**3a.**

SELECT lastname as Name, studentprogram as Program

FROM student

UNION

SELECT ProfessorName as Name, ProfessorProgram as Program

FROM professor

**3b.**

SELECT firstname, lastname, studentprogram

FROM student

WHERE studentprogram IN (SELECT DISTINCT ProfessorProgram FROM professor WHERE ProfessorProgram LIKE 'C%')

**3c.**

SELECT professor.ProfessorId, professor.ProfessorName, student\_professor.mentor

FROM professor

LEFT JOIN student\_professor on professor.ProfessorId = student\_professor.professorId

GROUP BY ProfessorName

**3d.**

SELECT studentprogram, AVG(age) as 'Average Age'

FROM student

GROUP BY studentprogram

**3e.**

SELECT COUNT(studentno) as 'Number of Students'

FROM student

WHERE studentprogram = 'Computer Science'

**3f.**

SELECT MIN(age) as 'Youngest Age'

FROM student

**3g.**

SELECT MAX(Age) as 'Oldest Age', AVG(Age) as 'Average Age'

FROM professor

**3h.**

SELECT ProfessorId, COUNT(Mentor) as 'Number of Mentored Students'

FROM student\_professor

WHERE Mentor = '1'

GROUP BY ProfessorId