**CHAROTAR UNIVERSITY OF SCIENCE & TECHNOLOGY**

FACULTY OF TECHNOLOGY AND ENGINEERING

**Devang Patel Institute of Advance Technology & Research**

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

**CSE246 Database Management System**

Semester: IV

Academic year: 2019-20

**PL/SQL Mini Project Report**

**AIM**

Create a mini project to handle the operations of Library Management System using SQL queries and PL/ SQL ( Use the concept of Cursor, Trigger, Procedure/ function, Package and Exception Handling )  
  
*Note: create at least three modules*

**EXPLANATION OF PROJECT**

This Project is a Library Management System. It consists of 4 Tables

* LIB
  + Book Name
  + Author
  + Publication
  + Number of Copies
* STUDENT
  + Roll Number
  + Name
  + Card Number
* BOOKS
  + Book Number
  + Book Name
  + Availability
  + Subscribed to
* SUBSCRIPTION
  + Book Number
  + Roll Number
  + Date of Subscription
  + Date of Return
  + Fine Amount
  + Status

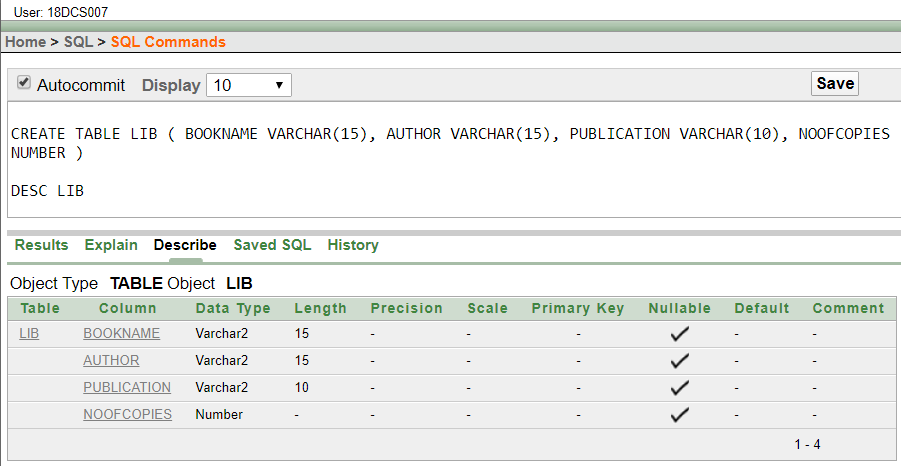
This project helps Librarian to enter and maintain details about the books & students who issues those books.

**MODULES IN PROJECT**

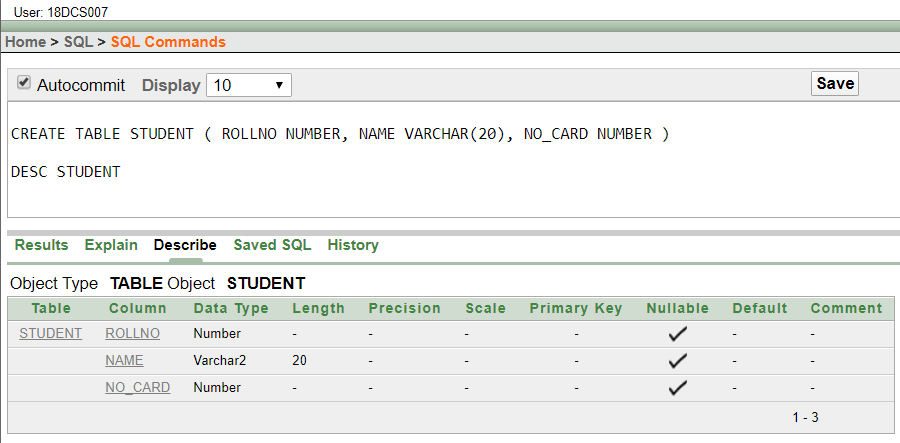
1. Inserting Rows in table Student
2. Inserting Rows in table Lib
3. Procedure to take a Book
4. Procedure for Returning a Book

**PROGRAM CODE**

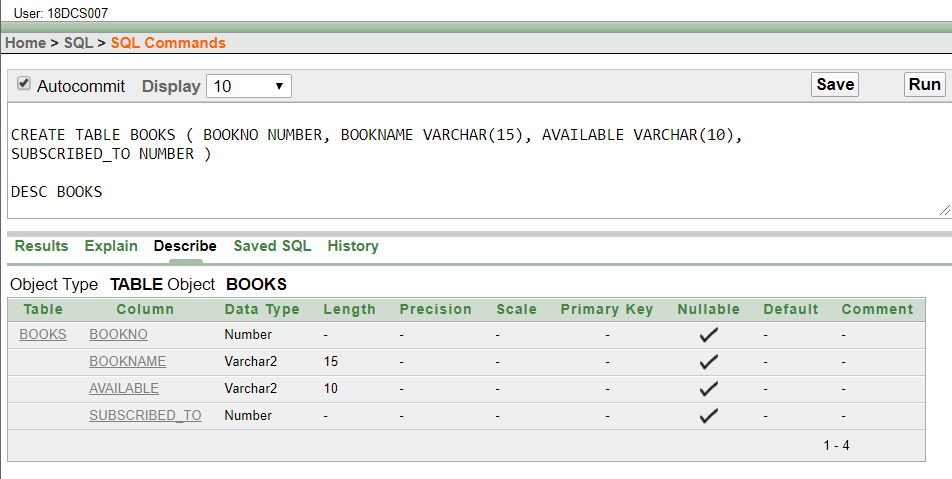
CREATING TABLE **LIBRARY**



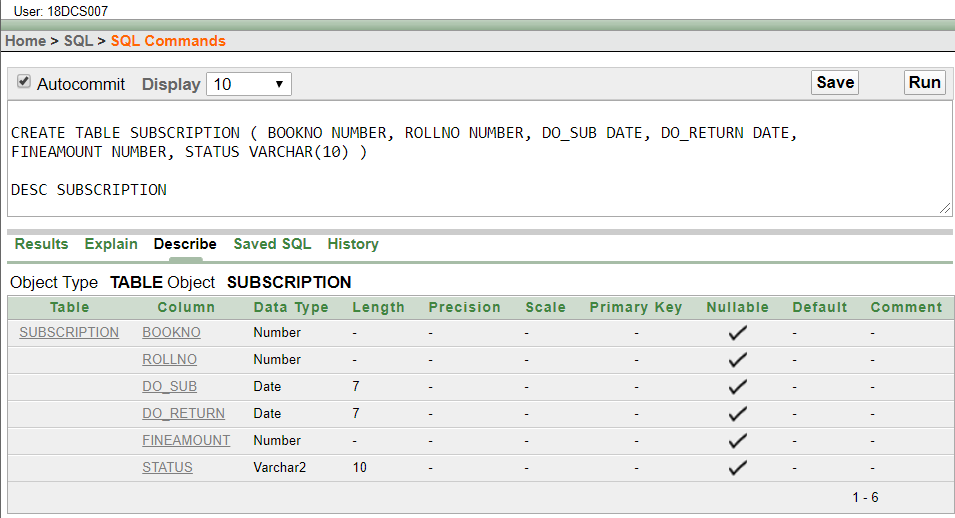
CREATING TABLE **STUDENT**



CREATING TABLE **BOOKS**



CREATING TABLE **SUBSCRIPTION**



**INSERTING ROWS IN TABLE STUDENT**

declare

Roll number;

Name varchar(20);

Card number;

begin

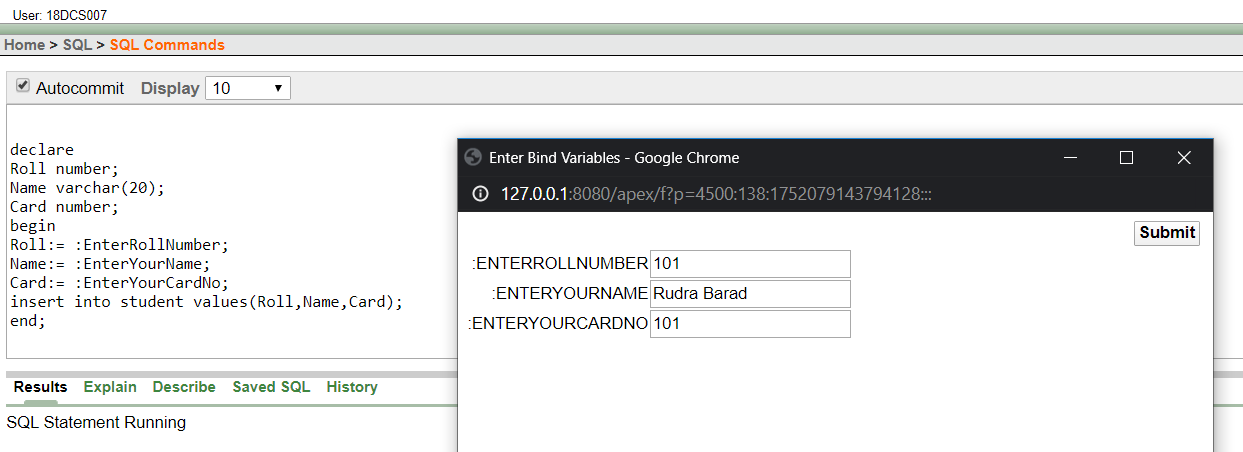
Roll:= :EnterRollNumber;

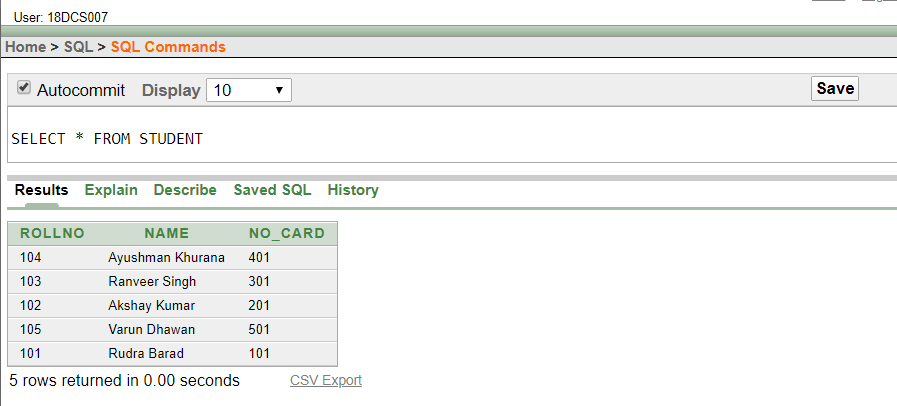
Name:= :EnterYourName;

Card:= :EnterYourCardNo;

insert into student values(Roll,Name,Card);

end;





**INSERTING ROWS IN TABLE STUDENT**

declare

Book\_no number;

Book\_Name varchar(15);

Noc number;

Noc1 number;

Auth varchar(15);

Pub varchar(10);

Nobooks number;

lib\_rec lib%rowtype;

begin

Book\_no:= :Enter\_Book\_Number;

Book\_Name:= :Enter\_Name\_of\_the\_Book;

Auth:= :Enter\_Name\_of\_Auth;

Pub:= :Enter\_Name\_of\_Pub;

Noc:= :Enter\_Number\_of\_Copies;

Noc1:= Noc;

select count(\*) into Nobooks from lib where Book\_name=Book\_Name;

if Nobooks=0 then

insert into lib values(Book\_Name,Auth,Pub,Noc);

else

update lib set Num\_of\_copies=Num\_of\_copies+Noc where Book\_name=Book\_Name;

end if;

while Noc!=0

loop

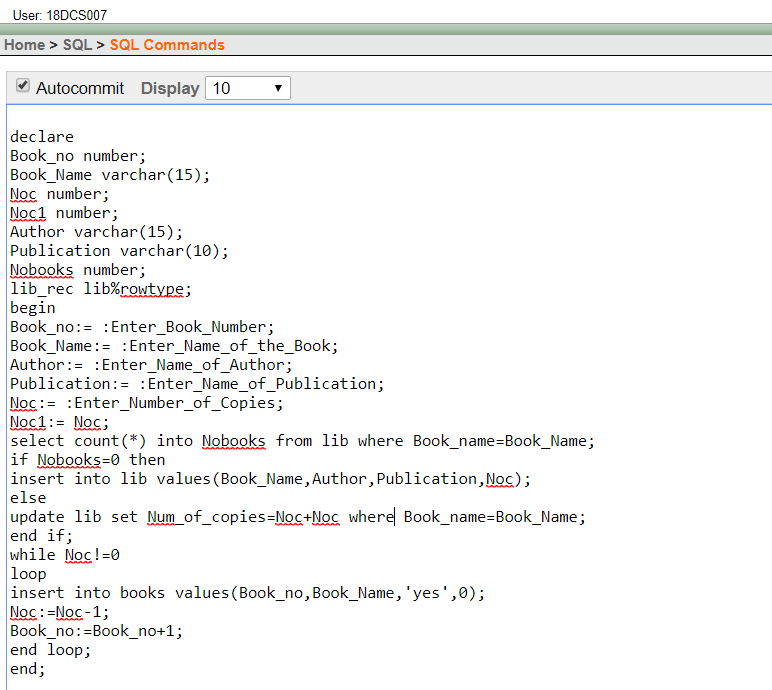
insert into books values(Book\_no,Book\_Name,'yes',0);

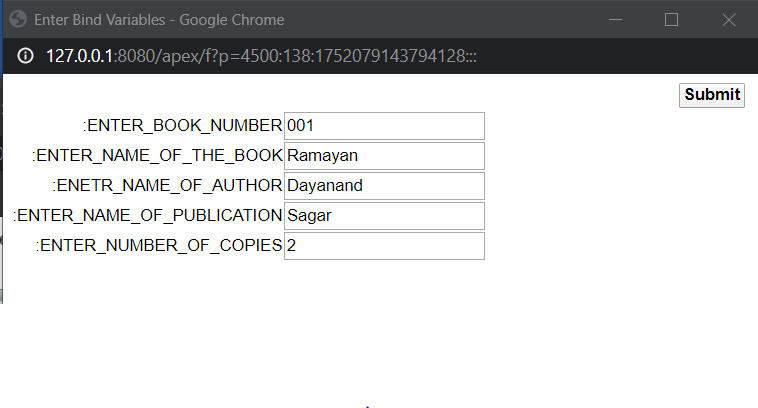
Noc:=Noc-1;

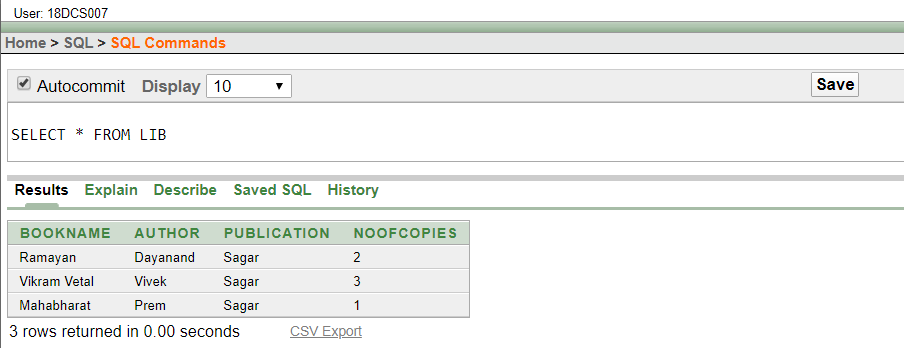
Book\_no:=Book\_no+1;

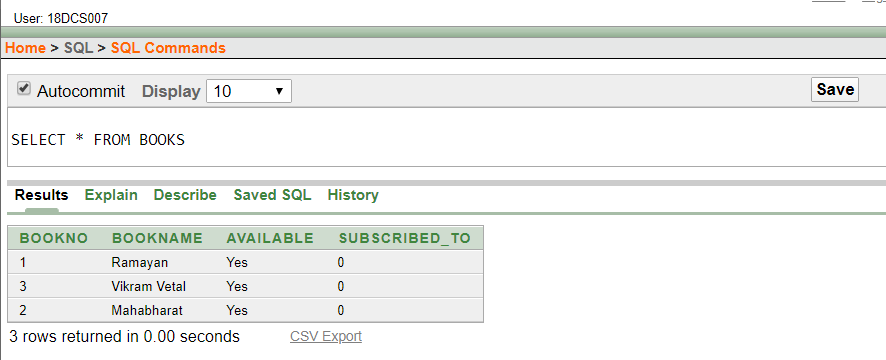
end loop;

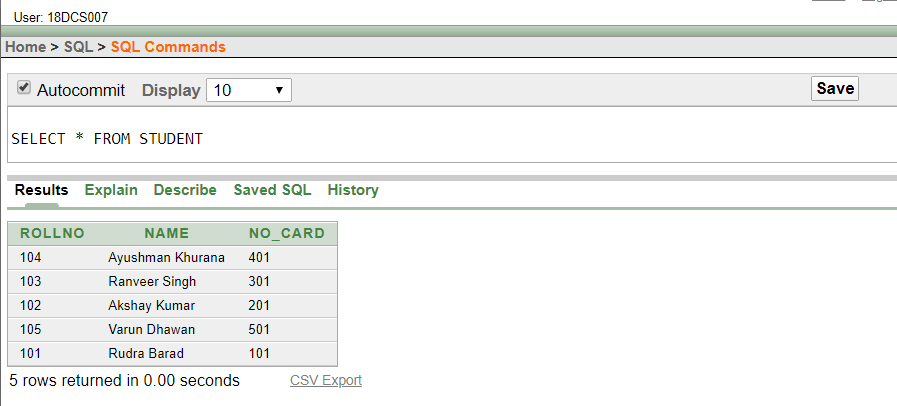
end;











**PROCEDURE TO TAKE A BOOK**

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;

exception

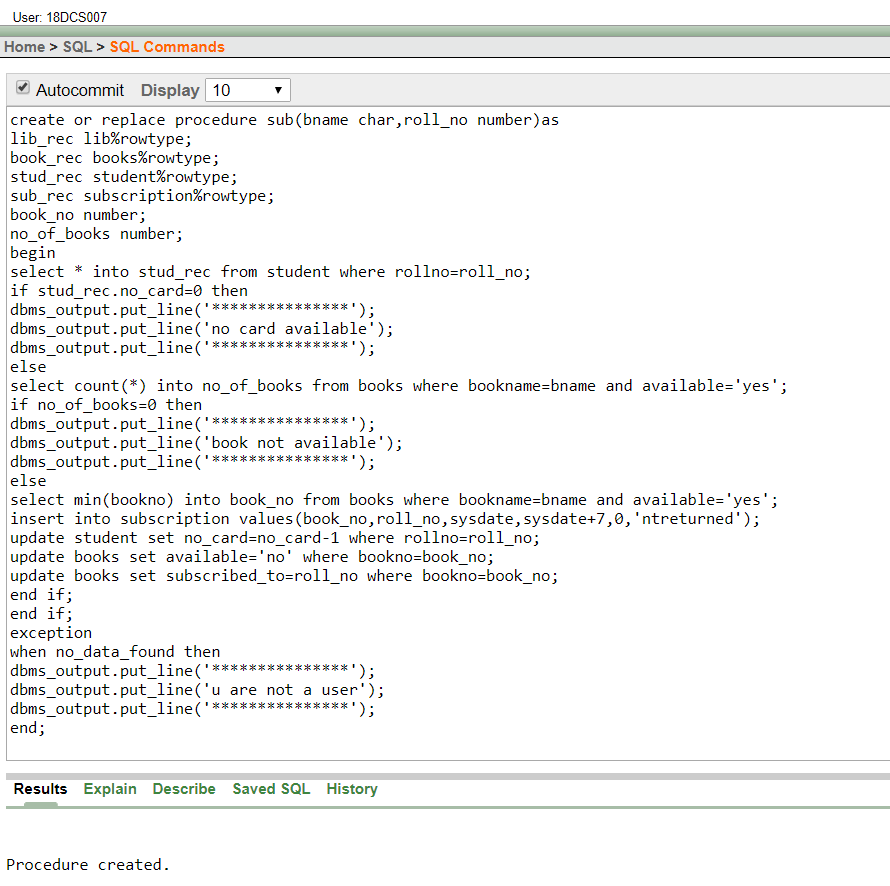
when no\_data\_found then

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

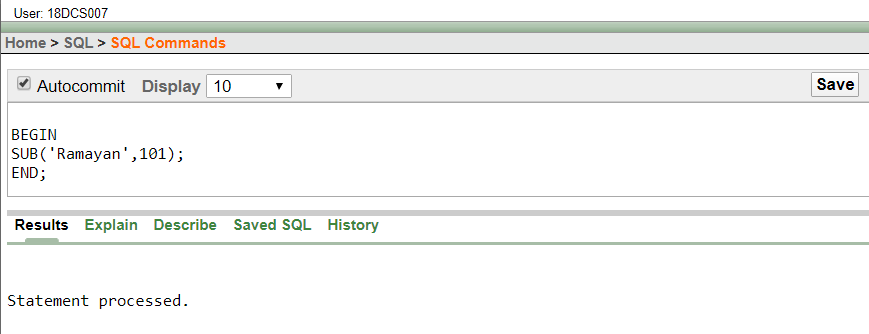
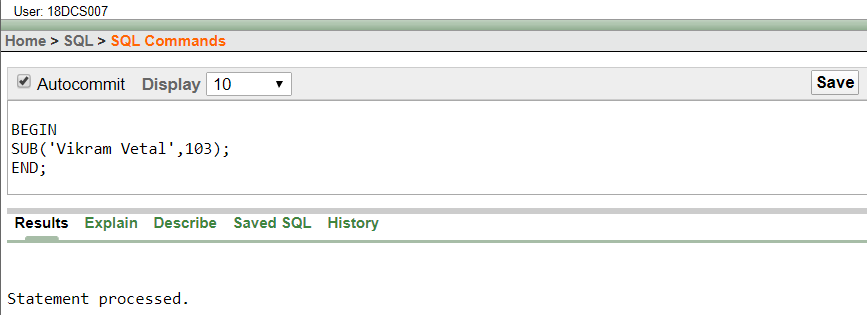
dbms\_output.put\_line('u are not a user');

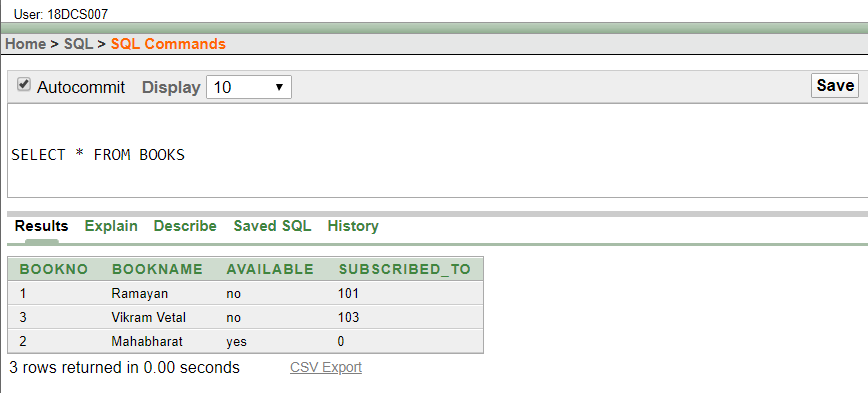
dbms\_output.put\_line('\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*');

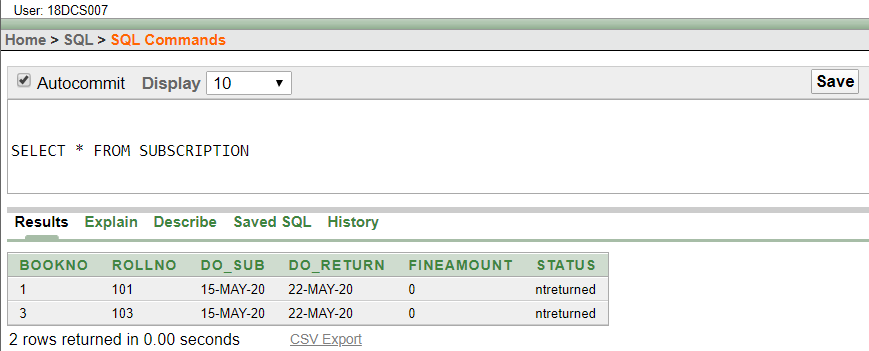
end;



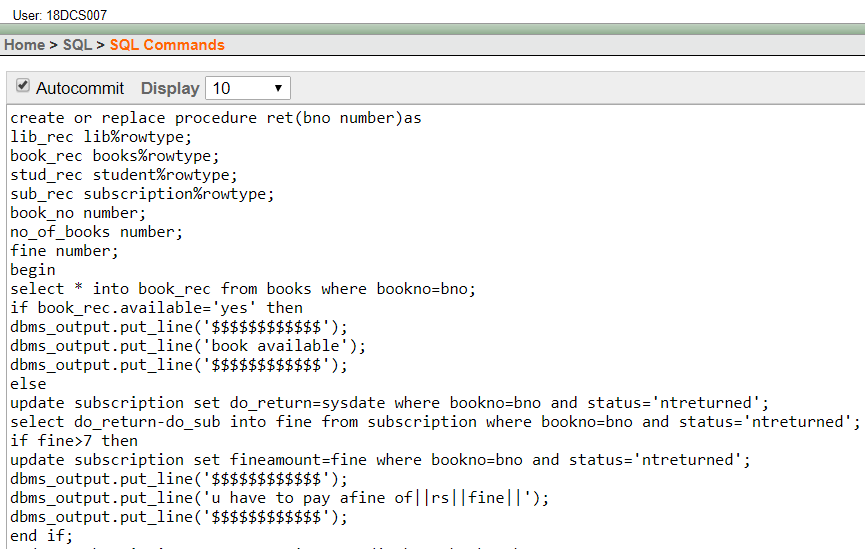
ISSUING THE BOOK

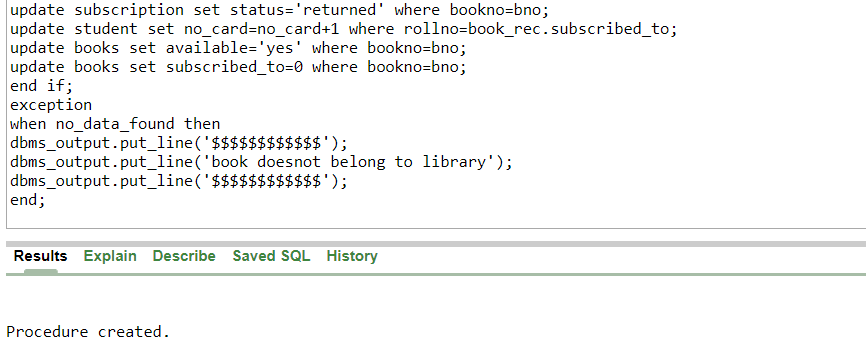


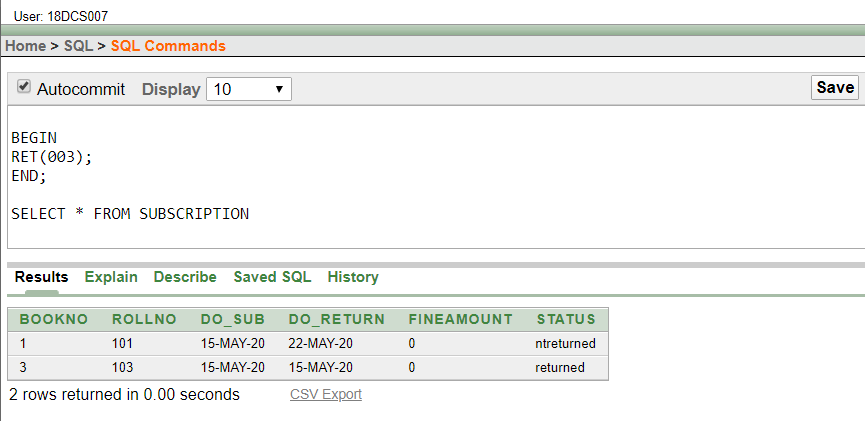


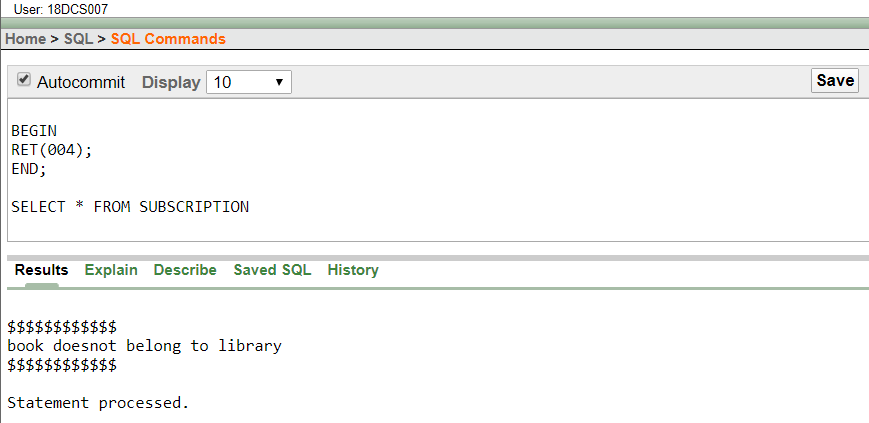


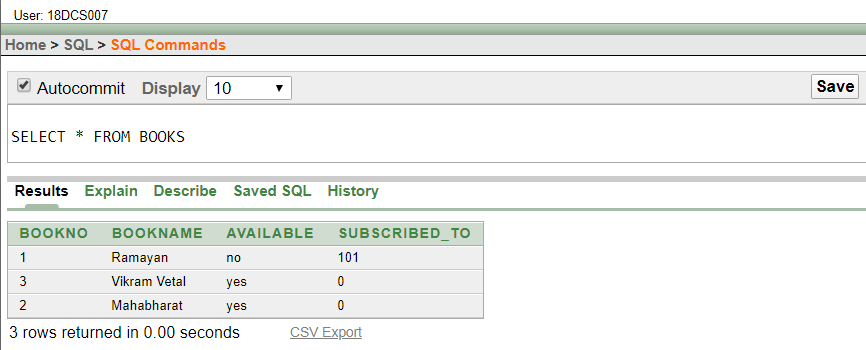
**PROCEDURE FOR RETURNING THE BOOK**











**CONCLUSION**

In this project, I have used the PL/SQL to create modules of Library Management. I’ve used different concepts like Packages, trigger and cursors.