

**DIGITAL ASSIGNMENT 4**

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**COURSE CODE: BCSE302P**

**COURSE NAME: DATABASE SYSTEM LAB**

**Write a PL/SQL procedure to accept an employee name and display his Department names.**

# SQL Command:

create procedure dispDepName(F\_Name in Employee.First\_Name%type) as

Dep\_Name Department.Department\_Name%type; Dep\_number Department.Department\_Number%type;

begin

select Department\_Number into Dep\_number from Employee where First\_Name = F\_Name; select Department\_Name into Dep\_name from Department where Department\_Number = Dep\_number; dbms\_output.put\_line('Department Name of '|| F\_Name || ' is ' || Dep\_Name);

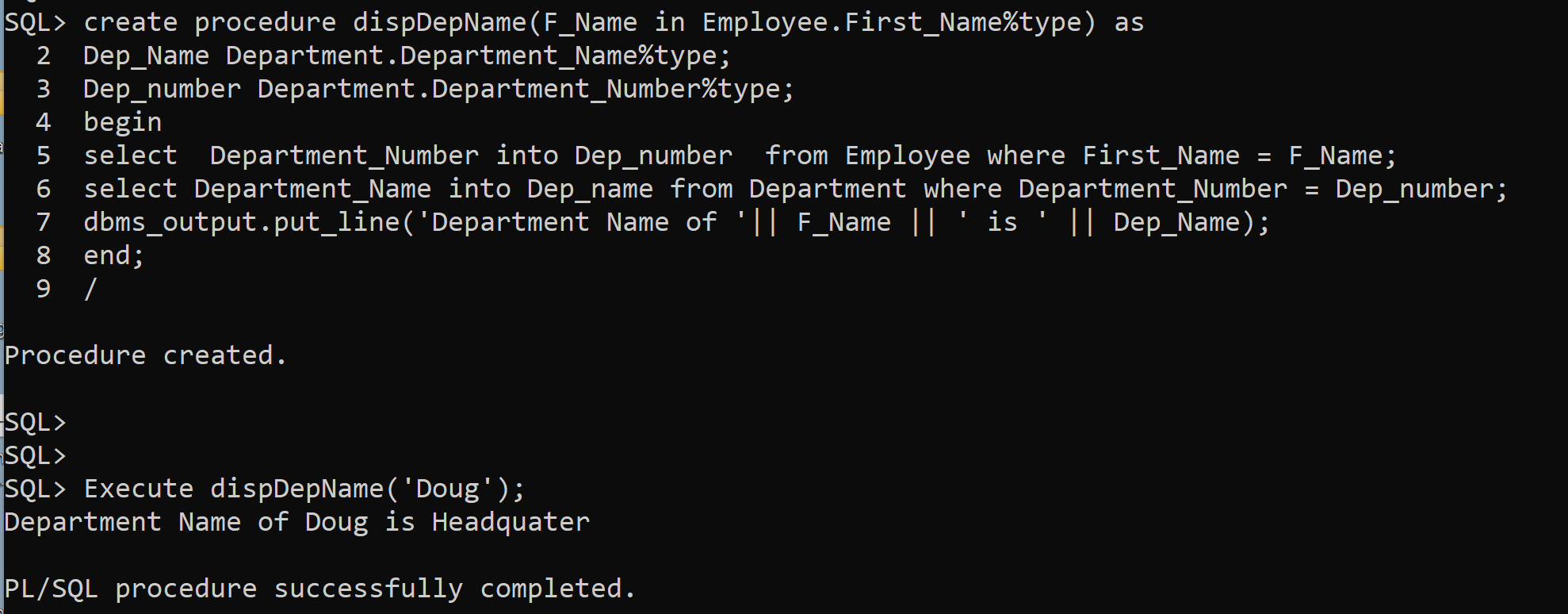
end;

/

Execute dispDepName('Doug');

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# Screenshot:



**Write a PL/SQL procedure to accept department number and display the employee whose salary is greater than the average salary of that department.**

# SQL Command:

create procedure salAvg(Dep\_Num in Department.Department\_Number%type ,F\_Name out Employee.First\_Name%type) as v\_avg\_sal number(7,2);

begin

select avg(Salary) into v\_avg\_sal from Employee where Department\_Number = dep\_num; select First\_Name into F\_Name from Employee where Salary >= v\_avg\_sal and Department\_Number = dep\_num;

end;

/

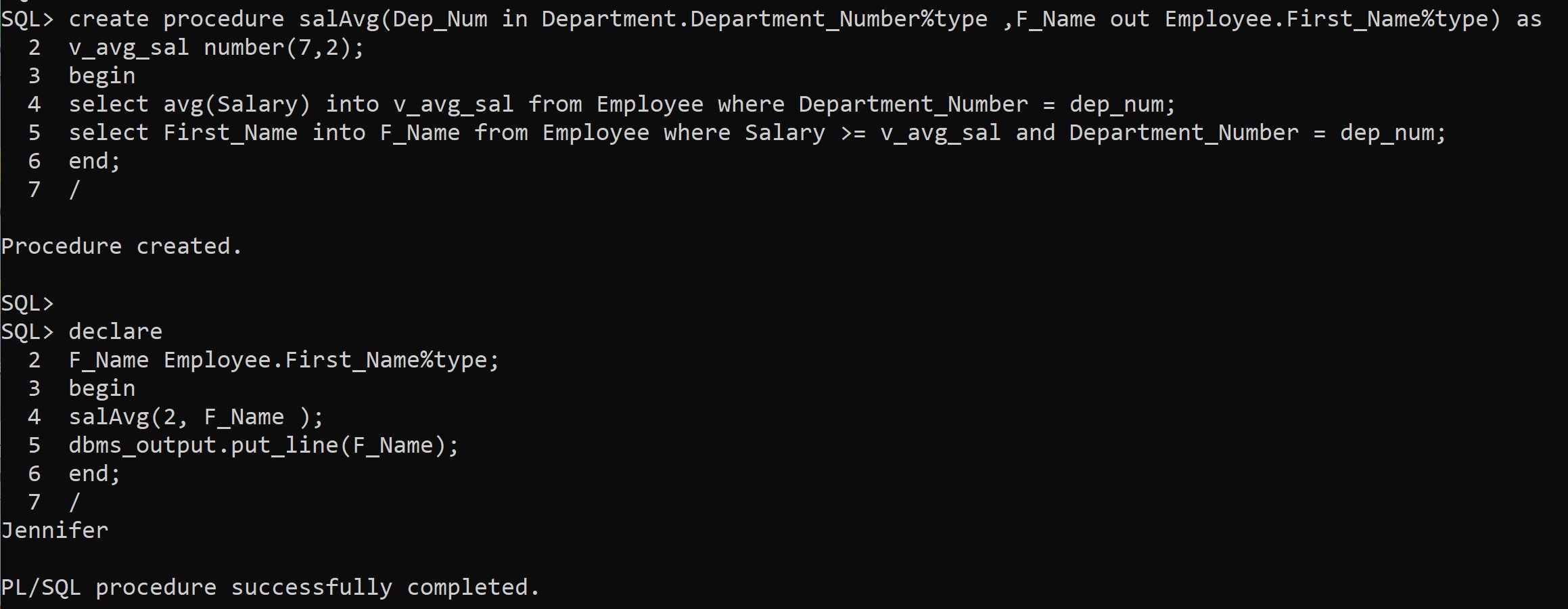
declare

F\_Name Employee.First\_Name%type; begin

salAvg(2, F\_Name ); dbms\_output.put\_line(F\_Name); end;

/

# Screenshot:



**Write a PL/SQL function to find the number of employees for a given Department name.**

# SQL Command:

create function numEmpFunc(Dep\_num number) return number is

num\_emp number; begin

select count(\*) into num\_emp from Employee where Department\_Number = Dep\_num;

return num\_emp; end;

declare

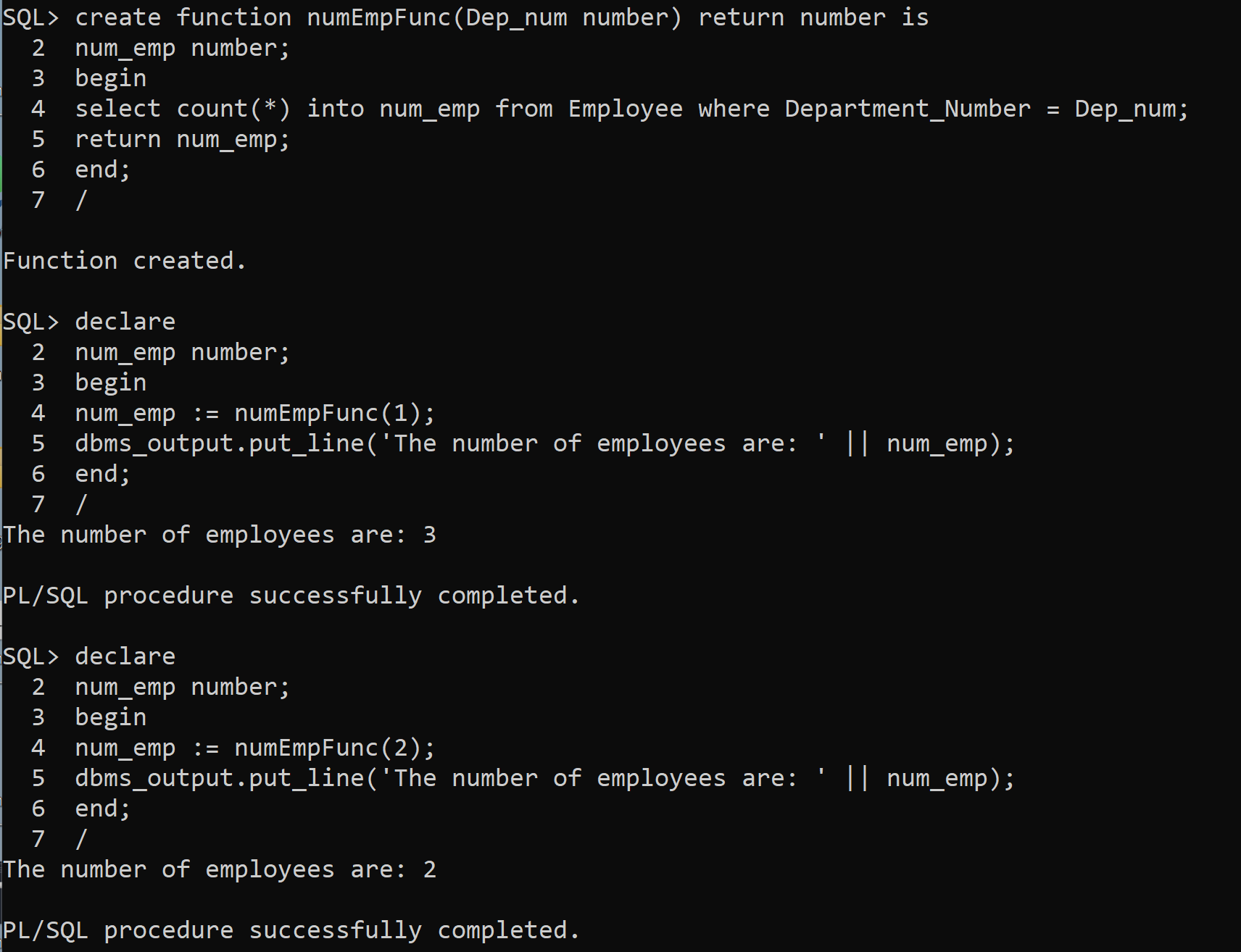
num\_emp number; begin

num\_emp := numEmpFunc(1); dbms\_output.put\_line('The number of employees are: ' || num\_emp);

end;

/

# Screenshot:



**Write a PL/SQL function to find the factorial of the given number using function.**

# SQL Command:

create function factorialFunc(num number) return number is

fact number:=1; itr number := 1; begin

while itr<=num loop

fact := fact\*itr; itr := itr+1;

end loop; return fact; end;

/

declare

num number; ans number; begin

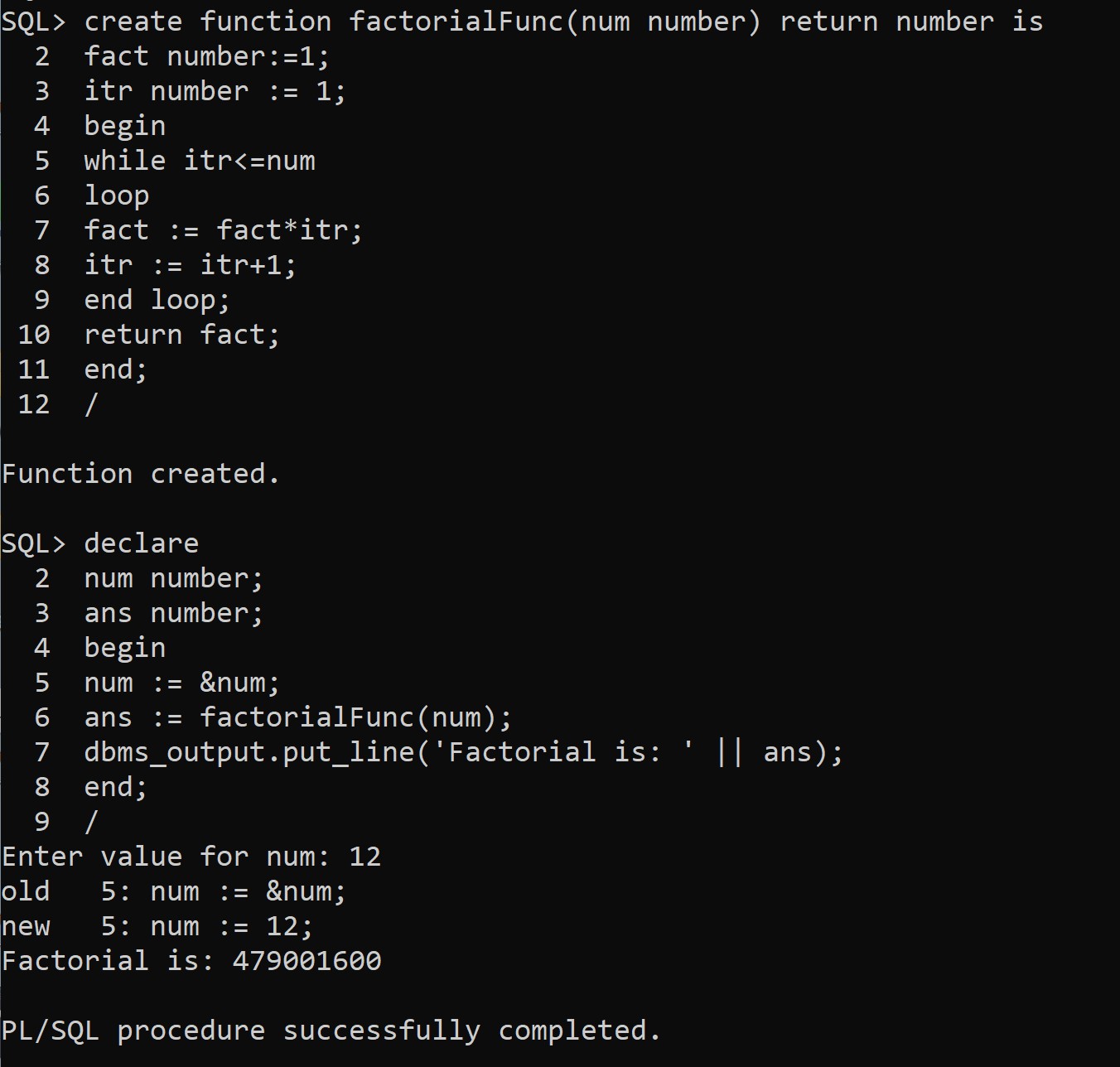
num := &num;

ans := factorialFunc(num); dbms\_output.put\_line('Factorial is: ' || ans);

end;

/

# Screenshot:



**Write a PL/SQL function to find the Fibonacci series for the given limit.**

# SQL Command:

create function fiboFunc(num number) return number is

|  |  |  |  |
| --- | --- | --- | --- |
| num1 | number | := | 1; |
| num2 | number | := | 1; |
| num3 | number | := | 1; |

itr number := 3; begin

if num = 1 then return 1;

end if;

if num = 2 then return 1;

end if;

while itr<=num loop

|  |  |  |  |
| --- | --- | --- | --- |
| num3 | := | num1 + | num2; |
| num1  num2 | :=  := | num2;  num3; |  |

itr := itr+1; end loop; return num2; end;

/

declare

nums number; ans number; begin

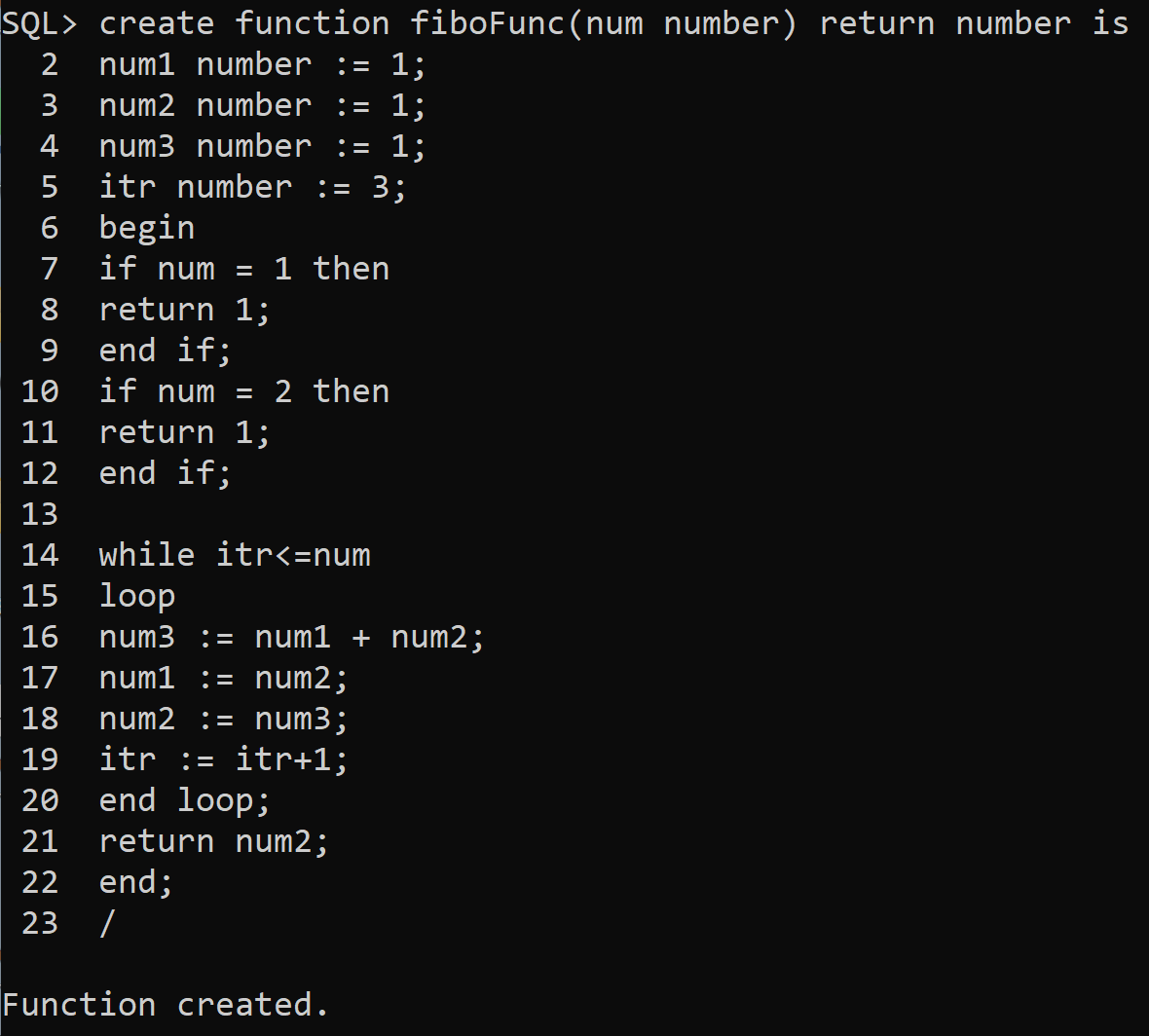
nums := &nums;

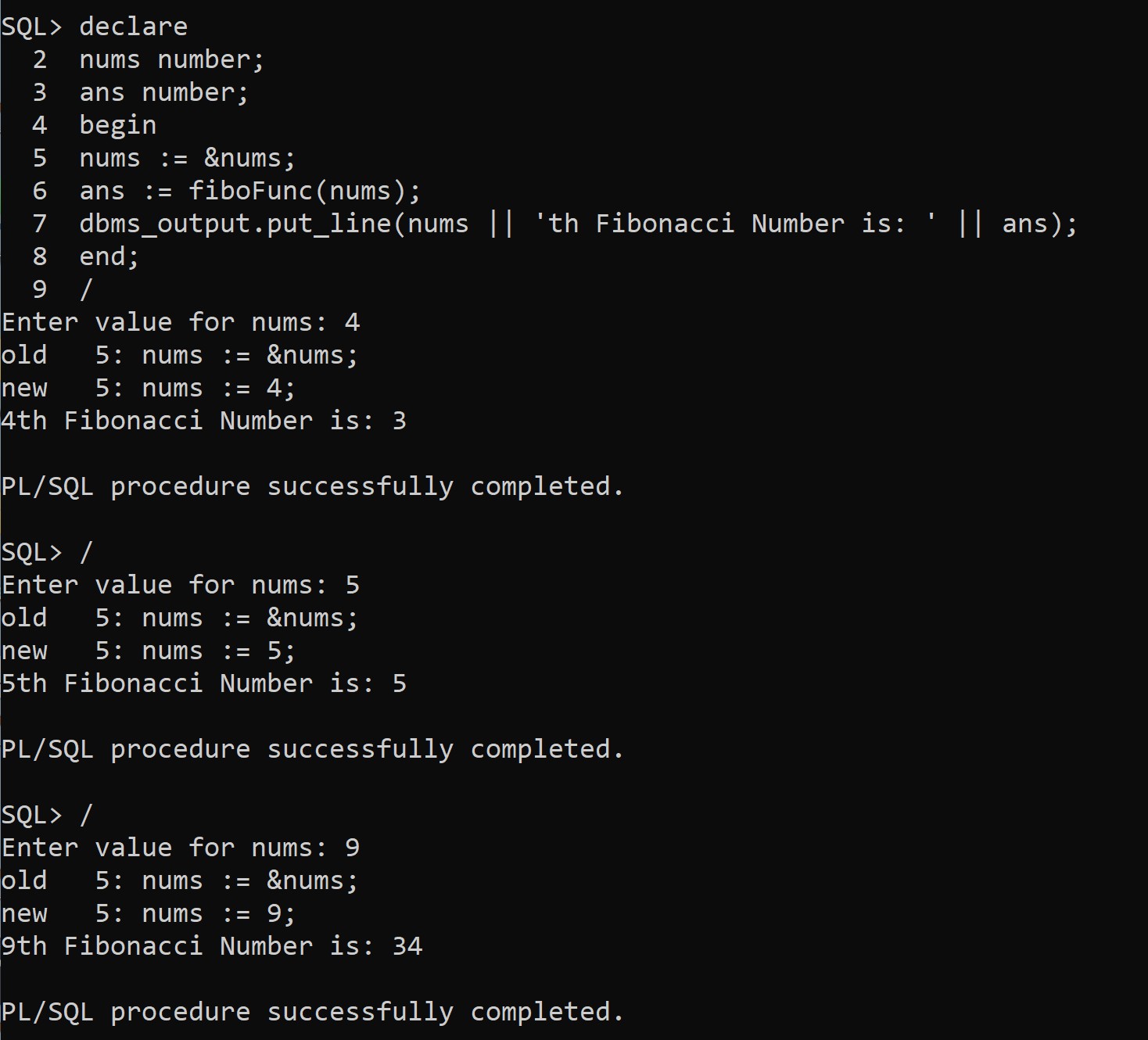
ans := fiboFunc(nums); dbms\_output.put\_line(nums || 'th Fibonacci Number is: ' || ans);

end;

/

# Screenshot:





**Write a PL/SQL program to retrieve all the rows from the employee table using cursors.**

# SQL Command:

declare

cursor emp\_cursor is select \* from Employee; emp\_record emp\_cursor%rowtype;

begin

open emp\_cursor; for i in 1..1000 loop

fetch emp\_cursor into emp\_record; exit when emp\_cursor%notfound;

dbms\_output.put\_line('The First name is ' || emp\_record.First\_Name || ', SSN is: ' || emp\_record.SSN\_Number

|| ',The Address is ' || emp\_record.Address

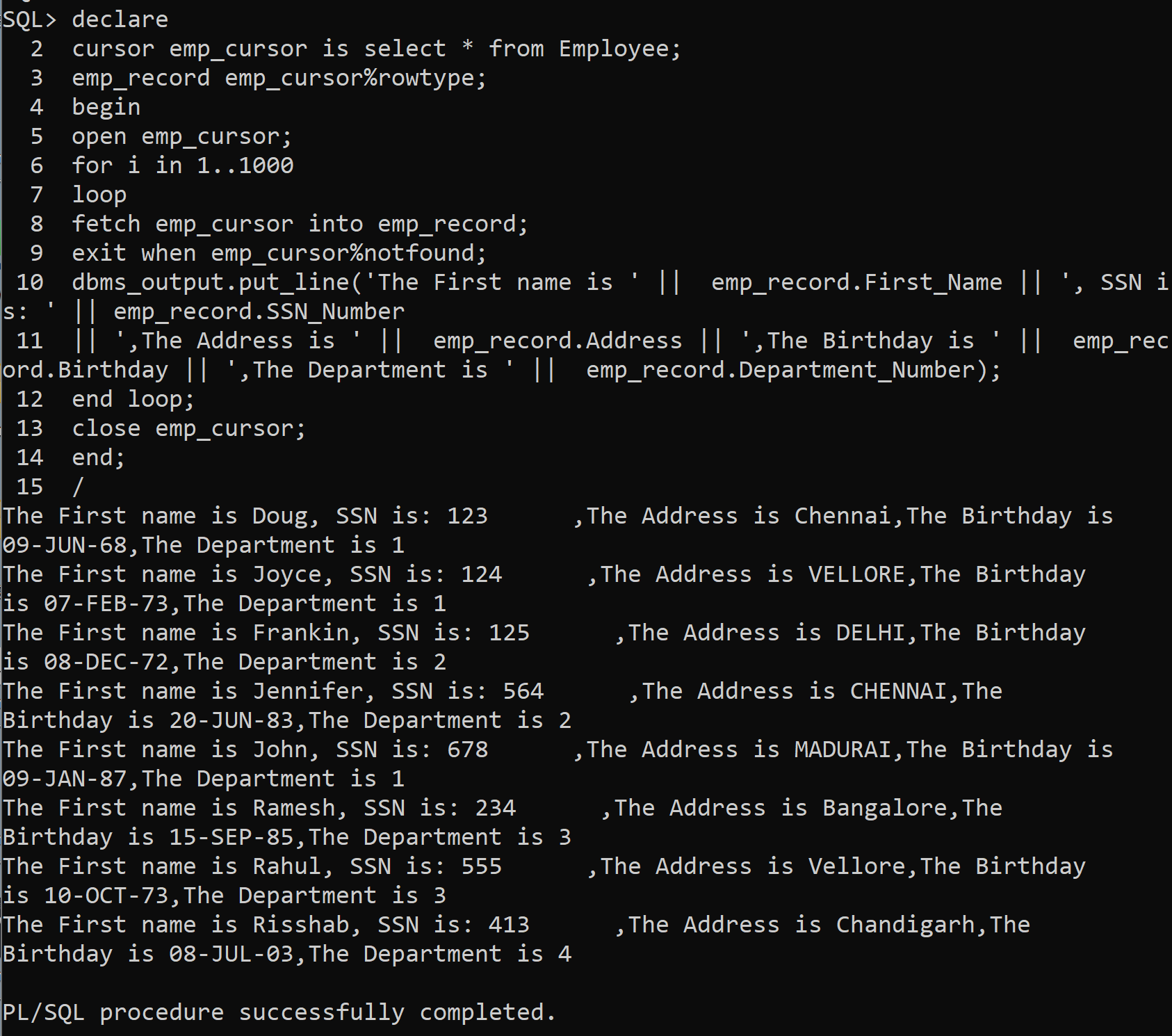
|| ',The Birthday is ' || emp\_record.Birthday || ',The Department is '

|| emp\_record.Department\_Number); end loop;

close emp\_cursor; end;

/

# Screenshot:



**Write a PL/SQL program to display the details of employee who is getting highest salary department headquarters using cursor.**

# SQL Command:

declare

cursor emp\_cursor is select \* from Employee; emp\_record emp\_cursor%rowtype; emp\_HighestSalary emp\_cursor%rowtype;

begin

open emp\_cursor; emp\_HighestSalary.Salary := 0; for i in 1..1000

loop

fetch emp\_cursor into emp\_record; exit when emp\_cursor%notfound;

if emp\_record.Department\_Number = 1 then if emp\_HighestSalary.Salary <

emp\_record.Salary then emp\_HighestSalary := emp\_record;

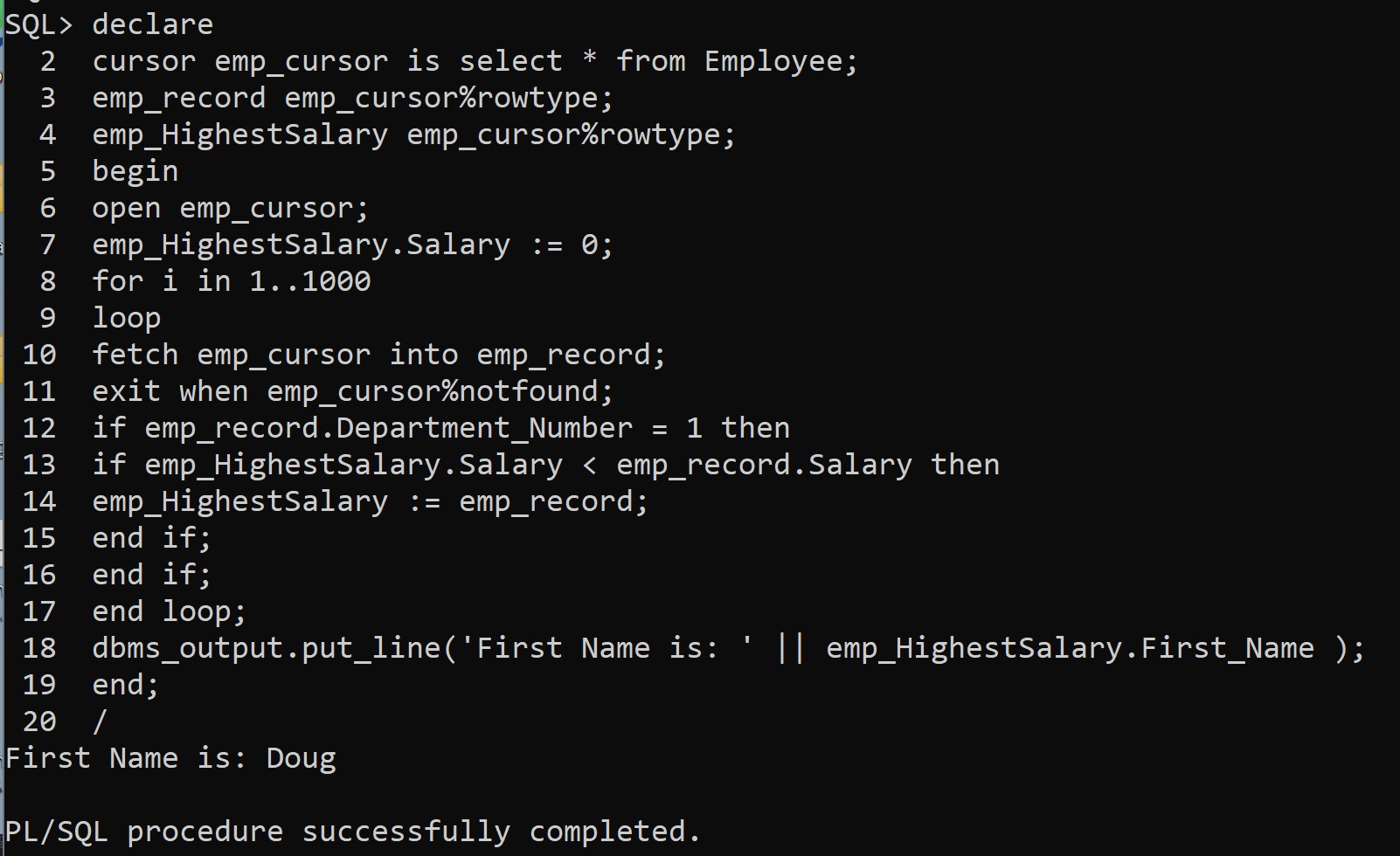
end if; end if; end loop;

dbms\_output.put\_line('First Name is: ' || emp\_HighestSalary.First\_Name );

end;

/

# Screenshot:



**Write a PL/SQL cursor program to display few records using joins SQL Command:**

# declare

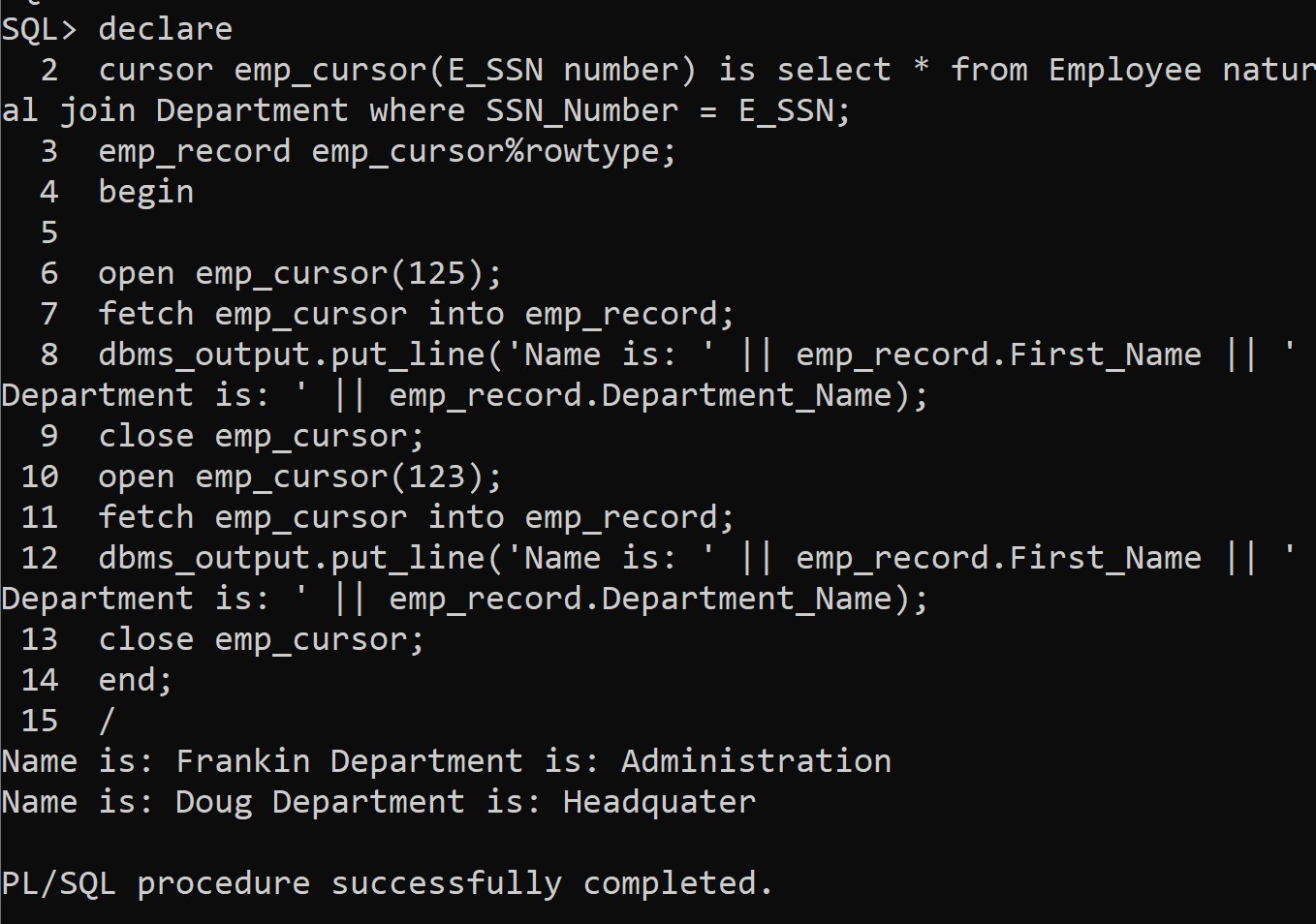
cursor emp\_cursor(E\_SSN number) is select \* from Employee natural join Department where SSN\_Number = E\_SSN;

emp\_record emp\_cursor%rowtype; begin

open emp\_cursor(125);

fetch emp\_cursor into emp\_record;

|  |  |  |
| --- | --- | --- |
| dbms\_output.put\_line('Name is: ' || |  | |
| emp\_record.First\_Name || ' Department  || emp\_record.Department\_Name); close emp\_cursor; | is: | ' |
| open emp\_cursor(123);  fetch emp\_cursor into emp\_record; |  |  |
| dbms\_output.put\_line('Name is: ' ||  emp\_record.First\_Name || ' Department | is: | ' |
| || emp\_record.Department\_Name); |  | |
| close emp\_cursor;  end; |
| / |
| **Screenshot:** |



# Write a PL/SQL trigger program

**To display a welcome message “WELCOME TO THE ABC COMPANY” when a new employee record is inserted into the employee table.**

# SQL Command:

create trigger new\_record after insert on Employee

begin

dbms\_output.put\_line('Welcome to the ABC Company');

end;

/

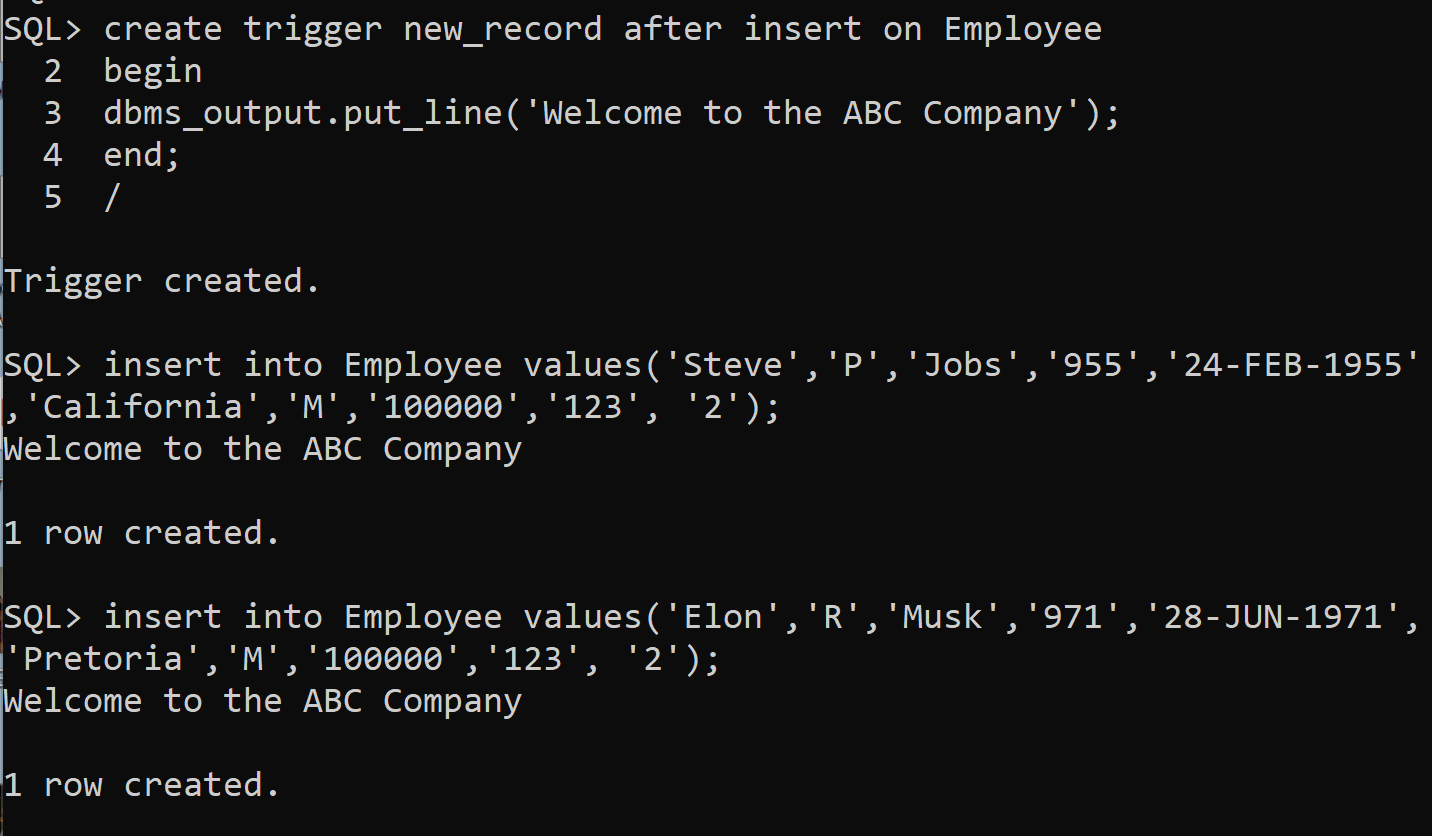
insert into Employee values('Steve','P','Jobs','955','24-FEB-

1955','California','M','100000','123', '2');

insert into Employee values('Elon','R','Musk','971','28-JUN-

1971','Pretoria','M','100000','123', '2');

# Screenshot:



**To display “Thank you for your service” message when the employee record is deleted from the employee table and insert a record into the new table named Old\_Emp(fname, mname,lname, bdate, address)**

# SQL Command:

create table Old\_Emp(First\_Name Varchar(15),Mid\_Name Char(2),Last\_Name Varchar(15), Birthday Date, Address varchar(15));

create trigger delete\_record before delete on Employee

for each row declare begin

insert into Old\_Emp values( :old.First\_Name,

:old.Mid\_Name, :old.Last\_Name,

:old.Birthday, :old.Address); dbms\_output.put\_line('Thank you for your service');

end;

/

delete from Employee where First\_Name = 'Elon';

delete from Employee where First\_Name = 'Steve';

# Screenshot:

