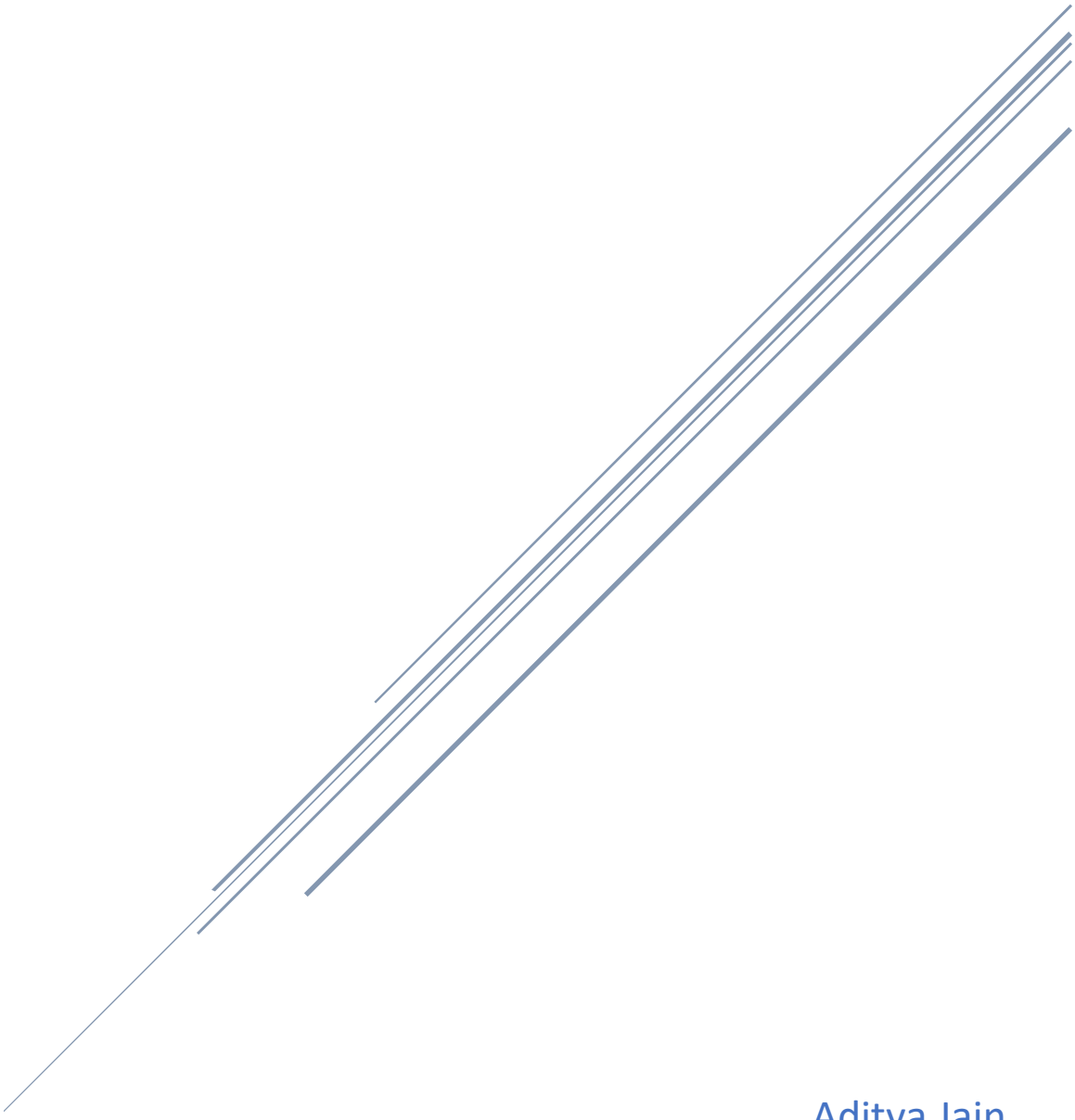
CSE-2007 ASSIGNMENT

Exercise 10



Aditya Jain
17BCE7066

Cursors

Q1. Retrieve the employee details using cursors.

Code:

```
declare
cursor emp_cursor is select * from employee;
begin
for emp_rec in emp_cursor
loop
dbms_output.put_line('SSN:' || emp_rec.ssn || ' First Name: ' ||emp_rec.firstname || ' Last Name: '
||emp_rec.lastname|| ' Salary: ' || emp_rec.salary);
end loop;
end;
/
```

Output:

```
SQL> edit 'C:\Users\Aditya Jain\Desktop\PL\Ex10_1.sql';

SQL> @ 'C:\Users\Aditya Jain\Desktop\PL\Ex10_1.sql';
SSN:554433221 First Name: Doug Last Name: Gilbert Salary: 80000
SSN:543216789 First Name: Joyce Last Name: PAN Salary: 70000
SSN:333445555 First Name: Frankin Last Name: Wong Salary: 40000
SSN:987654321 First Name: Jennifer Last Name: Wallace Salary: 43000
SSN:123456789 First Name: John Last Name: Smith Salary: 30000
SSN:666884444 First Name: Ramesh Last Name: Narayan Salary: 38000
SSN:453453453 First Name: Joyce Last Name: English Salary: 25000
SSN:888665555 First Name: James Last Name: Borg Salary: 55000
SSN:999887777 First Name: Alicia Last Name: Zelaya Salary: 25000
SSN:987987987 First Name: Ahmad Last Name: Jabbar Salary: 25000

PL/SQL procedure successfully completed.
```

Q2. Write a cursor program to display all the employee and department details

Code:

```
begin
for emp_rec in (select * from employee natural join department)
loop
dbms_output.put_line('SSN:' || emp_rec.ssn || ' FirstName ' || emp_rec.firstname || '
DepartmentName ' || emp_rec.departmentname || ' Department Number: '||
emp_rec.departmentnumber);
```

```
end loop;
end;
/
```

Output:

```
SQL> edit 'C:\Users\Aditya Jain\Desktop\PL\Ex10_2.sql';

SQL> @ 'C:\Users\Aditya Jain\Desktop\PL\Ex10_2.sql';
SSN:888665555 FirstName James DepartmentName Manufacture Department Number: 1
SSN:543216789 FirstName Joyce DepartmentName Administration Department Number: 2
SSN:554433221 FirstName Doug DepartmentName Headquarter Department Number: 3
SSN:999887777 FirstName Alicia DepartmentName Finance Department Number: 4
SSN:987654321 FirstName Jennifer DepartmentName Finance Department Number: 4
SSN:987987987 FirstName Ahmad DepartmentName Finance Department Number: 4
SSN:453453453 FirstName Joyce DepartmentName Research Department Number: 5
SSN:666884444 FirstName Ramesh DepartmentName Research Department Number: 5
SSN:333445555 FirstName Frankin DepartmentName Research Department Number: 5
SSN:123456789 FirstName John DepartmentName Research Department Number: 5

PL/SQL procedure successfully completed.
```

Functions

Q1. Write a function to give the number of employees for a given Department name.

Code:

```
create or replace function get_count(dname in varchar2)
return number
is
x number;
begin
select count(*) into x from employee natural join department where departmentname=dname
group by departmentname;
return x;
end;
/
```

Output:

```
SQL> edit 'C:\Users\Aditya Jain\Desktop\PL\Ex10_3.sql';

SQL> @ 'C:\Users\Aditya Jain\Desktop\PL\Ex10_3.sql';

Function created.

SQL> select get_count('Finance') from dual;

GET_COUNT('FINANCE')
--------------------
                   3

SQL>
```

Q2. Write a PL/SQL to find the factorial of the given number using function.

Code:

```
create or replace function fact(n in number)
return number
is
fact number;
num number;
begin
num:=n;
fact:=1;
if(num<0)
then
dbms_output.put_line('Invalid Input');
return -1;
else
while(num>0)
loop
fact:=fact*num;
num:=num-1;
end loop;
return fact;
end if;
end;
/
```

Output:

```
SQL> edit 'C:\Users\Aditya Jain\Desktop\PL\Ex10_4.sql';

SQL> @ 'C:\Users\Aditya Jain\Desktop\PL\Ex10_4.sql';

Function created.

SQL> select fact(5) from dual;

   FACT(5)
----------
       120
```

Procedures:

Q1. Write a procedure to accept an employee name and display his Department names

Code:

```
declare
ename employee.firstname%type;
procedure get_dept(emp_name in varchar2)
is
begin
for rec in (select departmentname from employee natural join department where
firstname=emp_name)
loop
dbms_output.put_line(rec.departmentname);
end loop;
end get_dept;
begin
ename:='&ename';
dbms_output.put_line('Department Names are ');
get_dept(ename);
end;
/
```

Output:

```
SQL> edit 'C:\Users\Aditya Jain\Desktop\PL\Ex10_5.sql';

SQL> @ 'C:\Users\Aditya Jain\Desktop\PL\Ex10_5.sql';
Enter value for ename: Joyce
old  12: ename:='&ename';
new  12: ename:='Joyce';
Department Names are
Administration
Research

PL/SQL procedure successfully completed.
```