**CREATION**

SQL> create table lib ( bookname varchar(15),author varchar(15), publicationvarchar(10), noofcopies number);

Table created.

SQL> create table student ( rollno number,  name varchar(20), no\_card number  );

Table created.

SQL> create table books ( bookno number, bookname varchar(15),

available varchar(10),subscribed\_to number );

Table created.

SQL> create table subscription ( bookno number, rollno number, do\_sub date,

do\_return date,  fineamount number,status varchar(10) );

Table created.SQL> desc lib;

 Name                                      Null?    Type

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

 BOOKNAME                                           VARCHAR2(15)

 AUTHOR                                             VARCHAR2(15)

 PUBLICATION                                        VARCHAR2(10)

 NOOFCOPIES                                         NUMBER

SQL> desc student;

 Name                                      Null?    Type

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

 ROLLNO                                             NUMBER

 NAME                                               VARCHAR2(20)

 NO\_CARD                                            NUMBER

SQL> desc books;

 Name                                      Null?    Type

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

 BOOKNO                                             NUMBER

 BOOKNAME                                           VARCHAR2(15)

 AVAILABLE                                          VARCHAR2(10)

 SUBSCRIBED\_TO                                      NUMBER

SQL> desc subscription;

 Name                                      Null?    Type

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

 BOOKNO                                             NUMBER

 ROLLNO                                             NUMBER

 DO\_SUB                                             DATE

 DO\_RETURN                                          DATE

 FINEAMOUNT                                         NUMBER

 STATUS                                             VARCHAR2(10)

**INSERTION**

SQL> begin

  2      insert into student values(&rollno,'&name',2);

  3      end;

  4      /

Enter value for rollno: 5058

Enter value for name: pavi

old   2:     insert into student values(&rollno,'&name',2);

new   2:     insert into student values(5058,'pavi',2);

PL/SQL procedure successfully completed.

SQL> /

Enter value for rollno: 5100

Enter value for name: vidhya

old   2:     insert into student values(&rollno,'&name',2);

new   2:     insert into student values(5100,'vidhya',2);

PL/SQL procedure successfully completed.

SQL> /

Enter value for rollno: 5097

Enter value for name: anitha

old   2:     insert into student values(&rollno,'&name',2);

new   2:     insert into student values(5097,'anitha',2);

PL/SQL procedure successfully completed.

SQL> /

Enter value for rollno: 5066

Enter value for name: hari

old   2:     insert into student values(&rollno,'&name',2);

new   2:     insert into student values(5066,'hari',2);

PL/SQL procedure successfully completed.

SQL> /

Enter value for rollno: 5056

Enter value for name: suresh

old   2:     insert into student values(&rollno,'&name',2);

new   2:     insert into student values(5056,'suresh',2);

PL/SQL procedure successfully completed.

SQL> ed ins;

bookno number;

bname varchar(15);

noc number;

noc1 number;

author varchar(15);

publication varchar(10);

nobooks number;

lib\_rec lib%rowtype;

begin

bookno:=&bookno;

bname:='&bookname';

author:='&author';

publication:='&publication';

noc:=&noofcopies;

noc1:=noc;

select count(\*) into nobooks from lib where bookname=bname;

if nobooks=0 then

insert into lib values(bname,author,publication,noc);

else

update lib set noofcopies=noofcopies+noc where bookname=bname;

end if;

while noc!=0

loop

insert into books values(bookno,bname,'yes',0);

noc:=noc-1;

bookno:=bookno+1;

end loop;

end;

SQL> @ ins;

 30  /

Enter value for bookno: 23

old  11: bookno:=&bookno;

new  11: bookno:=23;

Enter value for bookname: cn

old  12: bname:='&bookname';

new  12: bname:='cn';

Enter value for author: forozan

old  13: author:='&author';

new  13: author:='forozan';

Enter value for publication: tata

old  14: publication:='&publication';

new  14: publication:='tata';

Enter value for noofcopies: 4

old  15: noc:=&noofcopies;

new  15: noc:=4;

PL/SQL procedure successfully completed.

SQL> /

Enter value for bookno: 28

old  11: bookno:=&bookno;

new  11: bookno:=28;

Enter value for bookname: ooad

old  12: bname:='&bookname';

new  12: bname:='ooad';

Enter value for author: scilber

old  13: author:='&author';

new  13: author:='scilber';

Enter value for publication: tata

old  14: publication:='&publication';

new  14: publication:='tata';

Enter value for noofcopies: 4

old  15: noc:=&noofcopies;

new  15: noc:=4;

PL/SQL procedure successfully completed.

SQL> /

Enter value for bookno: 32

old  11: bookno:=&bookno;

new  11: bookno:=32;

Enter value for bookname: dbms

old  12: bname:='&bookname';

new  12: bname:='dbms';

Enter value for author: elmasri

old  13: author:='&author';

new  13: author:='elmasri';

Enter value for publication: tata

old  14: publication:='&publication';

new  14: publication:='tata';

Enter value for noofcopies: 4

old  15: noc:=&noofcopies;

new  15: noc:=4;

PL/SQL procedure successfully completed.

SQL> /

Enter value for bookno: 37

old  11: bookno:=&bookno;

new  11: bookno:=37;

Enter value for bookname: evs

old  12: bname:='&bookname';

new  12: bname:='evs';

Enter value for author: ravi

old  13: author:='&author';

new  13: author:='ravi';

Enter value for publication: scitech

old  14: publication:='&publication';

new  14: publication:='scitech';

Enter value for noofcopies: 1

old  15: noc:=&noofcopies;

new  15: noc:=1;

PL/SQL procedure successfully completed.

**DIDPLAY**

SQL> select \* from lib;

BOOKNAME        AUTHOR          PUBLICATION       NOOFCOPIES

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

       cn                         forozan                 tata                              4

      ooad                     scilber                   tata                              4

      dbms                    elmasri                  tata                               4

      evs                        ravi                       scitech                        1

SQL> select \* from books;

    BOOKNO   BOOKNAME        AVAILABLE    SUBSCRIBED\_TO

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

        23                     cn                          yes                    0

        24                     cn                          yes                    0

        25                     cn                          yes                    0

        26                     cn                          yes                    0

        28                   ooad                        yes                    0

        29                   ooad                        yes                    0

        30                   ooad                           yes                   0

        31                   ooad                            yes                  0

        32                   dbms                           yes                  0

        33                   dbms                           yes                  0

        34                   dbms                           yes                  0

    BOOKNO     BOOKNAME       AVAILABLE      SUBSCRIBED\_TO

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

        35                dbms                          yes                     0

        37                  evs                           yes                     0

13 rows selected.

SQL> select \* from student;

    ROLLNO       NAME                    NO\_CARD

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

      5058                pavi                          2

      5100                vidhya                      2

      5097                anitha                       2

      5066                 hari                          2

      5056                suresh                       2

**PROCEDURE TO TAKE A BOOK**

SQL> ed take;

create or replace procedure sub(bname char,roll\_no number)as

lib\_rec lib%rowtype;

book\_rec books%rowtype;

stud\_rec student%rowtype;

sub\_rec subscription%rowtype;

book\_no number;

no\_of\_books number;

begin

select \* into stud\_rec from student where rollno=roll\_no;

if stud\_rec.no\_card=0 then

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

dbms\_output.put\_line('no card available');

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

else

select count(\*) into no\_of\_books from books where bookname=bname and available='yes';

if no\_of\_books=0 then

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

dbms\_output.put\_line('book not available');

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

else

select min(bookno) into book\_no from books where bookname=bname and available='yes';

insert into subscription values(book\_no,roll\_no,sysdate,sysdate+7,0,'ntreturned');

update student set no\_card=no\_card-1 where rollno=roll\_no;

update books set available='no' where bookno=book\_no;

update books set subscribed\_to=roll\_no where bookno=book\_no;

end if;

end if;

exception

when no\_data\_found then

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

dbms\_output.put\_line('u are not a user');

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

end;

SQL> @ take;

 35  /

Procedure created.

SQL> exec sub('evs',5058);

PL/SQL procedure successfully completed.

SQL> select \* from books;

    BOOKNO         BOOKNAME        AVAILABLE          SUBSCRIBED\_TO

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

        23                           cn                       yes                           0

        24                           cn                       yes                           0

        25                           cn                       yes                           0

        26                           cn                       yes                           0

        28                         ooad                     yes                           0

        29                         ooad                     yes                           0

        30                         ooad                     yes                           0

        31                         ooad                     yes                           0

        32                         dbms                    yes                           0

        33                         dbms                    yes                           0

        34                         dbms                    yes                           0

    BOOKNO          BOOKNAME        AVAILABLE    SUBSCRIBED\_TO

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

        35                           dbms                   yes                            0

        37                            evs                       no                     5058

13 rows selected.

SQL> select \* from subscription;

 BOOKNO     ROLLNO      DO\_SUB    DO\_RETURN     FINEAMOUNT     STATUS

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

        37               5058        21-SEP-09     28-SEP-09               0                       ntreturned

SQL> select \* from student;

    ROLLNO    NAME                    NO\_CARD

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

      5058          pavi                           1

      5100          vidhya                        2

      5097          anitha                         2

      5066          hari                            2

      5056          suresh                        2

SQL> exec sub('evs',5100);

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

book not available

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

PL/SQL procedure successfully completed.

SQL> exec sub('ooad',5058);

PL/SQL procedure successfully completed.

SQL> select \* from books;

    BOOKNO         BOOKNAME        AVAILABLE      SUBSCRIBED\_TO

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

        23                           cn                       yes                           0

        24                           cn                       yes                           0

        25                           cn                       yes                           0

        26                           cn                       yes                           0

        28                         ooad                     no                           5058

        29                         ooad                     yes                           0

        30                         ooad                     yes                           0

        31                         ooad                     yes                           0

        32                         dbms                    yes                           0

        33                         dbms                    yes                           0

        34                         dbms                    yes                           0

        35                         dbms                   yes                            0

        37                         evs                       no                      5058

SQL> select \* from subscription;

BOOKNO     ROLLNO     DO\_SUB       DO\_RETURN     FINEAMOUNT     STATUS

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

        37             5058           21-SEP-09        28-SEP-09            0                      ntreturned

        28             5058           21-SEP-09        28-SEP-09            0                      ntreturned

SQL> select \* from student;

  ROLLNO    NAME                    NO\_CARD

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

      5058          pavi                           0

      5100          vidhya                       2

      5097          anitha                         2

      5066          hari                            2

      5056          suresh                        2

SQL> exec sub('dbms',5058);

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

no card available

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

PL/SQL procedure successfully completed.

Procedure created.  
  
**PROCEDURE FOR RETURNING A BOOK**

SQL> ed ret;

create or replace procedure ret(bno number)as

lib\_rec lib%rowtype;

book\_rec books%rowtype;

stud\_rec student%rowtype;

sub\_rec subscription%rowtype;

book\_no number;

no\_of\_books number;

fine number;

begin

select \* into book\_rec from books where bookno=bno;

if book\_rec.available='yes' then

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

dbms\_output.put\_line('book available');

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

else

update subscription set do\_return=sysdate where bookno=bno and status='ntreturned';

select do\_return-do\_sub into fine from subscription where bookno=bno and status='ntreturned';

if fine>7 then

update subscription set fineamount=fine where bookno=bno and status='ntreturned';

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

dbms\_output.put\_line('u have to pay afine of||rs||fine||');

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

end if;

update subscription set status='returned' where bookno=bno;

update student set no\_card=no\_card+1 where rollno=book\_rec.subscribed\_to;

update books set available='yes' where bookno=bno;

update books set subscribed\_to=0 where bookno=bno;

end if;

exception

when no\_data\_found then

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

dbms\_output.put\_line('book doesnot belong to library');

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

end;

SQL> @ ret;

304  /

Procedure created.

SQL> exec ret(28);

PL/SQL procedure successfully completed.

SQL> select \* from subscription;

    BOOKNO     ROLLNO   DO\_SUB    DO\_RETURN    FINEAMOUNT     STATUS

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

        37                 5058        21-SEP-09    28-SEP-09            0                       returned

        28                  5058        21-SEP-09    21-SEP-09           0                       returned

SQL> select \* from books;

 BOOKNO             BOOKNAME       AVAILABLE     SUBSCRIBED\_TO

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

        23                           cn                       yes                           0

        24                           cn                       yes                           0

        25                           cn                       yes                           0

        26                           cn                       yes                           0

        28                         ooad                     yes                           0

        29                         ooad                     yes                           0

        30                         ooad                     yes                           0

        31                         ooad                     yes                           0

        32                         dbms                    yes                           0

        33                         dbms                    yes                           0

        34                         dbms                    yes                           0

  BOOKNO              BOOKNAME    AVAILABLE      SUBSCRIBED\_TO

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

           35                         dbms                   yes                            0

           37                         evs                       no                      5058

13 rows selected.

SQL> select \* from student;

  ROLLNO    NAME                    NO\_CARD

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

      5058          pavi                           1

      5100          vidhya                       2

      5097          anitha                         2

      5066          hari                            2

      5056          suresh                        2

SQL> exec ret(345);

$$$$$$$$$$$$

book doesnot belong to library

$$$$$$$$$$$$