DBMS Lab Exercise-7 Procedural Language – Extension of SQL (PL/SQL)

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PART A

Write the PL/SQL program for the following.

1. Sum Of Two Numbers in PL/SQL

```
Declare
a number(5);
b number(5);
c number(5);
Begin
a:=100;
b:=168;
c:=a+b;
dbms_output.put_line(c);
End;
```

```
Statement processed.
268
```

2. To print all even numbers below 30.

```
declare
```

```
 x number := 0;
begin
for x in 1..30 loop
if mod(x,2)=0 then
dbms_output.put_line ( x);
end if;

end loop;
end;
```

```
Statement processed.
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
```

3. To reverse the given number. (Get user input)

```
DECLARE
num NUMBER;
rev NUMBER;
BEGIN
num:=46785;
rev:=0;
WHILE num>0 LOOP
rev:=(rev*10) + mod(num,10);
num:=floor(num/10);
END LOOP;
DBMS_OUTPUT.PUT_LINE('Reverse of the number is: ' || rev);
END;
```

```
Statement processed.
Reverse of the number is: 58764
```

4. To find the factorial of a given number. Get user input)

```
declare
fac number :=1;
n number :=3;
begin
while n > 0 loop
fac:=n*fac;
n:=n-1;
end loop;
dbms_output.put_line(fac);
end;
```

```
Statement processed.
6
```

5. Check a number using PL/SQL Program for Prime Number or not. (Get user input)

```
declare
n number;
i number;
temp number;
begin
```

```
n := 51;
i := 2;
temp := 1;
  for i in 2..n/2
    loop
        if mod(n, i) = 0
        then
            temp := 0;
            exit;
        end if;
    end loop;

    if temp = 1
    then
        dbms_output.put_line('true');
    else
        dbms_output.put_line('false');
    end if;
end;
```

```
Statement processed.
false
```

6. To generate the Fibonacci series up to 'n' terms (Get user input)

```
declare
first number := 0;
second number := 1;
temp number;
n number := 5;
i number;
```

```
begin
    dbms_output.put_line('Series:');
    dbms_output.put_line(first);
    dbms_output.put_line(second);
    for i in 2..n
    loop
        temp:=first+second;

first := second;
second := temp;
    dbms_output.put_line(temp);
end loop;
```

```
Statement processed.
Series:
0
1
1
2
3
5
```

```
end;
```

7. Find Average of N numbers using PLSQL (Get user input)

```
  DECLARE
      a     NUMBER := 567;

      b     NUMBER := 575;

      c     NUMBER := 876;

      sumOf3 NUMBER;
      avgOf3 NUMBER;
  BEGIN
      sumOf3 := a + b + c;
      avgOf3 := sumOf3 / 3;
```

```
    dbms_output.Put_line('Sum = '
                         ||sumOf3);
    dbms_output.Put_line('Average = '
                         ||avgOf3);
END;
```

```
Statement processed.
Sum = 2018
Average = 672.66666666666666666666666666666666666667
```

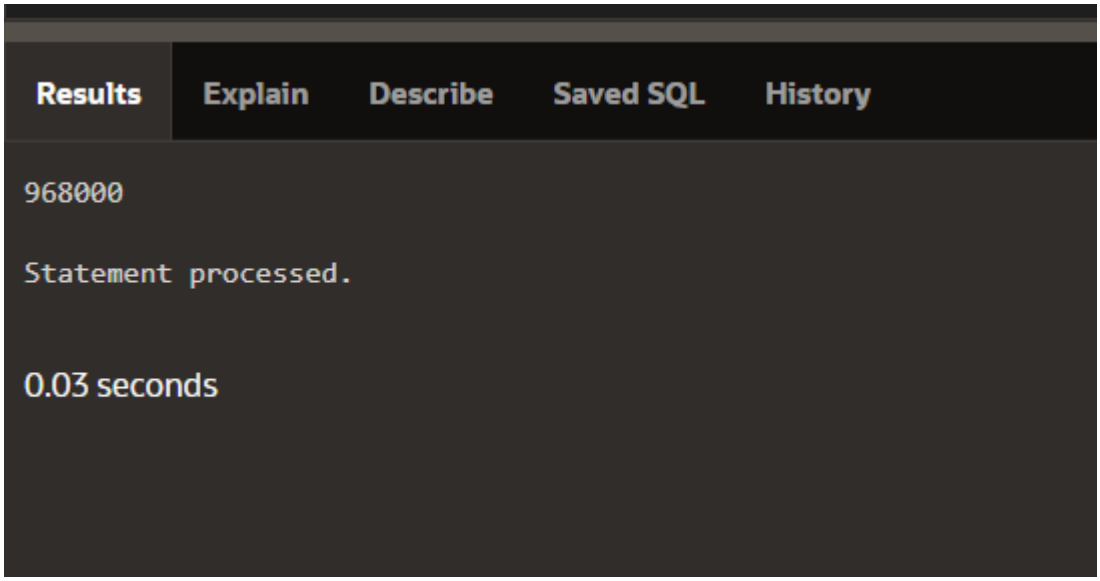
PART B

Consider the following schema for PL/SQL programming:
Employee(Fname, Lname,Empid, DoB, Gender, Salary, Dnumber)

1.Write a PL/SQL block to accept an Empid and display the salary of the person.

```
create table employee_21bce1163 (fname varchar(20),lname varchar(20), empid number(10),dob date,gender varchar(1),salary number(10),dnumber number(10));
insert into employee_21bce1163 values('sandip','datta',100,to_date('12-07-2003','dd-mm-yyyy'),'M',987000,3);
insert into employee_21bce1163 values('rohan','mathur',101,to_date('11-11-2003','dd-mm-yyyy'),'M',458000,4);
insert into employee_21bce1163 values('sean','mendes',102,to_date('18-02-2003','dd-mm-yyyy'),'M',968000,4);
insert into employee_21bce1163 values('lula','roy',103,to_date('25-08-2003','dd-mm-yyyy'),'F',234000,2);
```

```
insert into employee_21bce1163
values('bela','sen',104,to_date('04-08-2003','dd-mm-
yyyy'),'M',999000,7);

declare
aempid employee_21bce1163.empid%type;
asalary employee_21bce1163.salary%type;
begin
aempid:=102;
select salary into asalary from employee_21bce1163 where
empid=aempid;
dbms_output.put_line(asalary);
```



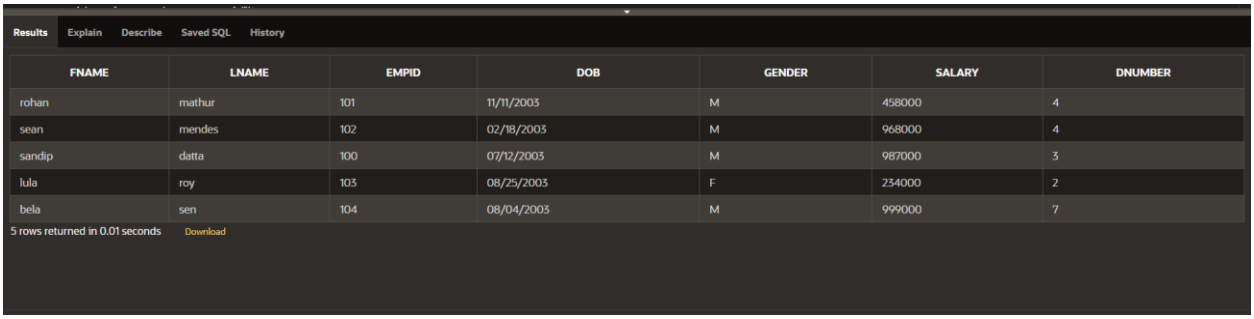

```
end;
```

2. Write a PL/SQL block to delete the details of the retired employee.

Before

```
create table employee_21bce1163 (fname varchar(20),lname
varchar(20), empid number(10),dob date,gender varchar(1),salary
number(10),dnumber number(10));
insert into employee_21bce1163
values('sandip','datta',100,to_date('12-07-2003','dd-mm-
yyyy'),'M',987000,3);
insert into employee_21bce1163
values('rohan','mathur',101,to_date('11-11-2003','dd-mm-
yyyy'),'M',458000,4);
insert into employee_21bce1163
values('sean','mendes',102,to_date('18-02-2003','dd-mm-
yyyy'),'M',968000,4);
```

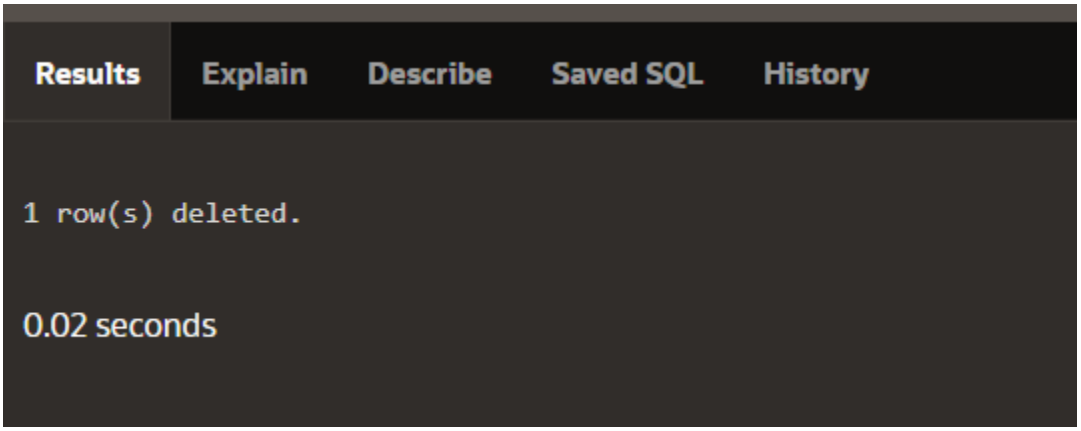
```
insert                  into                  employee_21bce1163
values('lula','roy',103,to_date('25-08-2003','dd-mm-
yyyy'),'F',234000,2);
insert                  into                  employee_21bce1163
values('bela','sen',104,to_date('04-08-2003','dd-mm-
yyyy'),'M',999000,7);
select* from employee_21bce1163;
declare
aempid employee_21bce1163.empid%type;

begin
aempid:=103;
delete from employee_21bce1163 where empid=aempid;

end;
select * from employee_21bce1163;
```



Results Explain Describe Saved SQL History

FNAME	LNAME	EMPID	DOB	GENDER	SALARY	DNUMBER
rohan	mathur	101	11/11/2003	M	458000	4
sean	mendes	102	02/18/2003	M	968000	4
sandip	datta	100	07/12/2003	M	987000	3
lula	roy	103	08/25/2003	F	234000	2
bela	sen	104	08/04/2003	M	999000	7

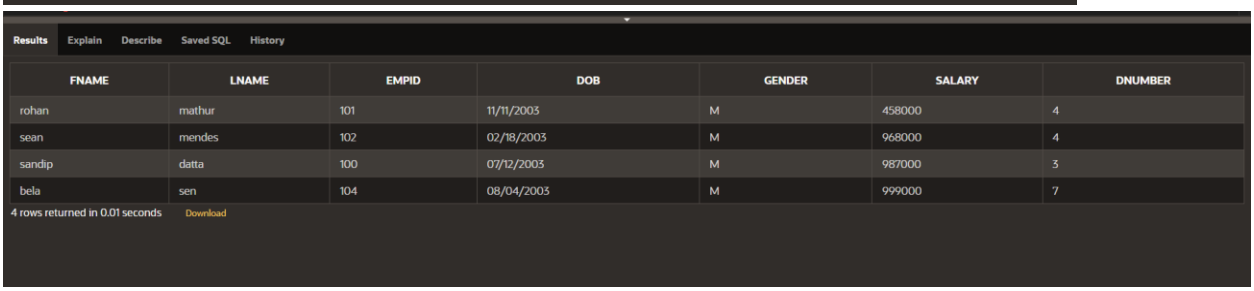
5 rows returned in 0.01 seconds Download



Results Explain Describe Saved SQL History

1 row(s) deleted.

0.02 seconds



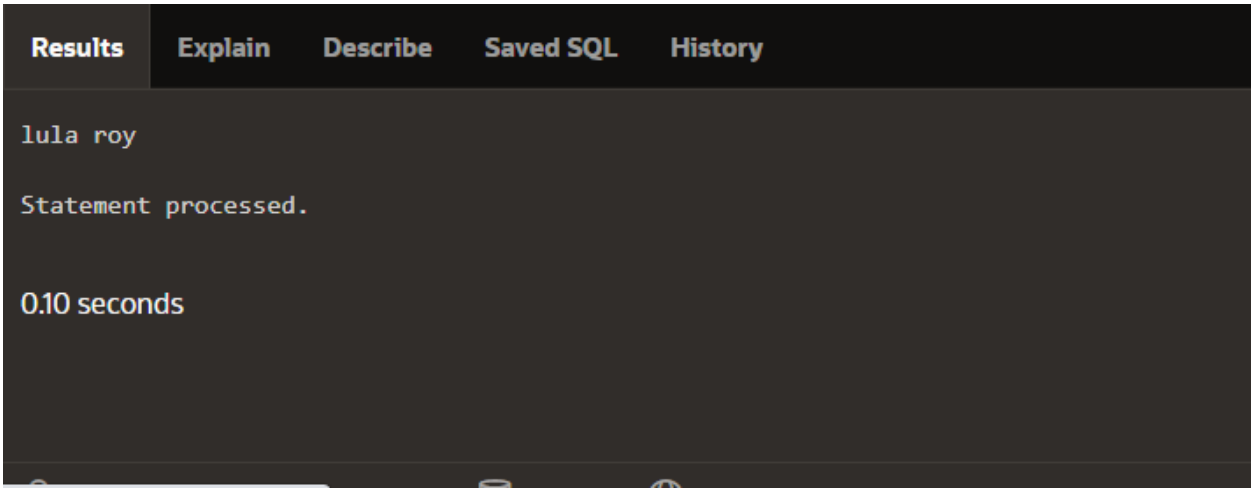
Results Explain Describe Saved SQL History

FNAME	LNAME	EMPID	DOB	GENDER	SALARY	DNUMBER
rohan	mathur	101	11/11/2003	M	458000	4
sean	mendes	102	02/18/2003	M	968000	4
sandip	datta	100	07/12/2003	M	987000	3
bela	sen	104	08/04/2003	M	999000	7

4 rows returned in 0.01 seconds Download

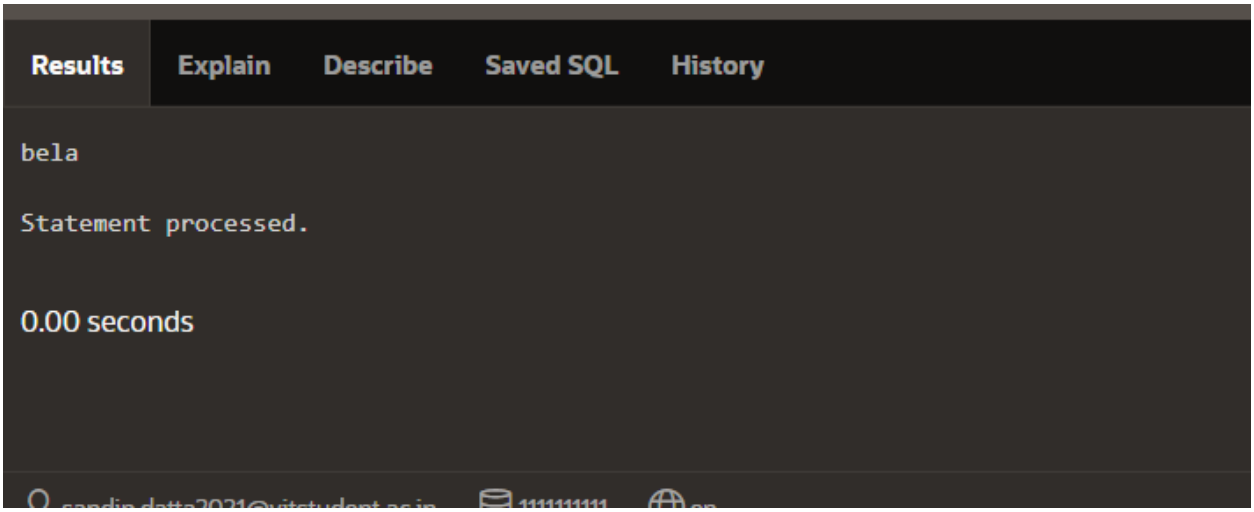
3. Write a PL/SQL block to display the names of female employee who belong to Dnumber 7.

```
create table employee_21bce1163 (fname varchar(20),lname varchar(20), empid number(10),dob date,gender varchar(1),salary number(10),dnumber number(10));
insert into employee_21bce1163 values('sandip','datta',100,to_date('12-07-2003','dd-mm-yyyy'),'M',987000,3);
insert into employee_21bce1163 values('rohan','mathur',101,to_date('11-11-2003','dd-mm-yyyy'),'M',458000,4);
insert into employee_21bce1163 values('sean','mendes',102,to_date('18-02-2003','dd-mm-yyyy'),'M',968000,4);
insert into employee_21bce1163 values('lula','roy',103,to_date('25-08-2003','dd-mm-yyyy'),'F',234000,2);
insert into employee_21bce1163 values('bela','sen',104,to_date('04-08-2003','dd-mm-yyyy'),'M',999000,7);

declare
cursor aemployee_21bce1163 is select fname,lname from employee_21bce1163 where gender='F' and dnumber=2;
begin
 for i in aemployee_21bce1163 loop
 dbms_output.put_line(i.fname||' '||i.lname);
 end loop;
end;
```



4. Write a PL/SQL to display the name of employee who get maximum salary.

```
create table employee_21bce1163 (fname varchar(20),lname varchar(20), empid number(10),dob date,gender varchar(1),salary number(10),dnumber number(10));
insert into employee_21bce1163 values('sandip','datta',100,to_date('12-07-2003','dd-mm-yyyy'),'M',987000,3);
insert into employee_21bce1163 values('rohan','mathur',101,to_date('11-11-2003','dd-mm-yyyy'),'M',458000,4);
insert into employee_21bce1163 values('sean','mendes',102,to_date('18-02-2003','dd-mm-yyyy'),'M',968000,4);
insert into employee_21bce1163 values('lula','roy',103,to_date('25-08-2003','dd-mm-yyyy'),'F',234000,2);
insert into employee_21bce1163 values('bela','sen',104,to_date('04-08-2003','dd-mm-yyyy'),'M',999000,7);

declare
asalary employee_21bce1163.salary%type;
aname employee_21bce1163.fname%type;
begin
 select max(salary) into asalary from employee_21bce1163;
 select fname into aname from employee_21bce1163 where salary=asalary;
 dbms_output.put_line(aname);
end;
```


Results
Explain
Describe
Saved SQL
History
bela
Statement processed.
0.00 seconds