

```

declare cursor cur1 is select * from result;
begin
    for data in cur1
    loop
        dbms_output.put_line('Enrollment no ' || data.enrollno);
        for i in 1..data.subjmarks.count
        loop
            if data.subjmarks(i) is not null then
                dbms_output.put_line('Marks ' ||
data.subjmarks(i));
            else
                dbms_output.put_line('Marks NA');
            end if;
        end loop;
    end loop;
end;
/

```

SQL*Plus: Release 10.2.0.1.0 - Production on Sat Jan 3 08:38:44 2026

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```

SQL> connect
Enter user-name: prince/sagar
Connected.
SQL> create type booklist as varray(3) of varchar(10));
2 /

```

Warning: Type created with compilation errors.

```

SQL> show err
Errors for TYPE BOOKLIST:

```

LINE/COL ERROR

```

-----
1/42      PLS-00103: Encountered the symbol ")" when expecting one of the
          following:
          ; not null alter STORED_ character

```

```

SQL> drop type booklist;

```

Type dropped.

```

SQL> create type booklist as varray(3) of varchar(10);
2 /

```

Type created.

```

SQL> create table bookissue(memcd number,blist booklist);

```

Table created.

```
SQL> insert into bookissue values(1,booklist('SQK','Java','C'));
```

1 row created.

```
SQL> insert into bookissue values(2,booklist('C++','Python','HTML'));
```

1 row created.

```
SQL> select * from bookissue;
```

```
      MEMCD
-----
BLIST
-----
      1
BOOKLIST('SQK', 'Java', 'C')

      2
BOOKLIST('C++', 'Python', 'HTML')
```

```
SQL> desc booklist;
booklist VARRAY(3) OF VARCHAR2(10)
```

```
SQL> create type marks as varray(5) of number;
2 /
```

Type created.

```
SQL> create table result(enrollno number,subjmarks marks);
```

Table created.

```
SQL> insert into result values(101,marks(50,60,70,80,90));
```

1 row created.

```
SQL> select * from result;
```

```
      ENROLLNO
-----
SUBJMARKS
-----
      101
MARKS(50, 60, 70, 80, 90)
```

```
SQL>
```

```
SQL> create table books1(bookno number,isbn varchar(10));
```

Table created.

```
SQL> insert into books values(1,'ABC');
insert into books values(1,'ABC')
```

*

ERROR at line 1:

ORA-00947: not enough values

```
SQL> insert into books1 values(1,'ABC');
```

1 row created.

```
SQL> insert into books1 values(1,'1111');
```

1 row created.

```
SQL> insert into books1 values(1,'AB12#');
```

1 row created.

```
SQL> select * from books1;
```

BOOKNO	ISBN
1	ABC
1	1111
1	AB12#

```
SQL> create table temp(books booklist,score marks);
```

Table created.

```
SQL> insert into temp values(books('A','B','C'),score(1,2,3,4,5));
insert into temp values(books('A','B','C'),score(1,2,3,4,5))
```

*

ERROR at line 1:

ORA-00904: "BOOKS": invalid identifier

```
SQL> insert into temp values(booklist('A','B','C'),marks(1,2,3,4,5));
```

1 row created.

```
SQL>
```

```
SQL> select * from bookissue;
```

MEMCD

BLIST

1
BOOKLIST('SQK', 'Java', 'C')

2
BOOKLIST('C++', 'Python', 'HTML')

SQL> select * from bookissue where blist='Java';
select * from bookissue where blist='Java'

*

ERROR at line 1:

ORA-00932: inconsistent datatypes: expected PRINCE.BOOKLIST got CHAR

SQL> select * from bookissue b where exists
2 (select 1 from table(b.blist)b where b.column_value='Java');

MEMCD

BLIST

1
BOOKLIST('SQK', 'Java', 'C')

SQL> select * from bookissue b where exists
2 (select from table(b.blist)b where b.column_value='Java');
(select from table(b.blist)b where b.column_value='Java')

*

ERROR at line 2:

ORA-00936: missing expression

SQL> select * from bookissue b where exists

2

SQL> select * from bookissue b where exists
2 (select 10 from table(b.blist)b where b.column_value='Java');

MEMCD

BLIST

1
BOOKLIST('SQK', 'Java', 'C')

SQL> select * from bookissue b where exists

```
2 (select 'A' from table(b.blist)b where b.column_value='Java');
```

```
MEMCD
```

```
-----  
BLIST  
-----
```

```
1
```

```
BOOKLIST('SQK', 'Java', 'C')
```

```
SQL> select * from bookissue b where exists  
2 (select * from table(b.blist)b where b.column_value='Java');
```

```
MEMCD
```

```
-----  
BLIST  
-----
```

```
1
```

```
BOOKLIST('SQK', 'Java', 'C')
```

```
SQL> select * from bookissue b where exists  
2 (select * from table(x.blist)b where b.column_value='Java');  
(select * from table(x.blist)b where b.column_value='Java')  
*
```

```
ERROR at line 2:
```

```
ORA-06553: PLS-306: wrong number or types of arguments in call to 'OGC_X'
```

```
SQL> select * from bookissue b where exists  
2 (select * from table(b.blist)x where x.column_value='Java');
```

```
MEMCD
```

```
-----  
BLIST  
-----
```

```
1
```

```
BOOKLIST('SQK', 'Java', 'C')
```

```
SQL> select * from table bookissue;  
select * from table bookissue  
*
```

```
ERROR at line 1:
```

```
ORA-00906: missing left parenthesis
```

```
SQL> select * from marks;  
select * from marks  
*
```

ERROR at line 1:
ORA-04044: procedure, function, package, or type is not allowed here

SQL> select * from result;

ENROLLNO

SUBJMARKS

101
MARKS(50, 60, 70, 80, 90)

SQL> insert into result values(102,marks(10,20,30,40,50));

1 row created.

SQL> select * from result;

ENROLLNO

SUBJMARKS

101
MARKS(50, 60, 70, 80, 90)

102
MARKS(10, 20, 30, 40, 50)

SQL> select * from result r where exists
2 (select 1 from table(r.marks) m where m.column_value=50);
(select 1 from table(r.marks) m where m.column_value=50)
*

ERROR at line 2:
ORA-00904: "R"."MARKS": invalid identifier

SQL> select * from result r where exists
2 (select 1 from table(r.subjmarks) m where m.column_value=50);

ENROLLNO

SUBJMARKS

101
MARKS(50, 60, 70, 80, 90)

102

MARKS(10, 20, 30, 40, 50)

SQL> ed c:/oracle/var1.sql

SQL> set serveroutput on

SQL> @ c:/oracle/var1.sql

```
declare cur1 is select * from result;
                *
```

ERROR at line 1:

ORA-06550: line 1, column 14:

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

constant exception <an identifier>

<a double-quoted delimited-identifier> table LONG_ double ref

char time timestamp interval date binary national character

nchar

SQL> ed c:/oracle/var1.sql

SQL> @ c:/oracle/var1.sql

Enrollment no 101

Enrollment no 102

PL/SQL procedure successfully completed.

SQL> ed c:/oracle/var1.sql

SQL> @ c:/oracle/var1.sql

Enrollment no 101

Marks 50

Marks 60

Marks 70

Marks 80

Marks 90

Enrollment no 102

Marks 10

Marks 20

Marks 30

Marks 40

Marks 50

PL/SQL procedure successfully completed.

SQL> ed c:/oracle/var1.sql

SQL> insert into result values(103,marks(30,40,50,60,null));

1 row created.

```
SQL> @ c:/oracle/var1.sql
```

```
Enrollment no 101
```

```
Marks 50
```

```
Marks 60
```

```
Marks 70
```

```
Marks 80
```

```
Marks 90
```

```
Enrollment no 102
```

```
Marks 10
```

```
Marks 20
```

```
Marks 30
```

```
Marks 40
```

```
Marks 50
```

```
Enrollment no 103
```

```
Marks 30
```

```
Marks 40
```

```
Marks 50
```

```
Marks 60
```

```
Marks
```

PL/SQL procedure successfully completed.

```
SQL> ed c:/oracle/var1.sql
```

```
SQL> @ c:/oracle/var1.sql
```

```
end loop;
```

```
*
```

ERROR at line 13:

ORA-06550: line 13, column 3:

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

;

The symbol ";" was substituted for "END" to continue.

```
SQL> ed c:/oracle/var1.sql
```

```
SQL> @ c:/oracle/var1.sql
```

```
Enrollment no 101
```

```
Marks 50
```

```
Marks 60
```

```
Marks 70
```

```
Marks 80
```

```
Marks 90
```

```
Enrollment no 102
```

```
Marks 10
```

```
Marks 20
```

```
Marks 30
```

```
Marks 40
```

```
Marks 50
```

```
Enrollment no 103
```


Marks 30
Marks 40
Marks 50
Marks 60
Marks NA

PL/SQL procedure successfully completed.

SQL> ed c:/oracle/var1.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> select * from customers2;

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

9 rows selected.

SQL> drop table customers2;

Table dropped.

SQL> select * from customers2;
select * from customers2
*

ERROR at line 1:
ORA-00942: table or view does not exist

SQL> select * from customers2;

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

9 rows selected.

SQL> select * from students;
select * from students
*

ERROR at line 1:
ORA-00942: table or view does not exist

SQL> select * from books;

BOOKNO	NAME	EDITION
1	SQL	2023
2	Java	2024

SQL> drop table books;
drop table books
*

ERROR at line 1:
ORA-02449: unique/primary keys in table referenced by foreign keys

SQL> drop table issue;

Table dropped.

SQL> drop table books;

Table dropped.

SQL> select * from books;

BOOKNO	NAME	EDITION
1	SQL	2023
2	Java	2024

```
SQL> dbms_output.put_line('Marks ' || data.subjmarks(i));
```

```
-----
Microsoft Windows [Version 10.0.19045.6466]
(c) Microsoft Corporation. All rights reserved.
```

```
C:\Users\XITS>exp
```

```
Export: Release 10.2.0.1.0 - Production on Sat Jan 3 09:27:59 2026
```

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

```
Username: prince
Password:
```

```
Connected to: Oracle Database 10g Express Edition Release 10.2.0.1.0 - Production
Enter array fetch buffer size: 4096 >
```

```
Export file: EXPDAT.DMP > c:/oracle/booksbackup.dmp
```

```
(2)U(sers), or (3)T(ables): (2)U > t
```

```
Export table data (yes/no): yes >
```

```
Compress extents (yes/no): yes >
```

```
Export done in WE8MSWIN1252 character set and AL16UTF16 NCHAR character set
```

```
About to export specified tables via Conventional Path ...
```

```
Table(T) or Partition(T:P) to be exported: (RETURN to quit) > books
```

```
. . exporting table BOOKS 2 rows exported
```

```
Table(T) or Partition(T:P) to be exported: (RETURN to quit) >
```

```
Export terminated successfully without warnings.
```

```
C:\Users\XITS>imp
```

```
Import: Release 10.2.0.1.0 - Production on Sat Jan 3 09:29:16 2026
```

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

Username: prince
Password:

Connected to: Oracle Database 10g Express Edition Release 10.2.0.1.0 - Production

Import file: EXPDAT.DMP > c:/oracle/booksbackup.dmp

Enter insert buffer size (minimum is 8192) 30720>

Export file created by EXPORT:V10.02.01 via conventional path
import done in WE8MSWIN1252 character set and AL16UTF16 NCHAR character set
List contents of import file only (yes/no): no >

Ignore create error due to object existence (yes/no): no >

Import grants (yes/no): yes >

Import table data (yes/no): yes >

Import entire export file (yes/no): no >

Username: prince

Enter table(T) or partition(T:P) names. Null list means all tables for user

Enter table(T) or partition(T:P) name or . if done: .

. importing PRINCE's objects into PRINCE
. importing PRINCE's objects into PRINCE
. . importing table "BOOKS" 2 rows imported
Import terminated successfully without warnings.

C:\Users\XITS>

=====