

① SELECT prof.ID  
FROM Professor prof  
WHERE prof.age > 55;

② CREATE TABLE classes-info {  
    name varchar(50),  
    professorName varchar(50),  
    classTime Time NotNull,  
    classDay Date NotNull,  
    firstSession Date NotNull,  
    finalExam Date NotNull,  
    PRIMARY KEY(name),  
    FOREIGN KEY(professorName) REFERENCES  
        professors-info (firstName)}

CREATE TABLE professors-info {  
    firstName varchar(50),  
    lastName varchar(50),  
    SSN int NotNull,  
    professorCode int NotNull,  
    phoneNumber int NotNull,  
    age int NotNull,  
    salary int NotNull,  
    workExperience int NotNull,  
    PRIMARY KEY(firstName)}

CREATE TABLE students\_info {

firstName varchar(50),

lastName varchar(50),

fatherName varchar(50),

SSN int NotNull,

studentID int NotNull,

phoneNumber int NotNull,

age int NotNull,

enrollDate Date NotNull,

passedUnits int NotNull,

previousAverage float NotNull,

totalAverage float NotNull,

PRIMARY KEY(studentID)}

③ (ا) SELECT Iname, price FROM Item

(ب) SELECT orderNo, date FROM Order WHERE tax > 10

(ج) SELECT orderNo, INO, Iname, price, quality  
FROM Contains C

INNER Join Item on C.INO = Item.INO

(د) SELECT custId, number

FROM Customer cust, Address ads, Phone ph

WHERE city = "Tehran"

3) SELECT \* FROM Customer c WHERE c.cID in (

SELECT c.cID FROM Customer AS c JOIN Buys AS b ON

c.cID = b.cID JOIN Order AS o ON b.orderNo = o.orderNo

JOIN Contains AS co ON o.orderNo = co.orderNo JOIN

Item AS i ON co.INo = i.INo

GROUP BY c.cID HAVING COUNT(DISTINCT i.INo) = (

SELECT COUNT(\*) FROM Item ))

Q)

SELECT SNO FROM Supplier

WHERE SNo not in (SELECT SNO FROM Supplier LEFT JOIN  
Supplies on Supplier.SNO = Supplies.SNO)

③ ج) SELECT \* FROM Customer cust WHERE custId in (

SELECT cust.custId FROM Customer as cust JOIN Buys as b

on cust.custId = b.custId JOIN Order as o on

b.orderNo = o.orderNo JOIN Address as add on

o.addId = add.addId

WHERE add.city = "Yazd") AND custId in (

SELECT cust.custId FROM Customer as cust JOIN

Buys as b on cust.custId = b.custId JOIN Order as o on

b.orderNo = o.orderNo JOIN Address as add on o.addId = add.addId

WHERE add.city = "Tehran") and custId not in (

SELECT cust.custId FROM Customer as cust JOIN Buys as b

on cust.custId = b.custId JOIN Order as o on

b.orderNo = o.orderNo JOIN Address as add on

o.addId = add.addId WHERE add.city = "Isfahan")

③ 2) SELECT i.INo FROM (SELECT custId, city FROM Customer  
as c JOIN Address as a ON c.addId = a.addId )  
as ca JOIN Buys as b ON ca.custId = b.custId JOIN (  
SELECT orderNo, city FROM Order as o JOIN address as od  
ON o.addId = od.addId ) as oad ON b.orderNo = oad.orderNo  
JOIN Contains as co ON oad.orderNo = co.orderNo JOIN  
Item as i ON co.INo = i.INo JOIN Supplies as s ON  
i.INo = s.INo JOIN (SELECT SNo, city FROM Supplier  
as su JOIN Address as add ON su.addId = add.addId ) as  
sad ON su.SNo = sad.SNo WHERE ca.city = oad.city  
and sad.city = oad.city

٤) SELECT c.\* FROM Customer as c JOIN Buys as b on  
c.cID = b.cID JOIN order as o on b.orderNo JOIN Contains  
as con on o.orderNo = con.orderNo JOIN Item as i on  
con.INo = i.INo GROUP BY c.cID, i.INO  
HAVING COUNT(DISTINCT i.INO) = COUNT(i.INO)

④ (ii) SELECT std.name , count(\*) cnt  
FROM friends  
JOIN Students std ON friends.student-id = std.id  
GROUP BY std.Code  
ORDER BY cnt desc

ب) SELECT DISTINCT (std1. student\_id)  
FROM db-grades std1, friends, db-grades std2  
WHERE std1. student\_id = friends. student\_id  
AND std2. student\_id = friends. friend\_id  
AND std1. grade < 10  
AND std2. grade > 10

ج) CREATE view fGrade as  
SELECT std1. student\_id as student\_id1, std1. grade as grade1  
std2. student\_id as student\_id2, std2. grade as grade2  
FROM db-grades std1, friends, db-grades std2  
WHERE std1. student\_id = friends. student\_id  
AND std2. student\_id = friends. friend\_id  
SELECT DISTINCT (student\_id1)  
FROM fGrade  
WHERE grade2 < 10  
AND student\_id1 not in (SELECT student\_id1 FROM fGrade  
WHERE grade2 >= 10)

د) SELECT DISTINCT (student\_id)  
FROM fGrade  
WHERE grade2 > grade1  
AND student\_id1 in (SELECT student\_id1 FROM fGrade WHERE  
grade2 < grade1)

iii) SELECT var-pop (grade)  
FROM db-grades  
WHERE grade < 10