 9: empno number :=7654;

employee name is :MARTIN

job is :SALESMAN

manager is :7698

salary is

:1250

commission is :1400

department number is :30

PL/SQL procedure successfully completed.

SQL> set linesize 400;

SQL> /

Enter value for empid: 7654

old 9: empno number :=&empid;

new 9: empno number :=7654;

employee name is :MARTIN

job is :SALESMAN

manager is :7698

salary is :1250

commission is :1400

department number is :30

PL/SQL procedure successfully completed.

SQL> select \* from emp;

EMPNO ENAME JOB MGR HIREDATE SAL COMM DEPTNO

---------- ---------- --------- ---------- --------- ---------- ---------- ----------

7839 KING PRESIDENT 17-NOV-81 5000 10

7698 BLAKE MANAGER 7839 01-MAY-81 2850 30

7782 CLARK MANAGER 7839 09-JUN-81 2450 10

7566 JONES MANAGER 7839 02-APR-81 2975 20

7788 SCOTT ANALYST 7566 19-APR-87 3000 20

7902 FORD ANALYST 7566 03-DEC-81 3000 20

7369 SMITH CLERK 7902 17-DEC-80 800 20

7499 ALLEN SALESMAN 7698 20-FEB-81 1600 300 30

7521 WARD SALESMAN 7698 22-FEB-81 1250 500 30

7654 MARTIN SALESMAN 7698 28-SEP-81 1250 1400 30

7844 TURNER SALESMAN 7698 08-SEP-81 1500 0 30

EMPNO ENAME JOB MGR HIREDATE SAL COMM DEPTNO

---------- ---------- --------- ---------- --------- ---------- ---------- ----------

7876 ADAMS CLERK 7788 23-MAY-87 1100 20

7900 JAMES CLERK 7698 03-DEC-81 950 30

7934 MILLER CLERK 7782 23-JAN-82 1300 10

14 rows selected.

SQL> desc dept

Name Null? Type

----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------- -------- ------------------------------------------------------------------------------------------------------------------------------------------------------------

DEPTNO NOT NULL NUMBER(2)

DNAME VARCHAR2(14)

LOC VARCHAR2(13)

MANAGER VARCHAR2(10)

SQL> select \* from dept;

DEPTNO DNAME LOC MANAGER

---------- -------------- ------------- ----------

10 ACCOUNTING NEW YORK

20 RESEARCH DALLAS

30 SALES CHICAGO

40 OPERATIONS BOSTON

SQL> alter table dept

2 drop column manager;

Table altered.

SQL> select \* from dept;

DEPTNO DNAME LOC

---------- -------------- -------------

10 ACCOUNTING NEW YORK

20 RESEARCH DALLAS

30 SALES CHICAGO

40 OPERATIONS BOSTON

SQL> --inserting new record into dept table.

SQL> declare

2 vno number(10);

3 vname varchar2(10);

4 vloc varchar2(10);

5 begin

6 vno='&yourvalue';

7 vname='&yourname

8 vloc='&yourloc';

9 insert into dept values(vno, vname, vloc);

10 dbms\_output.put\_line('new department launched : '||vname);

11 dbms\_output.put\_line('\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*'||vno||chr(10)||);

12 'dept name : '||vname||chr(10)||' location is : '||chr(10)||'\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*');

13 end;

14 /

Enter value for yourvalue: 50

old 6: vno='&yourvalue';

new 6: vno='50';

Enter value for yourname: finance

old 7: vname='&yourname

new 7: vname='finance

Enter value for yourloc: hyderabad

old 8: vloc='&yourloc';

new 8: vloc='hyderabad';

ERROR:

ORA-01756: quoted string not properly terminated

SQL> ed

Wrote file afiedt.buf

1 declare

2 vno number(10);

3 vname varchar2(10);

4 vloc varchar2(10);

5 begin

6 vno='&yourvalue';

7 vname='&yourname

8 vloc='&yourloc';

9 insert into dept values(vno, vname, vloc);

10 dbms\_output.put\_line('new department launched : '||vname);

11 dbms\_output.put\_line('\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*'||vno||chr(10)||

12 'dept name : '||vname||chr(10)||' location is : '||chr(10)||'\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*');

13\* end;

SQL> /

Enter value for yourvalue: 50

old 6: vno='&yourvalue';

new 6: vno='50';

Enter value for yourname: finance

old 7: vname='&yourname

new 7: vname='finance

Enter value for yourloc: hyderabad

old 8: vloc='&yourloc';

new 8: vloc='hyderabad';

ERROR:

ORA-01756: quoted string not properly terminated

SQL> ed

Wrote file afiedt.buf

1 declare

2 vno number(10);

3 vname varchar2(10);

4 vloc varchar2(10);

5 begin

6 vno='&yourvalue';

7 vname='&yourname

8 vloc='&yourloc';

9 insert into dept values(vno, vname, vloc);

10 dbms\_output.put\_line('new department launched is : '||vname);

11 dbms\_output.put\_line(chr(10)||'\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*'||'dept no is : '||vno||chr(10)||

12 'dept name : '||vname||chr(10)||' location is : '||chr(10)||'\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*');

13\* end;

SQL> /

Enter value for yourvalue: 50

old 6: vno='&yourvalue';

new 6: vno='50';

Enter value for yourname: finance

old 7: vname='&yourname

new 7: vname='finance

Enter value for yourloc: hyderabad

old 8: vloc='&yourloc';

new 8: vloc='hyderabad';

ERROR:

ORA-01756: quoted string not properly terminated

SQL> ed

Wrote file afiedt.buf

1 declare

2 vno number(10);

3 vname varchar2(10);

4 vloc varchar2(10);

5 begin

6 vno='&value';

7 vname='&yourname';

8 vloc='&yourloc';

9 insert into dept values(vno, vname, vloc);

10 dbms\_output.put\_line('new department launched is : '||vname);

11 dbms\_output.put\_line(chr(10)||'\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*'||'dept no is : '||vno||chr(10)||

12 'dept name : '||vname||chr(10)||' location is : '||chr(10)||'\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*');

13\* end;

SQL> /

Enter value for value: 50

old 6: vno='&value';

new 6: vno='50';

Enter value for yourname: finance

old 7: vname='&yourname';

new 7: vname='finance';

Enter value for yourloc: hyderabad

old 8: vloc='&yourloc';

new 8: vloc='hyderabad';

vno='50';

\*

ERROR at line 6:

ORA-06550: line 6, column 4:

PLS-00103: Encountered the symbol "=" when expecting one of the following:

:= . ( @ % ;

SQL> ed

Wrote file afiedt.buf

1 declare

2 vno number(10);

3 vname varchar2(10);

4 vloc varchar2(10);

5 begin

6 vno:='&value';

7 vname:='&yourname';

8 vloc:='&yourloc';

9 insert into dept values(vno, vname, vloc);

10 dbms\_output.put\_line('new department launched is : '||vname);

11 dbms\_output.put\_line(chr(10)||'\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*'||'dept no is : '||vno||chr(10)||

12 'dept name : '||vname||chr(10)||' location is : '||chr(10)||'\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*');

13\* end;

SQL> /

Enter value for value: 50

old 6: vno:='&value';

new 6: vno:='50';

Enter value for yourname: finance

old 7: vname:='&yourname';

new 7: vname:='finance';

Enter value for yourloc: hyderabad

old 8: vloc:='&yourloc';

new 8: vloc:='hyderabad';

new department launched is : finance

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*dept no is : 50

dept name : finance

location is :

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

PL/SQL procedure successfully completed.

SQL> /

Enter value for value: 60

old 6: vno:='&value';

new 6: vno:='60';

Enter value for yourname: Govt

old 7: vname:='&yourname';

new 7: vname:='Govt';

Enter value for yourloc: amaravathi

old 8: vloc:='&yourloc';

new 8: vloc:='amaravathi';

new department launched is : Govt

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*dept no is : 60

dept name : Govt

location is :

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

PL/SQL procedure successfully completed.

SQL> ed

Wrote file afiedt.buf

1 declare

2 vno number(10);

3 vname varchar2(10);

4 vloc varchar2(10);

5 begin

6 vno:='&value';

7 vname:='&yourname';

8 vloc:='&yourloc';

9 insert into dept values(vno, vname, vloc);

10 dbms\_output.put\_line('new department launched is : '||vname);

11 dbms\_output.put\_line(chr(10)||'\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*'||chr(10)||'dept no is : '||vno||chr(10)||

12 'dept name : '||vname||chr(10)||' location is : '||vloc||chr(10)||'\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*');

13\* end;

SQL> /

Enter value for value: 70

old 6: vno:='&value';

new 6: vno:='70';

Enter value for yourname: Private

old 7: vname:='&yourname';

new 7: vname:='Private';

Enter value for yourloc: india

old 8: vloc:='&yourloc';

new 8: vloc:='india';

new department launched is : Private

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

dept no is : 70

dept name : Private

location is : india

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

PL/SQL procedure successfully completed.

SQL> select \* from dept;

DEPTNO DNAME LOC

---------- -------------- -------------

10 ACCOUNTING NEW YORK

20 RESEARCH DALLAS

30 SALES CHICAGO

40 OPERATIONS BOSTON

50 finance hyderabad

60 Govt amaravathi

70 Private india

7 rows selected.

SQL> spool off

--SPOOL FILE OF CLASS

Ex: write a program to display customer account details for the

given customer name?

declare

vcname varchar2(20);

vactno number(12);

vacttype varchar2(10);

vopendate date;

vactbal number;

vccode varchar2(10);

begin

vcname:='&vcname';

select actno,act\_type,act\_open\_date,act\_bal,cust\_code

into

vactno,vacttype,vopendate,vactbal,vccode

from cust\_act\_dtls

where cno =(select cno from cust\_dtls where cname=vcname);

dbms\_output.put\_line('Account details of '||upper(vcname));

dbms\_output.put\_line('\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*');

dbms\_output.put\_line('Account Number='||vactno);

dbms\_output.put\_line('Account Type='||vacttype);

dbms\_output.put\_line('Account Open Date='||vopendate);

dbms\_output.put\_line('Account Balance='||vactbal);

dbms\_output.put\_line('Customer Code='||vccode);

end;

Note:

Generally, we need to declare a variable with column data

type otherwise we will get compatibility issues.

To store a complete record in to a variable we need declare a

variable as TABLE BASED RECORD type variable.

--------------------------------------------------------------------------------------

TYPE COMPATIBILITY KEYWORD:- %TYPE

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

we can declare the variables dynamically/ Implicitly

with data type of column, by using %TYPE.

It eleminates Data type and size incompatibility issues.

syn:

var table\_name.col\_name%TYPE;

Ex: vdno emp.deptno%type;

In the above the %TYPE is taking the data type and size of the

column DEPTNO from the table EMP and these things will be

applicable to the varaible "vdno".

Ex:

vacctno cust\_act\_dtls.actno%type;

--------------------------------------------------------------------------------------

%ROWTYPE

\*\*\*\*\*\*\*\*

It is used to declare a variable as a RECORD type variable.

This type of variable is able to store one record from one table.

It is reducing number of variable declarations.

syn:

varname tablename%ROWTYPE;

Ex: emp\_rec emp%rowtype;

Ex: prod\_info prod\_dtls%rowtype;

emp\_rec

|

----------------------------------------------------------------------------------

| | | | | | |

empno ename sal job hiredate comm deptno

SAVE A RECORD IN TO COMPOSITE VARIABLE:-

Ex:

select \* into emp\_rec from emp where empno=7788;

How to ACCESS individual values from COMPOSITE TYPE variable?

syn: IN any output stmt,use the below syntax

var\_name . colname;

Ex: dbms\_output.put\_line

(' emp salary :'|| emp\_rec . sal);

Ex:-

-->Don't specify like this

dbms\_output.put\_line(' emp Info :'|| emp\_rec );

------------------------------------------------------------------------------------------

Ex:

Write a program to display the information of employee for

the given employee id?

declare

--Dynamic declaration of variable

veno emp.empno%type;

--Declaring table based record type variable

emprec emp%rowtype;

begin

veno:='&veno';

select \* into emprec from emp

where empno=veno;

dbms\_output.put\_line

(chr(10)||' Emp id: '||veno||chr(10)||

'\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*'||chr(10)||

'Name: '||emprec.ename||chr(10)||

'Desg: '||emprec.job||chr(10)||

'Salary: '||emprec.sal||chr(10)||

'Join Dt: '||emprec.hiredate||chr(10)||

'Comm: '||emprec.comm||chr(10)||

'Deptno: '||emprec.deptno||chr(10)||

'Working under manager\_Id: '||emprec.mgr

);

end;

-------------------------------------------------------------------------------------------------

Ex:

write a program to display the information of product for

the given product id?

declare

vprodid prod\_dtls.prod\_code%type;

p\_rec prod\_dtls%rowtype;

begin

vprodid:='&vrodpid';

select \* into p\_rec

from prod\_dtls

where prod\_code=vprodid;

dbms\_output.put\_line

(' Information of prodid: '||vprodid);

dbms\_output.put\_line

(chr(10)||'prod name: '||p\_rec.prod\_name||' '||

'Price: '||p\_rec.cost||' '||

'Mfg date: '||p\_rec.mfg||' '||

'Warrenty: '||p\_rec.warrenty||' '||

'company code: '||p\_rec.comp\_code);

end;

-------------------------------------------------------------------------------------------------

eX:

write a program to display the information of a customer for

the given customer number?

declare

vcustid cust\_dtls.custid%type;

cust\_rec cust\_dtls%rowtype;

begin

vcustid:='&vcustid';

select \* into cust\_rec from cust\_dtls

where custid=vcustid;

dbms\_output.put\_line

(' Given customer ID: '||vcustid);

dbms\_output.put\_line

(' customer name= '||cust\_rec.custname);

dbms\_output.put\_line

(' customer city= '||cust\_rec.custcity);

dbms\_output.put\_line

(' customer gender= '||cust\_rec.custgender);

dbms\_output.put\_line

(' customer mobile number= '||cust\_rec.custmobile);

end;

--------------------------------------------------------------------------------------------------------

declare

vcustid customers\_br1.cid%type;

cust\_rec customers\_br1%rowtype;

begin

vcustid:='&vcustid';

select \* into cust\_rec from customers\_br1 where cid=vcustid;

/\* dbms\_output.put\_line(' given customer id: '||vcustid);

dbms\_output.put\_line(' customer name='||cust\_rec.cname);

dbms\_output.put\_line(' customer city='||cust\_rec.city);

dbms\_output.put\_line(' customer gender='||cust\_rec.gender);

dbms\_output.put\_line(' customer mobile number='||cust\_rec.mobile); \*/

dbms\_output.put\_line('GIVEN ID:'||vcustid);

dbms\_output.put\_line('--------------------------------------------------------------');

dbms\_output.put\_line('NAME CITY GENDER MOBILE-NUMBER' );

dbms\_output.put\_line('---------------------------------------------------------------');

dbms\_output.put\_line(cust\_rec.cname||' '||cust\_rec.city||' '||cust\_rec.gender||' '||cust\_rec.mobile);

end;

--------------------------------------------------------------------------

%ROWTYPE drawbacks:

===================

i) Unnecessarily reserving more memory.

ii) It is not supporting multiple columns from

multiple tables.

---------------------------------------------------------------------------

USER DEFINED RECORD TYPE

========================

This record structure can be defined based on required columns

from a table or multiple tables.

This structure is defined by using the keyword "TYPE".

a) Define a structure for record.

This structure having multiple columns from

multiple tables.

TYPE <type\_name> IS RECORD

(

colname datatype(size),

colname datatype(size),

colname datatype(size),

---

---

);

b) Declare a variable with above type.

Then this variable supports / store a record composed with

above columns.

SYN:

var <type\_name>;

c) How to access values from above variable?

var\_name.structure\_colname

Note:

In the above syntax the colname should be same as a colname

from record structure

[ i.e. Not a colname from table ].

Req:

program to display customer name, city, actno,balance,

act\_name from given customer number?

DECLARE

TYPE cust\_type IS RECORD

(

custname cust\_dtls.cname%type,

custcity cust\_dtls.city%type,

Actno cust\_act\_dtls.actno%type,

actbal NUMBER,

actname act\_types.act\_name%type

);

v\_cust\_rec cust\_type;

vcid cust\_dtls.cno%type;

begin

VCID:='&VCID';

select

cd.cname,cd.city,cad.actno,cad.act\_bal,at.act\_name

into

v\_cust\_rec

from cust\_dtls cd,cust\_act\_dtls cad,act\_types at

where cd.cno=vcid

and

(

cd.cno=cad.cno

and

cad.act\_type=at.act\_type

);

dbms\_output.put\_line(chr(10)||

' Given customer Id: '||vcid||chr(10)||

'\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_'||chr(10)||

' Name: '||v\_cust\_rec.custname||chr(10)||

' City: '||v\_cust\_rec.custcity||chr(10)||

' Actname: '||v\_cust\_rec.actname||chr(10)||

' Actno: '||v\_cust\_rec.actno||chr(10)||

' Bal: '||v\_cust\_rec.actbal

);

end ;

declare

vname varchar2(20);

vsal number(5);

vjob varchar2(20);

vjdate date;

vcomm varchar2(10);

vdeptno number(3);

BEGIN

select ename,sal,job,hiredate,nvl(to\_char(comm),'N/A'),deptno INTO

vname,vsal,vjob,vjdate,vcomm,vdeptno

from emp

where empno=7521;

dbms\_output.put\_line(' Info of 7521');

dbms\_output.put\_line('---------------');

dbms\_output.put\_line('Empname: '||vname);

dbms\_output.put\_line('Sal: '||vsal);

dbms\_output.put\_line('Desg: '||vjob);

dbms\_output.put\_line('Joined Date: '||vjdate);

dbms\_output.put\_line('comm: '||vcomm);

dbms\_output.put\_line('Working under deptno: '||vdeptno);

END;

/

Ex:

declare

vname varchar2(10);

vcost number(7);

vmfg date;

vwarr varchar2(20);

vcmp varchar2(10);

begin

select prod\_name,cost,mfg,warrenty,comp\_code

into

vname,vcost,vmfg,vwarr,vcmp

from prod\_dtls

where prod\_code='DMBLY';

dbms\_output.put\_line

(' Prod code: DMBLY');

dbms\_output.put\_line

('--------------------');

dbms\_output.put\_line

('Name: '||vname);

dbms\_output.put\_line

('cost: '||vcost);

dbms\_output.put\_line

(' Mfg Date: '||vmfg);

dbms\_output.put\_line

(' Warrenty: '||vwarr);

dbms\_output.put\_line

('Comp Code: '||vcmp);

end;

Ex:

declare

vcname varchar2(20);

vactname varchar2(20);

vbal number(6);

begin

select cd.cname,at.act\_name,cad.act\_bal

into

vcname,vactname,vbal

from cust\_dtls cd, cust\_act\_dtls cad, act\_types at

where cd.cno='cust-2'

and

( cd.cno=cad.cno and cad.act\_type=at.act\_type);

dbms\_output.put\_line

(chr(10)||

'Customer Account Information: cust-2'||chr(10)||

'\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*'||chr(10)||

'Customer Name: '||vcname||chr(10)||

'Account Name: '||vactname||chr(10)||

'Balance: '||vbal||chr(10)||

'----------------------------------------'

);

end;

Ex:

declare

TYPE prod\_type IS RECORD

(

prodname prod\_dtls.prod\_name%type,

prodcost prod\_dtls.cost%type,

prodwarr prod\_dtls.warrenty%type,

compname comp\_dtls.comp\_name%type

);

prodrec prod\_type;

vpid prod\_dtls.prod\_code%type;

begin

vpid:='&vpid';

select p.prod\_name,p.cost,p.warrenty,

c.comp\_name

into prodrec

from prod\_dtls p, comp\_dtls c

where p.prod\_code=vpid

and p.comp\_code=c.comp\_code;

dbms\_output.put\_line

(chr(10)||

' Given prod code: '||vpid||chr(10)||

'Name: '||prodrec.prodname||chr(10)||

'Cost: '||prodrec.prodcost||chr(10)||

'Warr: '||prodrec.prodwarr||chr(10)||

'Comp name: '||prodrec.compname

);

end;

=========================================================================================