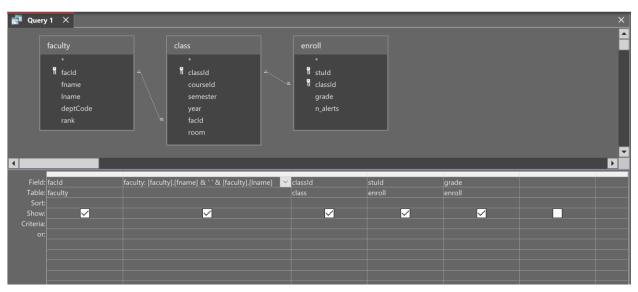# DASC 5333 Database Systems for Data Science
CSCI 4333 Design of Database Systems
Spring 2024
Suggested Solution to Homework #1
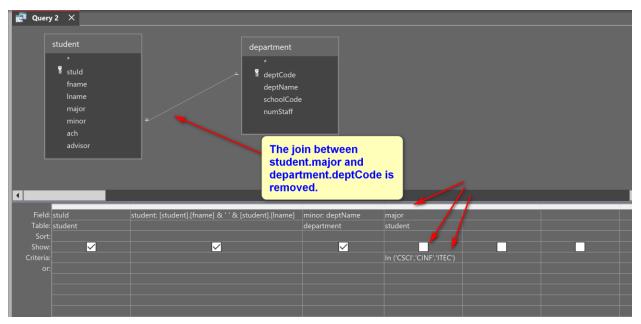
Annotations on solutions are included below. Students do not need to include annotations.
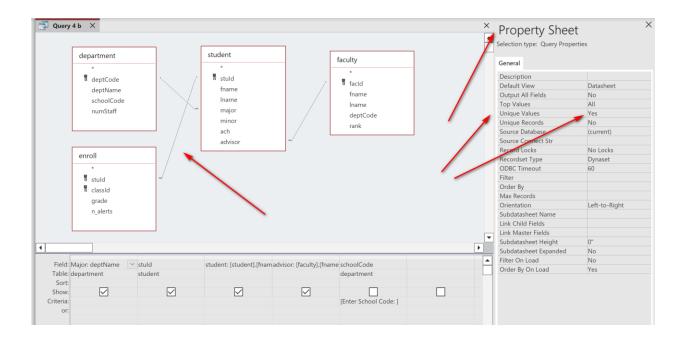
2. For examples:

(a)

(b)

The join between student.major and department.deptCode is removed.

(c)

Query 3 ×   ×

department
* deptCode
  deptName
  schoolCode
  numStaff

student
* stuId
  fname
  lname
  major
  minor
  ach
  advisor

department_1
* deptCode
  deptName
  schoolCode
  numStaff

An inner join is added between student and the second instance of department.

Join property is modified.

Join Properties   ?   ×

Left Table Name: department
Right Table Name: student
Left Column Name: deptCode
Right Column Name: minor

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

[OK] [Cancel] [New]

Field:	stuId	student: [student].[fname] & ' ' & [student].[lname]	major: deptName	minor: deptName	major	
Table:	student		department_1	department	student	
Sort:						
Show:	☑	☑	☑	☑	☐	☐
Criteria:					In ('CSCI','CINF','ITEC')	
or:						

(d) Include all students in the school:

Query 4 ×

department
* deptCode
  deptName
  schoolCode
  numStaff

student
* stuId
  fname
  lname
  major
  minor
  ach
  advisor

faculty
* facId
  fname
  lname
  deptCode
  rank

Field:	schoolCode	Major: deptName	stuId	student: [student].[fname] & ' ' & [student].[lname]	advisor: [faculty].[fname] & ' ' & [faculty].[lname]
Table:	department	department	student		
Sort:					
Show:	☐	☑	☑	☑	☑
Criteria:	=[Enter School Code:]				
or:					

Includes students enrolled in at least one course in the school:

Query 4 b

department
- *
- deptCode
- deptName
- schoolCode
- numStaff

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

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

enroll
- *
- stuId
- classId
- grade
- n_alerts

Property Sheet

Selection type: Query Properties

General

Property	Value
Description	
Default View	Datasheet
Output All Fields	No
Top Values	All
Unique Values	Yes
Unique Records	No
Source Database	(current)
Source Connect Str	
Record Locks	No Locks
Recordset Type	Dynaset
ODBC Timeout	60
Filter	
Order By	
Max Records	
Orientation	Left-to-Right
Subdatasheet Name	
Link Child Fields	
Link Master Fields	
Subdatasheet Height	0"
Subdatasheet Expanded	No
Filter On Load	No
Order By On Load	Yes

Field:	Major: deptName	stuId	student: [student].[fnam	advisor: [faculty].[fname	schoolCode
Table:	department	student			department
Sort:					
Show:	☑	☑	☑	☐	☐
Criteria:					[Enter School Code:]
or:					

(e)

Query 5

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

Field:	stuId	fname	lname	major	minor	ach	advisor
Table:	student	student	student	student	student	student	student
Sort:							
Show:	☑	☑	☑	☑	☑	☑	☑
Criteria:				In ('CSCI','CINF','ITEC')			
or:					In ('CSCI','CINF','ITEC')		