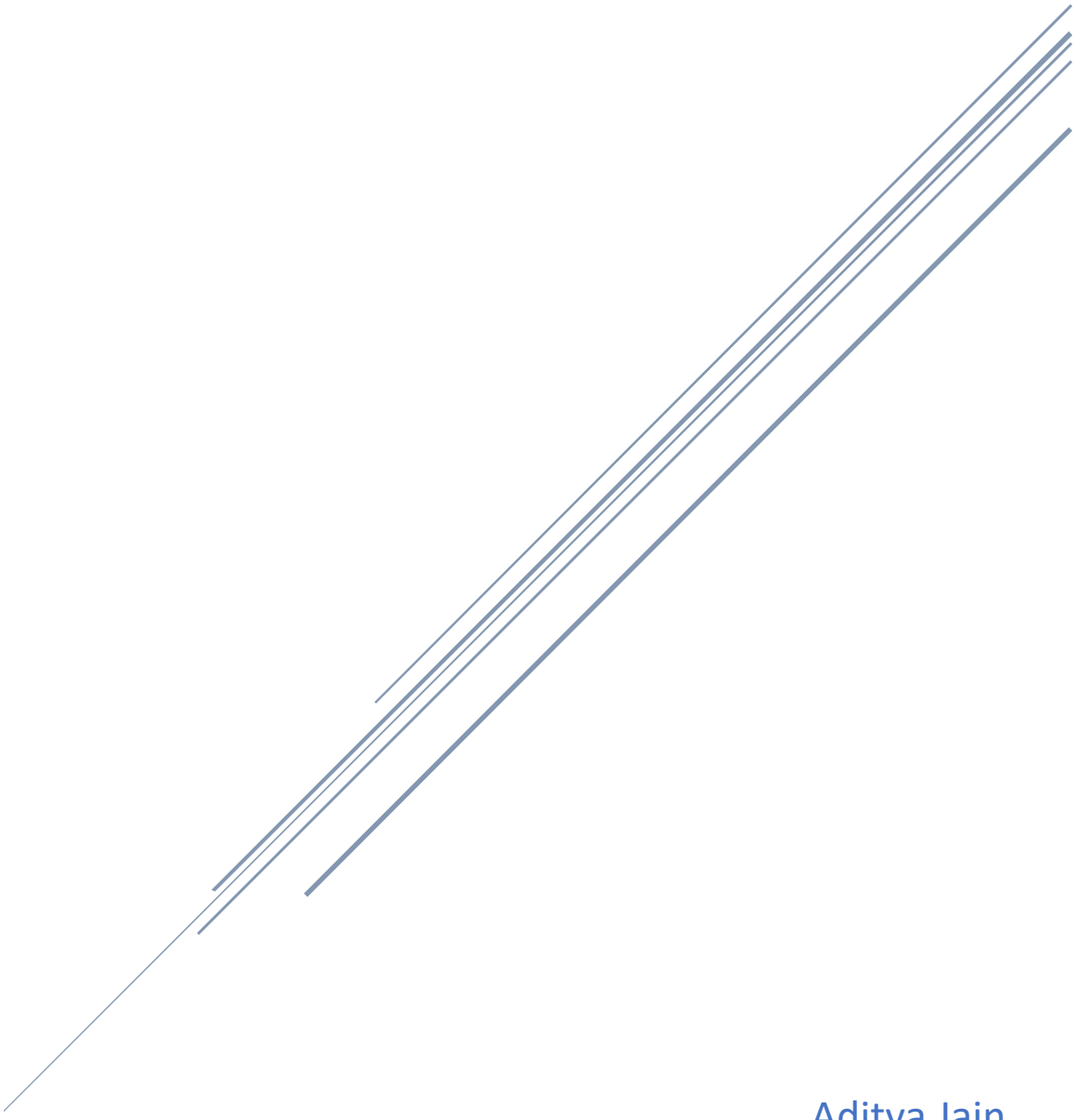
CSE-2007 ASSIGNMENT

Exercise 6



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Q1. Create a view to display the employee details who is working in IT department.

- create or replace view FIN_DETAILS as select * from employee where departmentnumber in (select departmentnumber from department where departmentname='Finance');

```
SQL> create or replace view FIN_DETAILS as select * from employee where departmentnumber in (select departmentnumber from department where departmentname='Finance');

View created.

SQL> select ssn from FIN_DETAILS;

SSN
---------
987654321
999887777
987987987
```

Q2. Create a logical table to store employee details who is getting salary more than 10000.

- create or replace view MORE_SAL as select * from employee where salary>10000 with check option constraint chk_salgt10000;

```
SQL> create or replace view MORE_SAL as select * from employee where salary>10000 with check option constraint chk_salgt10000;

View created.

SQL> select count(ssn) from MORE_SAL;

COUNT(SSN)
----------
        11
```

Q3. Create a table to store the employees details based on the department no

- create or replace view DEPT4 as select * from employee where departmentnumber=4 with check option constraint chk_depno4;

```
SQL> create or replace view DEPT4 as select * from employee where departmentnumber=4 with check option constraint chk_depno4;

View created.

SQL> select ssn,departmentnumber from DEPT4;

SSN       DEPARTMENTNUMBER
--------- ----------------
987654321                4
999887777                4
987987987                4
```

Exercise 6

Q1. Retrieve the names of all employees in department 5 who work more than 10 hours per week on ProductX project.

- select firstname,midname,lastname from ((employee natural join project) natural join works_on) where departmentnumber=5 and hours>10 and projectname='ProductX';

```
SQL> select firstname,midname,lastname from ((employee natural join project) natural join works_on) where departmentnumber=5 and hours>10 and projectname='ProductX';

no rows selected

SQL> select * from project;

PROJECTNAME     PROJECTNUMBER PROJECTLOCATION DEPARTMENTNUMBER
--------------- ------------- --------------- ---------------
ProjectA                3388 Houston                       1
ProjectB                1945 Salt Lake City                3
ProjectC                6688 Houston                       5
ProjectD                2423 Bellaire                      4
ProjectE                7745 Sugarland                     5
ProjectF                1566 Salt Lake City                3
ProjectG                1234 New York                      2
ProjectH                3467 Stafford                      4
ProjectI                4345 Chicago                       1
ProjectJ                2212 San Francisco                 2

10 rows selected.
```

Q2. List the names of all employees who have a dependent with the same first name as themselves.

- select firstname,midname,lastname from employee E join dependent D on E.ssn=D.empssn where E.firstname=D.dependentname;

```
SQL> select firstname,midname,lastname from employee E join dependent D on E.ssn=D.empssn where E.firstname=D.dependentname;

no rows selected
```

Q3. Find the names of all the employees who are directly supervised by 'Franklin Wong'.

- select firstname,midname,lastname from employee e where e.supervisorssn in (select ssn from employee where firstname='Franklin' and lastname='Wong');

```
SQL> select firstname,midname,lastname from employee E where e.supervisorssn in (select ssn from employee where firstname='Franklin' and lastname='Wong');

FIRSTNAME       MI LASTNAME
--------------- -- ---------------
Joyce           A  English
Ramesh          K  Narayan
John            B  Smith
```

Q4. Retrieve the names of all who do not work on any project.

- select firstname,midname,lastname from employee where ssn in (select ssn from employee minus select emp_ssn from works_on);

```
SQL> select firstname,midname,lastname from employee where ssn in (select ssn from employee minus select emp_ssn from works_on);

FIRSTNAME       MI LASTNAME
--------------- -- ---------------
Franklin        T  Wong
Joyce           A  English
Joyce              PAN
James           E  Borg
Robert          F  Scott
Jennifer        S  Wallace
Ahmad           V  Jabbar
Alicia          J  Zelaya

8 rows selected.
```

Q5. Find the names and addresses of all employees who work on at least one project located in Houston but whose department has no location in Houston

- select firstname,midname,lastname,address from (dept_locations natural join project) natural join employee where dept_loc <> 'Houston' and projectlocation='Houston';

```
SQL> select firstname,midname,lastname,address from (dept_locations natural join project) natural join employee where dept_loc <> 'Houston' and projectlocation='Houston';

FIRSTNAME       MI LASTNAME
--------------- -- ---------------
ADDRESS
--------------------------------------------------
Franklin        T  Wong
638 Voss,Houston,TX

John            B  Smith
731 Fondren,Houston,TX

Ramesh          K  Narayan
975 Fire Oak,Humble,TX


FIRSTNAME       MI LASTNAME
--------------- -- ---------------
ADDRESS
--------------------------------------------------
Joyce           A  English
5631 Rice,Houston,TX

James           E  Borg
450 Stone,Houstone,TX

Robert          F  Scott
2365 Newcastle Rd,Bellaire,TX


6 rows selected.
```

Q6. List the names of all managers who have no dependents.

- select firstname,midname,lastname from employee where ssn in (select managerssn from department minus select empssn from dependent);

```
SQL> select firstname,midname,lastname from employee where ssn in (select managerssn from department minus select empssn from dependent);

FIRSTNAME       MI LASTNAME
--------------- -- ---------------
Joyce              PAN
Doug            E  Gilbert
James           E  Borg
```

Q7. List the employee's names and the department names if they happen to manage a department.

- select firstname,midname,lastname,departmentname from employee natural join department where ssn=managerssn;

```
SQL> select firstname,midname,lastname,departmentname from employee natural join department where ssn=managerssn;

FIRSTNAME       MI LASTNAME        DEPARTMENTNAME
--------------- -- --------------- ---------------
James           E  Borg            Manufacture
Joyce              PAN             Administration
Doug            E  Gilbert         Headquarter
Jennifer        S  Wallace         Finance
John            B  Smith           Research
```

Q8. For each project retrieve the project number, project name and the number of employees who work on that project

- select projectname,count(emp_ssn) from project natural join works_on group by projectnumber,projectname;

```
SQL> select projectname,count(emp_ssn) from project natural join works_on group by projectnumber,projectname;

PROJECTNAME     COUNT(EMP_SSN)
--------------- --------------
ProjectB                     2
ProjectA                     2
```

Note: If we want the count for all the departments irrespective of whether employees are working in it or not then we can do this

select projectname,count(emp_ssn) from project left outer join works_on on project.projectnumber=works_on.projectnumber group by project.projectnumber,projectname;

```
SQL> select projectname,count(emp_ssn) from project left outer join works_on on project.projectnumber=works_on.projectnumber group by project.projectnumber,projectname;

PROJECTNAME     COUNT(EMP_SSN)
--------------- --------------
ProjectF                     0
ProjectI                     0
ProjectJ                     0
ProjectA                     2
ProjectC                     0
ProjectB                     2
ProjectD                     0
ProjectG                     0
ProjectE                     0
ProjectH                     0

10 rows selected.
```

Q9. For each project, list the project name and the total hours per week (by all employees) spent on that project.

- select projectname,sum(hours) from project natural join works_on group by projectnumber,projectname;

```
SQL> select projectname,sum(hours) from project natural join works_on group by projectnumber,projectname;

PROJECTNAME     SUM(HOURS)
--------------- ----------
ProjectB                29
ProjectA              72.5
```

Q10. Retrieve the names of the employees who have 2 or more dependents.

- select firstname,midname,lastname from employee where ssn in (select empssn from dependent group by empssn having count(empssn)>1);

```
SQL> select firstname,midname,lastname from employee where ssn in (select empssn from dependent group by empssn having count(empssn)>1);

FIRSTNAME       MI LASTNAME
--------------- -- ---------------
Franklin        T  Wong
John            B  Smith
```