

Homework3-cs460

Lu Ye

1. List all attributes of the employees from department 5.

Query:

```
select * from mccann.employee where dno=5;
```

Answer:

FNAME	M LNAME	SSN	BDATE	ADDRESS	S

SALARY	SUPERSSN	DNO			

John 30000	B Smith 333445555	123456789 5	09-JAN-55	731 Fondren, Houston, TX	M
Franklin 40000	T Wong 888665555	333445555 5	08-DEC-45	638 Voss, Houston, TX	M
Ramesh 38000	K Narayan 333445555	666884444 5	15-SEP-52	975 Fire Oak, Humble, TX	M

FNAME	M LNAME	SSN	BDATE	ADDRESS	S

SALARY	SUPERSSN	DNO			

Joyce 25000	A English 333445555	453453453 5	31-JUL-62	5631 Rice, Houston, TX	F

2. What are the SSNs of the employees working on proposal #10? Sort the result in descending order.

Query:

```
select ssn from mccann.employee, mccann.works_on where works_on.essn = employee.ssn and  
pno=10 order by ssn desc;
```

Answer:

```
SSN  
-----  
999887777  
987987987  
333445555
```

3. What is the Cartesian Product of the employees' first names and the dependents' names? List each pair of names only once in the result.

Query:

```
select distinct fname, dependent_name from mccann.employee, mccann.dependent;
```

Answer:

FNAME	DEPENDENT_
John	Michael
John	Theodore
John	Abner
Alicia	Elizabeth
Alicia	Abner
Jennifer	Elizabeth
Jennifer	Theodore
Joyce	Alice
Ahmed	Joy
James	Alice
John	Alice

FNAME	DEPENDENT_
Franklin	Elizabeth
Jennifer	Michael
Franklin	Michael
Ramesh	Alice
Joyce	Elizabeth
Joyce	Michael
Ahmed	Alice
Ahmed	Elizabeth
Ahmed	Theodore
Ahmed	Abner
Joyce	Joy

FNAME	DEPENDENT_
James	Elizabeth
James	Joy
James	Abner
Franklin	Alice
Alicia	Alice
Alicia	Theodore
Jennifer	Abner
Ramesh	Theodore
James	Theodore
John	Elizabeth
Franklin	Abner

FNAME	DEPENDENT_
Jennifer	Alice
Ramesh	Joy
Alicia	Joy
Ramesh	Michael
Ramesh	Abner
Joyce	Theodore
James	Michael
John	Joy
Franklin	Joy
Franklin	Theodore
Alicia	Michael

FNAME	DEPENDENT_
Jennifer	Joy
Ramesh	Elizabeth
Joyce	Abner
Ahmed	Michael

48 rows selected.

4. At which locations is the research department located?

Query:

```
select dlocation from mccann.dept_locations where dnumber in (select dnumber from
mccann.department where dname='Research');
```

Answer:

DLOCATION
Houston
Sugarland
Bellaire

5. What is the full name of the employee who has the largest salary?

Query:

```
select fname, minit, lname from mccann.employee where salary in (select max(salary) from
mccann.employee);
```

Answer:

FNAME	M	LNAME
James	E	Borg

6. What are the names of the departments with employees who have a dependent named Alice?

Query:

```
select dname from mccann.department, (select dno from mccann.employee, (select essn from
mccann.dependent where dependent_name='Alice') where ssn=essn)
where dnumber = dno;
```

Answer:

DNAME
Research
Research

7. Retrieve the SSNs of the employees who work in department 5 or who directly supervise an employee in department 5.

Query:

```
select ssn from mccann.employee where dno='5'
```

union

```
select ssn from mccann.employee where ssn in (select superssn from mccann.employee where dno='5');
```

Answer:

```
SSN
-----
123456789
333445555
453453453
666884444
888665555
```

8. What are the birthdates of the managers of the departments with projects from Stafford? (Note the wording change from Homework #2.)

Query:

```
select bdate from mccann.employee
```

```
where ssn in(select mgrssn
```

```
from mccann.department
```

```
where dnumber in (select dnum from mccann.project where plocation='Stafford'));
```

Answer:

```
BDATE
-----
20-JUN-31
```

9. For each employee, retrieve his/her full name and the full name of his/her immediate supervisor.

Query:

```
select distinct fname,init,lname,t1,t2,t3
```

```
from mccann.employee, (select fname as t1, init as t2,lname as t3, ssn as mssn from
mccann.employee)
```

```
where mssn=superssn
```

```
union select fname,init,lname,null,null,null from mccann.employee where superssn is null;
```

Answer:

FNAME	M LNAME	F	M L
Ahmed	V Jabbar	Jennifer	S Wallace
Alicia	J Zelaya	Jennifer	S Wallace
Franklin	T Wong	James	E Borg
James	E Borg		
Jennifer	S Wallace	James	E Borg
John	B Smith	Franklin	T Wong
Joyce	A English	Franklin	T Wong
Ramesh	K Narayan	Franklin	T Wong

10. What are the names of the male dependents who are dependent on a male employee?

Query:

```
select dependent_name from mccann.dependent where sex='M' and essn in (select ssn from
mccann.employee where sex='M');
```

Answer:

```
DEPENDENT_
-----
Michael
Theodore
```

11. What are the salaries of the employees from department 5 who are NOT working on ProductY?

Query:

```
select salary from mccann.employee where ssn in(select essn from mccann.works_on minus select essn
from mccann.works_on where pno in (select pnumber from mccann.project where pname='ProductY'))
and dno=5;
```

Answer:

```
SALARY
-----
38000
```

12. For each project on which more than two employees work, retrieve the project number, project name, and the number of employees who work on that project.

Query:

```
select pnumber,pname,numOfEm from mccann.project,
(select pno, count(*) as numOfEm from mccann.works_on group by pno having count(pno) >2)
where pnumber=pno;
```

Answer:

PNUMBER	PNAME	NUMOFEM
30	Newbenefits	3
2	ProductY	3
20	Reorganization	3
10	Computerization	3

13. What are the names of the departments which employ all genders?

Query:

```
select dname from mccann.department where dnumber in
```

```
(select dno
```

```
    from mccann.employee,(select sex as s, dno as no from mccann.employee)
```

```
    where sex='M' and s='F' and dno=no
```

```
);
```

Answer:

DNAME
Administration
Research