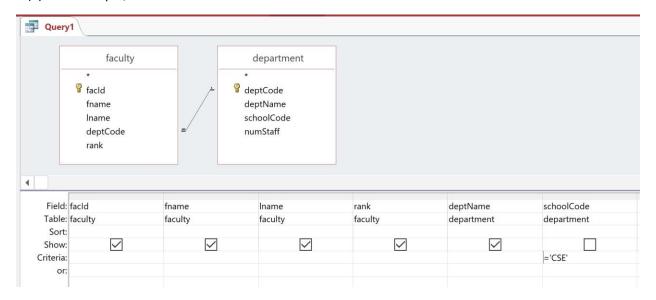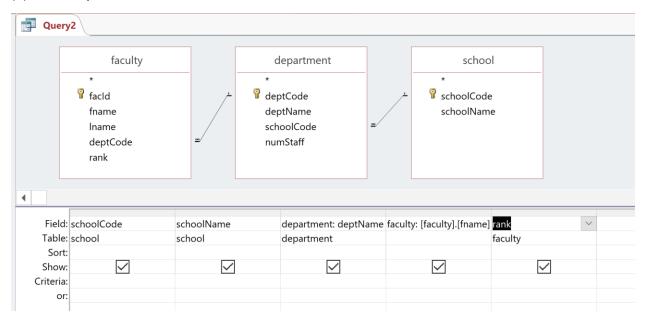# DASC 5333 Database Systems for Data Science
CSCI 4333 Design of Database Systems
Spring 2023
Suggested Solution to Homework #1

Annotations on solutions are included below. Students do not need to include annotations.
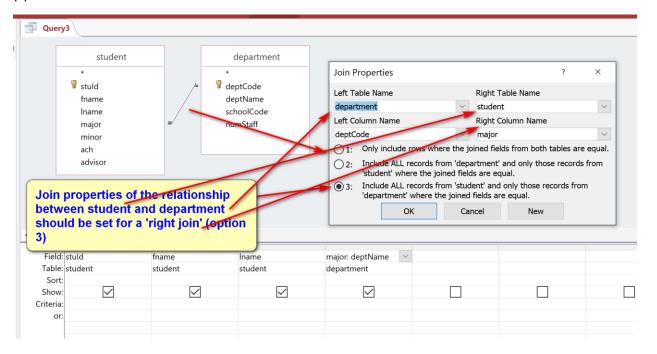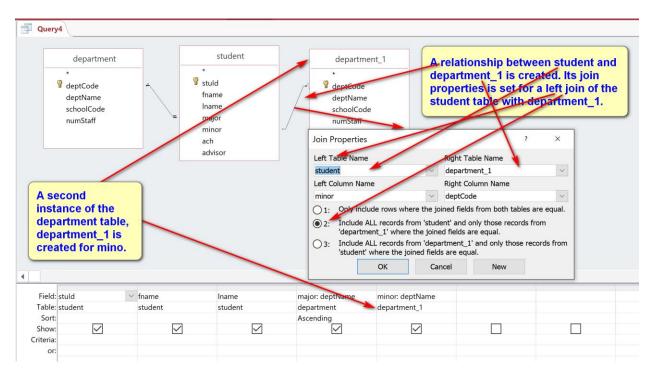
2 (a). For example,

(b) For example,

(c)

Join properties of the relationship between student and department should be set for a 'right join' (option 3)

(d)

Query4

department
- deptCode
- deptName
- schoolCode
- numStaff

student
- stuId
- fname
- lname
- major
- minor
- ach
- advisor

department_1
- deptCode
- deptName
- schoolCode
- numStaff

A relationship between student and department_1 is created. Its join properties is set for a left join of the student table with department_1.

A second instance of the department table, department_1 is created for mino.

Join Properties

Left Table Name: student
Right Table Name: department_1

Left Column Name: minor
Right Column Name: deptCode

○ 1: Only include rows where the joined fields from both tables are equal.
● 2: Include ALL records from 'student' and only those records from 'department_1' where the joined fields are equal.
○ 3: Include ALL records from 'department_1' and only those records from 'student' where the joined fields are equal.

OK   Cancel   New

Field:	stuId	fname	lname	major: deptName	minor: deptName		
Table:	student	student	student	department	department_1		
Sort:				Ascending			
Show:	✓	✓	✓	✓	✓	☐	☐
Criteria:							
or:							

(e)

Query5

school
- schoolCode
- schoolName

department
- deptCode
- deptName
- schoolCode
- numStaff

faculty
- facId
- fname
- lname
- deptCode
- rank

student
- stuId
- fname
- lname
- major
- minor
- ach
- advisor

Field:	schoolCode	department: deptName	faculty: [faculty].[fname]+' '+[faculty].[lname]	advisee: [student].[fname]+' '+[student].[lname]	
Table:	school	department			
Sort:					
Show:	✓	✓	✓	✓	
Criteria:	=[Enter school code:]				
or:					

(f)

Query6

department
- *
- 🔑 deptCode
- deptName
- schoolCode
- numStaff

	deptCode	deptName	numStaff	Staff level: IIf([department.numStaff]<=5,'lo ∨
Field:	deptCode	deptName	numStaff	Staff level: IIf([department.numStaff]<=5,'lo ∨
Table:	department	department	department	
Sort:				
Show:	☑	☑	☑	☑
Criteria:				
or:				

Q5

student
- *
- 🔑 stuId
- fname
- lname
- major
- minor
- credits
- advisor

faculty
- *
- 🔑 facId
- fname
- lname
- deptCode
- rank

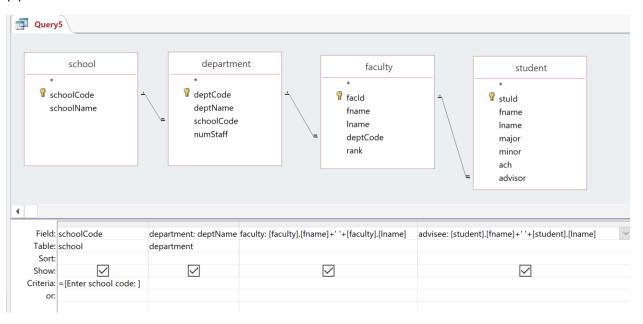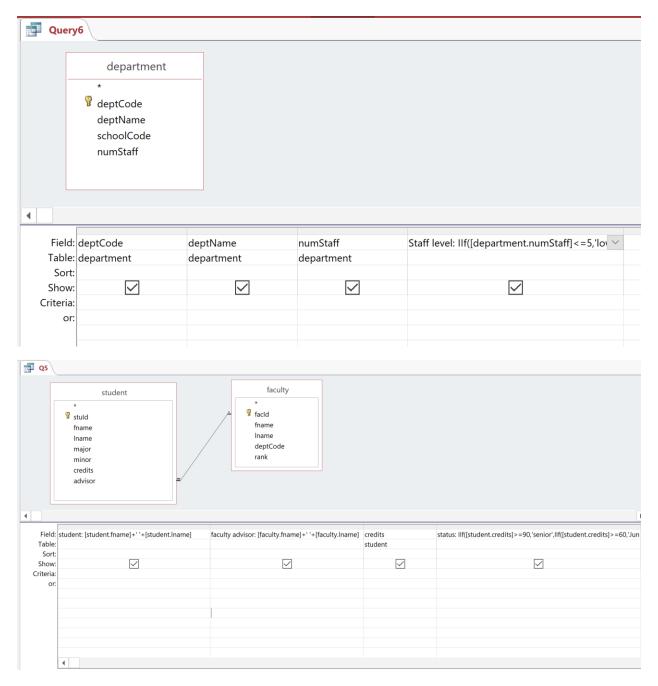|	student: [student.fname]+' '+[student.lname]	faculty advisor: [faculty.fname]+' '+[faculty.lname]	credits	status: IIf([student.credits]>=90,'senior',IIf([student.credits]>=60,'Jun
Field:	student: [student.fname]+' '+[student.lname]	faculty advisor: [faculty.fname]+' '+[faculty.lname]	credits	status: IIf([student.credits]>=90,'senior',IIf([student.credits]>=60,'Jun
Table:			student	
Sort:				
Show:	☑	☑	☑	☑
Criteria:				
or:				

Note that the field of column 4 should read:

Staff level:IIF([department.numStaff]<=5, 'low', IIF([department.numStaff]<=10, 'medium', 'high'))