DASC 5333 Database Systems for Data Science
CSCI 4333 Design of Database Systems
Spring 2023
Homework #1 MS Access

(1) **Establishing EMail Communication with TA and Photos.** Send an email to the TA (kuchid8144@uhcl.edu). The subject heading should be <<class_section>>;H1;<<Your name>>;<<Your Student ID>>,<<Your major>>. For example:

Subject: CSCI4333.1;H1;Jane Smith;0011098;CS

In the email, please attach a recent photo of high quality of yourself of *exactly* 300-pixel width and 450-pixel height. It should be similar to a *passport* photo, with mostly only you in the photo. The image format should be either jpeg, gif or png.

Make sure that you use an email address that your frequently check in your communications with the TA and the instructor, whenever possible. Do *not* copy your email or homework to the instructor. This is to establish a communication channel between you and the TA, and helping us to better communicate with you. *Thank you*.

(2) **Simple Access Query.** Use the Toy University DB in Access: toyu.accdb. Show *the screen captures* of the query designs.
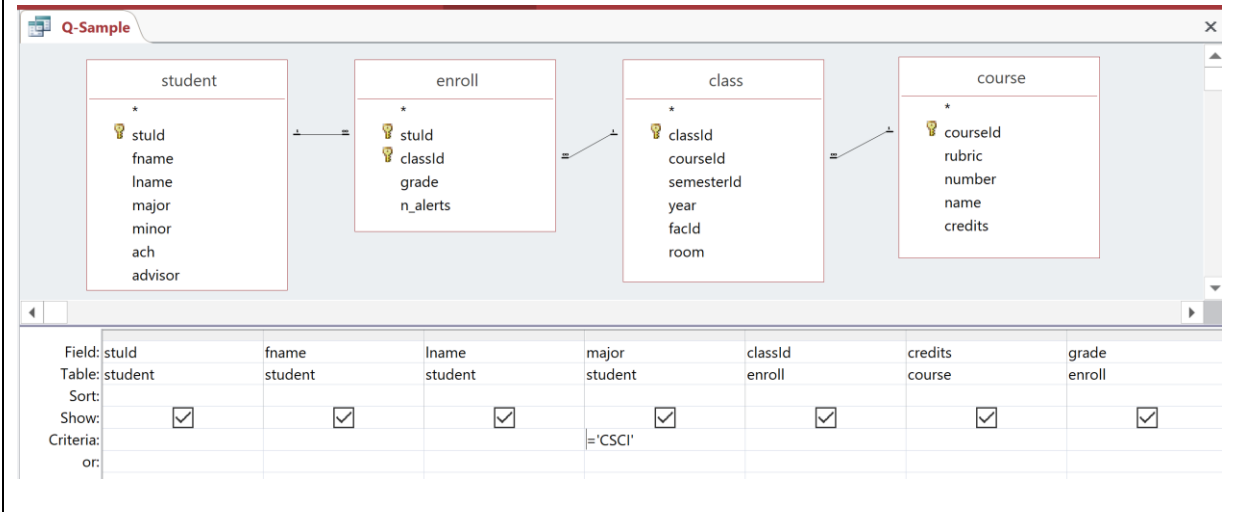
[Sample question] So you can have some ideas what a suggested solution should look like. You may also look at questions and answers from past semesters.

Q-Sample. Show the student id, fname, lname, major, class enrolled, credit of class and grade of class of every 'CSCI' major in the following manner. The result:

stuId	fname	lname	major	classId	credits	grade
100000	Tony	Hawk	CSCI	10000	3	A
100000	Tony	Hawk	CSCI	10001	3	A
100000	Tony	Hawk	CSCI	10002	3	B+
100000	Tony	Hawk	CSCI	10003	3	C
100000	Tony	Hawk	CSCI	10004	3	A-
100000	Tony	Hawk	CSCI	11001	3	D
100001	Mary	Hawk	CSCI	10000	3	
100001	Mary	Hawk	CSCI	10001	3	A-
100002	David	Hawk	CSCI	10000	3	B-
100002	David	Hawk	CSCI	10002	3	B+
100002	David	Hawk	CSCI	10003	3	D

Questions: (Collect your solutions of screenshots in a single MS words file and submit it through blackboard. If you are not sure what the format should be, refer to the suggested solution of the same homework #1 in previous semesters.)

(a) Show the facId, fname, lname, rank and deptName of all faculty working in the school of 'CSE' in the following format. The result:

facId	fname	lname	rank	deptName
1015	Daniel	Kim	Professor	Computer Information Systems
1016	Andrew	Byre	Associate Professor	Computer Information Systems
1011	Paul	Smith	Professor	Computer Science
1012	Mary	Tran	Associate Professor	Computer Science
1013	David	Love		Computer Science
1014	Sharon	Mannes	Assistant Professor	Computer Science
1017	Deborah	Gump	Professor	Information Technology
1019	Benjamin	Yu	Lecturer	Information Technology

(b) List the names of the schools, departments and their faculty names and ranks in the following manner. The result:

Query2

schoolCode	schoolName	department	faculty	rank
BUS	Business	Accounting	Jorginlo Neymar	Assistant Professor
HSH	Human Sciences and Humanities	Arts	Art Allister	Assistant Professor
CSE	Science and Engineering	Computer Information Systems	Daniel Kim	Professor
CSE	Science and Engineering	Computer Information Systems	Andrew Byre	Associate Professor
CSE	Science and Engineering	Computer Science	Paul Smith	Professor
CSE	Science and Engineering	Computer Science	Mary Tran	Associate Professor
CSE	Science and Engineering	Computer Science	David Love	
CSE	Science and Engineering	Computer Science	Sharon Mannes	Assistant Professor
HSH	Human Sciences and Humanities	English	Katrina Bajaj	Lecturer
CSE	Science and Engineering	Information Technology	Deborah Gump	Professor
CSE	Science and Engineering	Information Technology	Benjamin Yu	Lecturer

Note the column labels.

Note the value of the faculty column

(c)   Show the id, fname, lname, and major department name of all students in the following manner. The result:

Query3

stuId	fname	lname	major
100007	Ben	Zico	
100011	Catherine	Johanson	
100008	Bill	Ching	Arts
100009	Linda	King	Arts
100005	Linda	Johnson	Computer Information Systems
100006	Lillian	Johnson	Computer Information Systems
100000	Tony	Hawk	Computer Science
100001	Mary	Hawk	Computer Science
100002	David	Hawk	Computer Science
100003	Catherine	Lim	Information Technology
100004	Larry	Johnson	Information Technology

Students without a major should also be included in the result.

(d)   Show the stuId, fname, lname, and major department name and minor department name of all students in the following manner. The result:

Query4

stuld	fname	lname	major	minor
100011	Catherine	Johanson		
100007	Ben	Zico		
100009	Linda	King	Arts	Computer Science
100008	Bill	Ching	Arts	English
100006	Lillian	Johnson	Computer Information Systems	Information Technology
100005	Linda	Johnson	Computer Information Systems	English
100002	David	Hawk	Computer Science	Information Technology
100001	Mary	Hawk	Computer Science	Computer Information Systems
100000	Tony	Hawk	Computer Science	Computer Information Systems
100004	Larry	Johnson	Information Technology	
100003	Catherine	Lim	Information Technology	Computer Information Systems

You may need to have *two* instances of the same table.

(e) Your query should show a pop-up window for the user to enter a school code. For example,

Enter Parameter V... ? ✕

Please enter school code:

CSE

OK   Cancel

It will then show the advisee information of faculty members working under the school, as exemplified by the CSE example in the following manner

Query5

schoolCode	department	faculty	advisee
CSE	Computer Information Systems	Daniel Kim	Linda Johnson
CSE	Computer Information Systems	Daniel Kim	Lillian Johnson
CSE	Computer Science	Paul Smith	Tony Hawk
CSE	Computer Science	Paul Smith	Mary Hawk
CSE	Computer Science	Paul Smith	David Hawk
CSE	Information Technology	Deborah Gump	Catherine Lim
CSE	Information Technology	Deborah Gump	Larry Johnson

Hints: you may use [] for field name or user-input parameter name in MS Access.

(f) List the following information of departments in the following manner. The field 'Staff Level' is high (numStaff > 10), medium (10 >= numStaff > 5) or low (numStaff <= 5).

Query6

deptCode	deptName	numStaff	Staff level
ACCT	Accounting	10	medium
ARTS	Arts	5	low
CINF	Computer Information Systems	5	low
CSCI	Computer Science	12	high
ENGL	English	12	high
ITEC	Information Technology	4	low
MATH	Mathematics	7	medium

The solutions to Q2 should be put into a single MS words file, with proper description. Name the file using the convention as illustrated by this example: CSCI4333_<<Section>>_H1_<<Your name>>_<<Your Student ID>>.docx (e.g. CSCI4333_1_H1_JaneDoe_1234567.docx. Submit your homework assignment through Blackboard (except question 1, in which you need to send an email to the TA.) PDF files are acceptance replacement of docx files. All future homework should be submitted through Blackboard.