

EXAMPLES-2 FOR COMPANY DATABASE:

QC17) Make a list of all project numbers for projects that involve an employee whose last name is "Smith" as a worker or as a manager of the department that controls the project.

```

(SELECT      PNUMBER
FROM        PROJECT, DEPARTMENT, EMPLOYEE
WHERE       DNUM=DNUMBER AND MGRSSN=SSN AND LNAME='SMITH')
UNION
(SELECT      PNO
FROM        PROJECT, WORKS_ON, EMPLOYEE
WHERE       ESSN=SSN AND LNAME= 'SMITH');

SELECT      DISTINCT PNAME
FROM        PROJECT
WHERE       PNUMBER IN      (SELECT      PNUMBER
                              FROM        PROJECT, DEPARTMENT,
                              EMPLOYEE
                              WHERE       DNUM=DNUMBER AND
                              MGRSSN=SSN AND
                              LNAME='SMITH')

OR          PNUMBER IN      (SELECT      PNO
                              FROM        WORKS-ON, EMPLOYEE
                              WHERE       ESSN=SSN AND
                              LNAME='SMITH');

```

QC18) Select the social security numbers of all employees who work on the same (project, hours) combination on some project that employee 'MARRY MINELL ' (whose SSN = '222') works on.

```

SELECT DISTINCT  ESSN
FROM              WORKS_ON,
WHERE            (PNO , HOURS) IN      (SELECT      PNO, HOURS
                                         FROM        WORKS_ON
                                         WHERE       ESSN ='222');

```

QC19) Retrieve the name of each employee who has a dependent with the same first name and same sex as the employee.

```

A)  SELECT      E.FNAME, E.LNAME
    FROM        EMPLOYEE E
    WHERE       E.SSN IN (      SELECT      ESSN
                              FROM        DEPENDENT
                              WHERE       E.FNAME=DEPENDENT_NAME AND
                              SEX=E.SEX);

B)  SELECT      E.FNAME, E.LNAME
    FROM        EMPLOYEE E, DEPENDENT D
    WHERE       E.SSN=D.ESSN AND E.SEX=D.SEX AND
    E.FNAME=D.DEPENDENT_NAME;

C)  SELECT      E.FNAME, E.LNAME
    FROM        EMPLOYEE E
    WHERE       EXISTS (      SELECT      *
                              FROM        DEPENDENT
                              WHERE       E.SSN=ESSN AND SEX=E.SEX AND
                              E.FNAME=DEPENDENT_NAME);

```

QC20) Retrieve the names of employees who have no dependents.

```

A)  SELECT      FNAME, LNAME
    FROM        EMPLOYEE
    WHERE       NOT EXISTS (      SELECT      *

```

QC21) Retrieve the social security numbers of all employees who work on project number 1, 2, or 3.

B)

SELECT	DISTINCT ESSN
FROM	WORKS_ON
WHERE	PNO = ANY (1,2,3);

```

A)  SELECT      FNAME, LNAME
      FROM      EMPLOYEE
      WHERE      EXISTS (      SELECT      *
                                FROM      DEPENDENT
                                WHERE      SSN=ESSN)
      AND
      EXISTS (      SELECT      *
                                FROM      DEPARTMENT
                                WHERE      SSN=MGRSSN);

```

```

SELECT      LNAME, FNAME
FROM        EMPLOYEE
WHERE       SSN IN      (SELECT      MGRSSN
                        FROM        DEPARTMENT)
            AND SSN IN  (SELECT      ESSN
                        FROM        DEPENDENT);

```

```
c)
SELECT LNAME, FNAME
FROM EMPLOYEE
WHERE SSN IN ((SELECT MGRSSN
FROM DEPARTMENT)
INTERSECTION
(SELECT ESSN
FROM DEPENDENT));
```

```
SELECT FNAME, LNAME
FROM EMPLOYEE
WHERE SUPERSSN IS NULL;
```

SELECT FNAME, LNAME

```
FROM EMPLOYEE
WHERE SALARY > ANY (SELECT SALARY
FROM EMPLOYEE, DEPARTMENT
WHERE DNAME = 'TOURISM' AND
DNO=DNUMBER);
```

QC25) Find the names of employees whose salary greater than all the employees' salaries in research department.

```
SELECT FNAME, LNAME
FROM EMPLOYEE
WHERE SALARY >= ALL (SELECT SALARY
FROM EMPLOYEE, DEPARTMENT
WHERE DNAME ='RESEARCH' AND
DNO=DNUMBER);
```