

Your queries might vary from these proposed ones. It's important to know that there are many different ways to design these.

PART 1: Solution

a) SELECT Name FROM STUDENT

WHERE major = 'COSC' AND Class = 5

b) SELECT COURSE.CourseName FROM COURSE , SECTION

WHERE COURSE.CourseNumber = SECTION.CourseNumber

AND SECTION.Instructor= "Proffessor King"

AND SECTION.year = '1985'

AND SECTION.year = '1986'

c) SELECT SECTION.CourseNumber , SECTION.Year,

COUNT(GRADE_REPORT.StudentNumber) FROM SECTION, GRADE_REPORT

WHERE SECTION.Instructor = "Proffessor King"

AND SECTION.Identifier = GRADE_REPORT.SectionNumber

d) SELECT STUDENT.Name, COURSE.CourseName, COURSE.CourseNumber,

COURSE.CreditHours, SECTION.Semster,SECTION.Year AND GRADE_REPORT.Grade

FROM STUDENT,SECTION, COURSE, GRADE_REPORT

WHERE GRADE_REPORT.StudentNumber=STUDENT.StudentNumber

AND GRADE_REPORT.SectionIdentifier=SECTION.SectionIdentifier

AND SECTION.CourseNumber = COURSE.CourseNumber

AND STUDENT.Class = 5

AND Major = 'COSC'

e) SELECT STUDENT.NAME, STUDENT.Major FROM SYUDENT, GRADE_REPORT
WHERE STUDENT.StudentNumber = GRADE_REPORT.StudentNumber
AND GRADE_REPORT.Grade = 'A'

f) SELECT STUDENT.NAME, STUDENT.Major FROM SYUDENT, GRADE_REPORT
WHERE STUDENT.StudentNumber = GRADE_REPORT.StudentNumber
AND GRADE_REPORT.Grade <> 'A'

PART 2: Solution

a) SELECT EMPLOYEE.FNAME FROM EMPLOYEE, WORKS_ON, PROJECT
WHERE PROJECT.DNUM = EMPLOYEE.DNUM
AND WORKS_ON.PNUM = PROJECT.PNUMBER
AND PROJECT.PNAME = 'PROJECT X'
AND WORKS_ON.HOURS > 10
AND EMPLOYEE.DNUM = 5

b) SELECT EMPLOYEE.FNAME FROM EMPLOYEE, DEPENDENT
WHERE DEPENDENT.ESS = EMPLOYEE.SSN
AND DEPENDENT.DEPENDENT NAME = EMPLOYEE.FNAME

c) SELECT E.FNAME FROM EMPLOYEE, E, D
WHERE E.SUPER SSN = D.SSN
AND D.FNAME = 'FRANKLIN'
AND D.LNAME = 'WONG'

/* In the above query, SELF JOIN is used.*/

d) SELECT PNAME, WORKS_ON.HOURS FROM PROJECT, WORKS_ON
WHERE WORKS_ON.PNUM = PROJECCT.PNUMBER

e) SELECT EMPLOYEE.FNAME,EMPLOYEE.LNAME FROM EMPLOYEE
WHERE SSN IN(SELECT ESSN FROM WORKS_ON)
WHERE PNUMBER IN (SELCCCT PNUMBER FROM PROJECT)

g) SELECT AVG(SALARY.EMPLOYEE) FROM EMPLOYEE
WHERE EMPLOYEE.SEX ='FEMALE'

h) SELECT EMPLOYEE.FNAME, EMPLOYEE.LNAME, EMPLOYEE.ADDRESS FROM
EMPLOYEE, PROJECT, DEPT_LOCATIONS
WHERE EMPLOYEE.DNUM = PROJECT.DNUM
AND EMPLOYEE.DNUM =DEPT_LOCATIONS.DNUMBER
AND PROJECT.PLOCATION = 'HOUSTAN'
AND DEPT_LOCATIOS.DLOCATION = NULL

i)
SELECT EMPLOYEE.FNAME, EMPLOYEE.LNAME FROM EMPLOYEE,
DEPENDENT, WORKS_ON
WHERE EMPLOYEE.SSN = DEPARTMENT.MGRSSN
AND EMPLOYEE.SSN = WORKS_ON.ESSN
AND DEPENDENT.ESSN = WORKS_ON.ESSN
AND DEPENDENT.ESSN = NULL