

```

begin
    p1;
end;
/
-----
declare
    num number;
begin
    num:=&num;
    p2(num);
end;
/
-----
declare
    cursor c1(mon number,pdays number) is select * from attendance
    where month=mon and days>=pdays;
    attdata c1%rowtype;
begin
    open c1(12,20);
    loop
        fetch c1 into attdata;
        exit when c1%notfound;
        dbms_output.put_line('Id ' || attdata.id);
        dbms_output.put_line('Month ' || attdata.month);
        dbms_output.put_line('Days ' || attdata.days);
        dbms_output.put_line('-----');
    end loop;

    close c1;
end;
/
-----
declare
    cursor c1 is select * from customers;
begin
    for cur in c1
    loop
        dbms_output.put_line('Name ' || cur.cname);
        dbms_output.put_line('Amount ' || cur.amount);
        dbms_output.put_line('-----');
    end loop;
end;
/
-----
create or replace  procedure p1
as
begin
    dbms_output.put_line('This is a procedure. Similar to functions in other
languages');
end;

```

```

/
-----
create or replace procedure p2(no in number)
as
    sq number;
begin
    sq:=no*no;
    dbms_output.put_line('Square is ' || sq);
end;
/
-----
create or replace procedure p3(a number,b number,c out number)
as
begin
    c:=a+b;
end;
/
-----
declare
    x number;
    y number;
    z number;
begin
    x:=&x;
    y:=&y;
    p3(x,y,z);
    dbms_output.put_line('Sum is ' || z);
end;
/
-----
create or replace procedure p4(dno number,name out varchar)
as
    custdata customers%rowtype;
    dt date;
begin
    select min(doJ) into dt from customers where dept=dno;
    select cname into name from customers where doJ=dt;

end;
/
-----
declare
    dno number;
    nm varchar(10);
begin
    dno:=&dno;
    p4(dno,nm);
    dbms_output.put_line(nm);
end;

```

/

```
=====
Procedure / PL / SQL
=====
```

```
SQL*Plus: Release 10.2.0.1.0 - Production on Sat Dec 13 08:48:12 2025
```

```
Copyright (c) 1982, 2005, Oracle. All rights reserved.
```

```
SQL> connect
Enter user-name: prince
Enter password:
Connected.
SQL> create table attendance(id number, month number, days number);
```

```
Table created.
```

```
SQL> insert into attendance values(1,12,20);
```

```
1 row created.
```

```
SQL> insert into attendance values(2,12,23);
```

```
1 row created.
```

```
SQL> insert into attendance values(3,12,3);
```

```
1 row created.
```

```
SQL> insert into attendance values(4,12,29);
```

```
1 row created.
```

```
SQL> insert into attendance values(5,11,18);
```

```
1 row created.
```

```
SQL> insert into attendance values(6,11,24);
```

```
1 row created.
```

```
SQL> commit;
```

```
Commit complete.
```

```
SQL> set serveroutput on
SQL> select * from attendance;
```

ID	MONTH	DAYS
1	12	20
2	12	23
3	12	3
4	12	29
5	11	18
6	11	24

6 rows selected.

SQL> ed c:/oracle/cur12.sql

```
SQL> @ c:/oracle/cur12.sql
Id 4
Month 12
Days 29
-----
```

PL/SQL procedure successfully completed.

SQL> ed c:/oracle/cur12.sql

```
SQL> @ c:/oracle/cur12.sql
Id 1
Month 12
Days 20
-----
```

```
Id 2
Month 12
Days 23
-----
```

```
Id 4
Month 12
Days 29
-----
```

PL/SQL procedure successfully completed.

SQL> ed c:/oracle/cur12.sql

SQL> ed c:/oracle/cur13.sql

SQL> select * from customers;

CNO	CNAME	AMOUNT	DOJ	CONTACT	DEPT	CITY
1	Ravi	495	10-APR-20	9983	10	Indore
2	Sumit	715	13-APR-20	8832	20	Sagar
3	Ajay	165	30-SEP-22		10	Sagar

4	Vijay	935	15-FEB-23	30	Indore
5	Sanjay	385	10-APR-20	10	Indore
6	Gourav	55	03-NOV-25	20	Sagar
7	Sourav	120	06-NOV-25	10	Sagar
8	Raja	230	04-OCT-25	20	Bhopal
9	Rani	260	16-MAY-23	30	Bhopal
10	Gaurav	300	15-NOV-25	40	Gwalior
				3394	

10 rows selected.

SQL> ed c:/oracle/cur13.sql

SQL> @ c:/oracle/cur13.sql

Name Ravi

Amount 495

Name Sumit

Amount 715

Name Ajay

Amount 165

Name Vijay

Amount 935

Name Sanjay

Amount 385

Name Gourav

Amount 55

Name Sourav

Amount 120

Name Raja

Amount 230

Name Rani

Amount 260

Name Gaurav

Amount 300

PL/SQL procedure successfully completed.

SQL> ed c:/oracle/cur13.sql

SQL> ed c:/oracle/cur13.sql

```
SQL> ed c:/oracle/proc1.sql
SQL> @ c:/oracle/proc1.sql
Procedure created.

SQL> ed c:/oracle/proc1.sql
SQL> exec p1;
This is a procedure. Similar to functions
PL/SQL procedure successfully completed.

SQL> ed c:/oracle/proc1.sql
SQL> exec p1;
This is a procedure. Similar to functions
PL/SQL procedure successfully completed.

SQL> @ c:/oracle/proc1.sql
create procedure p1
*
ERROR at line 1:
ORA-00955: name is already used by an existing object

SQL> ed c:/oracle/proc1.sql
SQL> @ c:/oracle/proc1.sql
Procedure created.

SQL> exec p1
This is a procedure. Similar to functions in other languages
PL/SQL procedure successfully completed.

SQL> ed c:/oracle/proc1.sql
SQL> ed c:/oracle/callproc1.sql
SQL> @ c:/oracle/callproc1.sql
This is a procedure. Similar to functions in other languages
PL/SQL procedure successfully completed.

SQL> exec p1;
This is a procedure. Similar to functions in other languages
```

```
PL/SQL procedure successfully completed.
```

```
SQL> ed c:/oracle/callproc1.sql
```

```
SQL> ed c:/oracle/proc2.sql
```

```
SQL> @ c:/oracle/proc2.sql
```

```
Procedure created.
```

```
SQL> exec p2(4);
```

```
Square is 16
```

```
PL/SQL procedure successfully completed.
```

```
SQL> ed c:/oracle/proc2.sql
```

```
SQL> @ c:/oracle/proc2.sql
```

```
Procedure created.
```

```
SQL> exec p2(4);
```

```
Square is 16
```

```
PL/SQL procedure successfully completed.
```

```
SQL> ed c:/oracle/proc2.sql
```

```
SQL> ed c:/oracle/callproc2.sql
```

```
SQL> @ c:/oracle/callproc2.sql
```

```
Enter value for num: 8
```

```
old    4:      num:=&num;
```

```
new    4:      num:=8;
```

```
Square is 64
```

```
PL/SQL procedure successfully completed.
```

```
SQL> ed c:/oracle/callproc2.sql
```

```
SQL> ed c:/oracle/proc2.sql
```

```
SQL> ed c:/oracle/callproc1.sql
```

```
SQL> ed c:/oracle/callproc2.sql
```

```
SQL> ed c:/oracle/proc2.sql
```

```
SQL> ed c:/oracle/callproc2.sql
```

```
SQL> ed c:/oracle/proc3.sql
SQL> @ c:/oracle/proc3.sql
Procedure created.

SQL> ed c:/oracle/proc3.sql
SQL> @ c:/oracle/proc3.sql
Procedure created.

SQL> exec p3(10,20);
BEGIN p3(10,20); END;
*
ERROR at line 1:
ORA-06550: line 1, column 7:
PLS-00306: wrong number or types of arguments in call to 'P3'
ORA-06550: line 1, column 7:
PL/SQL: Statement ignored

SQL> exec p3(10,20,50);
BEGIN p3(10,20,50); END;
*
ERROR at line 1:
ORA-06550: line 1, column 16:
PLS-00363: expression '50' cannot be used as an assignment target
ORA-06550: line 1, column 7:
PL/SQL: Statement ignored

SQL> @ c:/oracle/proc3call.sql
SP2-0310: unable to open file "c:/oracle/proc3call.sql"
SQL> ed c:/oracle/proc3call.sql

SQL> @ c:/oracle/proc3call.sql
Enter value for x: 10
old   6:      x:=&x;
new   6:      x:=10;
Enter value for y: 20
old   7:      y:=&y;
new   7:      y:=20;
Sum is 30

PL/SQL procedure successfully completed.

SQL> ed c:/oracle/proc3call.sql
```

```
SQL> ed c:/oracle/proc3.sql
```

```
SQL> ed c:/oracle/proc3call.sql
```

```
SQL> select * from customers;
```

CNO	CNAME	AMOUNT	DOJ	CONTACT	DEPT	CITY
1	Ravi	495	10-APR-20	9983	10	Indore
2	Sumit	715	13-APR-20	8832	20	Sagar
3	Ajay	165	30-SEP-22		10	Sagar
4	Vijay	935	15-FEB-23		30	Indore
5	Sanjay	385	10-APR-20		10	Indore
6	Gourav	55	03-NOV-25		20	Sagar
7	Sourav	120	06-NOV-25		10	Sagar
8	Raja	230	04-OCT-25		20	Bhopal
9	Rani	260	16-MAY-23		30	Bhopal
10	Gaurav	300	15-NOV-25	3394	40	Gwalior

```
10 rows selected.
```

```
SQL> ed c:/oracle/proc4.sql
```

```
SQL> select cname,min(doj) from customers where dept=10 group by DOJ;
select cname,min(doj) from customers where dept=10 group by DOJ
*
```

```
ERROR at line 1:
```

```
ORA-00979: not a GROUP BY expression
```

```
SQL> select cname,min(doj) from customers where dept=10 group by cname;
```

CNAME	MIN(DOJ)
Ajay	30-SEP-22
Sourav	06-NOV-25
Ravi	10-APR-20
Sanjay	10-APR-20

```
SQL> ed c:/oracle/proc4.sql
```

```
SQL> select min(doJ) from customers where dept=10;
```

```
MIN(DOJ)
```

```
-----
```

```
10-APR-20
```

```
SQL> ed c:/oracle/proc4.sql
```

```
SQL>
SQL> @ c:/oracle/proc4.sql
```

Procedure created.

```
SQL> ed c:/oracle/proc4call.sql
```

```
SQL> @ c:/oracle/proc4call.sql
Enter value for dno: 10
old      5:      dno:=&dno;
new      5:      dno:=10;
declare
*
ERROR at line 1:
ORA-01422: exact fetch returns more than requested number of rows
ORA-06512: at "PRINCE.P4", line 7
ORA-06512: at line 6
```

```
SQL> @ c:/oracle/proc4call.sql
Enter value for dno: 20
old      5:      dno:=&dno;
new      5:      dno:=20;
Sumit
```

PL/SQL procedure successfully completed.

```
SQL> @ c:/oracle/proc4call.sql
Enter value for dno: 30
old      5:      dno:=&dno;
new      5:      dno:=30;
Vijay
```

PL/SQL procedure successfully completed.

```
SQL> select * from customers;
```

CNO	CNAME	AMOUNT	DOJ	CONTACT	DEPT	CITY
1	Ravi	495	10-APR-20	9983	10	Indore
2	Sumit	715	13-APR-20	8832	20	Sagar
3	Ajay	165	30-SEP-22		10	Sagar
4	Vijay	935	15-FEB-23		30	Indore
5	Sanjay	385	10-APR-20		10	Indore
6	Gourav	55	03-NOV-25		20	Sagar
7	Sourav	120	06-NOV-25		10	Sagar
8	Raja	230	04-OCT-25		20	Bhopal
9	Rani	260	16-MAY-23		30	Bhopal
10	Gaurav	300	15-NOV-25	3394	40	Gwalior

10 rows selected.

SQL> select * from customers where dept=20;

CNO	CNAME	AMOUNT	DOJ	CONTACT	DEPT	CITY
2	Sumit	715	13-APR-20	8832	20	Sagar
6	Gourav	55	03-NOV-25		20	Sagar
8	Raja	230	04-OCT-25		20	Bhopal

SQL> @ c:/oracle/proc4call.sql

Enter value for dno: 30
old 5: dno:=&dno;
new 5: dno:=30;
Vijay

PL/SQL procedure successfully completed.

SQL> @ c:/oracle/proc4call.sql

Enter value for dno: 20
old 5: dno:=&dno;
new 5: dno:=20;
Sumit

PL/SQL procedure successfully completed.

SQL> select * from customers where dept=30;

CNO	CNAME	AMOUNT	DOJ	CONTACT	DEPT	CITY
4	Vijay	935	15-FEB-23		30	Indore
9	Rani	260	16-MAY-23		30	Bhopal

SQL> @ c:/oracle/proc4call.sql

Enter value for dno: 10
old 5: dno:=&dno;
new 5: dno:=10;
declare
*
ERROR at line 1:
ORA-01422: exact fetch returns more than requested number of rows
ORA-06512: at "PRINCE.P4", line 7
ORA-06512: at line 6

SQL> ed c:/oracle/proc4.sql

SQL> select min(doJ) from customers where dept=20;

MIN(DOJ)

13-APR-20

SQL> ed c:/oracle/proc4.sql

SQL> ed c:/oracle/proc4call.sql

SQL>