Assignment 5: (Fall 2019)
Structured Query Language (SQL) and Microsoft Access

Due Date: Wednesday, November 20 by 6:00 pm.
Late Policy: This assignment will be accepted up to one (1) day late.
Assignments submitted after Nov. 20 at 6:00 PM but before Nov 21 at 6:00 AM will be deducted 10% of the total grade.
Assignments submitted after Nov 21 at 6:00 AM but before Nov 21 at 6:00 PM will be deducted 25% of the total grade.
Assignments submission will be closed at 6:00 PM on Nov 21 and no assignments can be submitted to OWL after that time.

Project 1: Written SQL

EMPLOYEES

ID	LastName	FirstName	HireDate	Address	City	Prov	PC	Phone	email
2991	Ringing	Isabelle	Feb 24, 15	100 BIRDIE COU	Toronto	ON	M5C1C3	9058484844	jstwe@lfp.ca
2997	Yermouth	Miltom	Oct 31, 13	100 CIRCLEVIEV	Ottawa	ON	K1C6V8	6132343994	bdavis@ctc.ne
3137	Pendous	Stu	Jul 13, 12	10210 FALLS MI	Niagara Falls	ON	L2G7L9	4168543443	robinHood@nc
4102	Thyme	Justin	May 04, 15	1409 KESWICK I	Windsor	ON	N8T1P7	5197563433	toocool@roger
4204	Teak	Anna	Jun 27, 15	1500 LAFAYETT	Sarnia	ON	N7S0W2	51984734334	scary@college.
4419	Linball	Bo	May 21, 15	1620 VANDUYK	Peterborough	ON	K9H4C8	6133893384	classy@yahoo.
4424	Slift	Faye	Mar 29, 15	16215 NORTH 3	London	ON	N6K0A5	5199923848	thebest@ccac.
4833	Gedon	Alma	Sep 11, 14	205 FIFTH AVE I	Toronto	ON	M3C2B4	4168332345	jbNot@rwoods
4902	Ferterbest	Hope	Jun 19, 13	393 EAST AVE	Toronto	ON	M2W4R5	4163431232	betterStill@ro

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demonstrate

EmpID	DemoDate	DemoAttendance	ProductID	LocationID
2991	Oct 14, 2019	125	6	5
2991	Aug 05, 2019	345	4	10
2997	Aug 29, 2019	9	3	8
3137	Aug 08, 2019	475	6	4
3137	Jun 05, 2019	50	4	11
4102	Jul 05, 2019	131	1	7
4204	Sep 22, 2019	375	5	3
4419	Oct 14, 2019	265	2	10
4419	Sep 14, 2019	16	3	7
4424	Oct 14, 2019	155	5	6

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DEMO_LOCATION

LocID	Location Name
1	Toronto - Centre
2	Toronto - Airport
3	Ottawa - Downtown
4	London
5	Windsor
6	Peterborough
7	Sarnia
8	Kingston
9	Sudbury
10	Kitchner
11	Waterloo
(New)	

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PRODUCT

ProductID	ProductName	PerPersonDemoCharge
1	Razafram	37.95
2	Niblick	42.55
3	Widget	58.75
4	Hortuese	107.25
5	Zonk	215.65
6	Mobilie	70.75
(New)		

Record: 1 of 6 No Filter Search

Your employees conduct demonstrations of your products to the customers. You have a database that contains your employees' demographics and the products they demonstrate.
Using the database tables shown above, create a Microsoft Word document containing the SQL statements (as shown in the lecture materials) to do the following:

A. Find the Employee ID, first name, last name, phone number and email address for employees who live in the city of Hamilton.

B. Modify the employee information for employee ID equal to 2997 to your first name, last name, address and email address. (you may use a fake address and email, but must be your name).

C. Find the Employee first and last name, Employee email and Number at Demonstration (Demo Attendance) for each demonstration that took place in the month of September 2019.

D. Find the Product Name, Per Person Demonstration Charge, Number at Demonstration (Demo Attendance), Demonstration Date and Employee Last Name for the demonstrations that had less than 100 people in attendance.

E. Find the number of customers in total for all sessions where you conducted the demonstration of the Widget. (Use your name in the query) Label the results as Total_Customers.

F. Find the Employee first and last name, Demonstration Date, Location Name, Product Name for all demonstrations that were charged less than $100 per person.

Save the SQL statements in the Word document named "*youraccountname*_sql.docx" and attach the file to your submission

HINT 1:
it is very easy to tell if a value is stored as a number or as text in an MS Access table.
-if the value is right justified (pushed to the right) then it is stored as a number.
-if the value is left justified (pushed to the left) then it is stored as a text.

HINT 2:
remember how field names with spaces are treated differently from field names without spaces.

HINT 3:
remember, round brackets are required to be used with **all** INNER JOIN statements.

The format (how the SQL statements are written) MUST match the style shown in the notes.

Each SQL reserved word **MUST** appear on their own line and in capital letters in the document.
Each SQL Statement **MUST** be indented as shown below. You will lose major marks otherwise.

example:

```
SELECT
    something
FROM
   ( somewhere
INNER JOIN
    somewhere else ON some condition )
WHERE
    some condition is true;
```

This is non-optional. You MUST use this standard.
You will be graded on adhering to this standard.

You MUST write the SQL without the use or aid of any electronic method.
For example: You can NOT use MS Access Query Builder to create the SQL graphically and then copy or type in the result to your Word document. You will be graded on adhering to this standard.

You must identify yourself on the document. You will lose marks if this is missing.
Somewhere visible on the beginning (top) of the Word file you must include:
- your **first** and **last** name
- your **Western ID** (see below for a description of your Western ID)
- your **student number**

Save your SQL statements in the Word file named "*youraccountname*_sql.docx" and attach the file to your submission.

Project 2: Queries in Microsoft Access

Create a **new blank** MS Access database with the name: *youraccountName*_Movies.accdb (substitute *youraccountname* in the file name with your actual UWO account name).

Follow the steps in the accompanying video to copy the tables from the supplied database (Asn5_Project2_SQL.accdb) to your new database you just created.

This will provide a listing of Movie Stars and movies they appeared in and the location where the movie was filmed.
*note – the Budget field in MovieTitles is in millions of dollars (i.e. 1.3 is 1.3 million dollars)

Create a query **using the Graphical Query Design Tool** in the Create tab in MS Access for each of the following. (You MUST name each query object using the names:
Query A, Query B, Query C, Query D, Query E and Query F respectively)

A. Find the Star's ID, first name, last name, phone number and email address for all stars who were born in the 20th century.

B. Modify the movie star's information for movie star ID equal to 2997 to your first name, last name, address, date of birth and email address. (you may use a fake address, birth date and email, but must be your name).

C. Find only the Movie star last name, Movie star email, birth date and Movie ID for all Stars whose salary was $200,000.00 or above.

D. Find the Star's First and Last Name, Star's Salary and Movie Name for the movies whose budget exceeded 2 million dollars.

E. Find the number of movies that you starred in. (Use your name in the query). Label the return as: MovieNumber.

F. Find the Movie Names of all the movies starring Katherine Hepburn that were filmed in either Rome or Paris.

Save your database in the file named "youraccountname_Movies.accdb and attach the file to your submission.

Project 3: Written SQL

Using the database tables shown below and create a Microsoft Word document containing the SQL statements (as shown in the lecture materials) to do the following:

A. Create a query that changes the conductor's name with the CID of 001289348 to your first and last name.

B. Find the Province, TrainStation, Gate and Class for all of the DESTINATIONS whose TrainStations end with the designation of '1020' and have a 'B' Gate.

C. Find the Destination Identification number (DID), Province, TrainStation and Gate for all of the trains taken by the Passenger with the PassengerID is equal to "0056348".

D. Find the passenger number (PassengerID), first name and last name for all passengers who are from Ontario who have bought tickets for a train to any TrainStation in Alberta. In addition to showing the passenger number, passenger first name and passenger last name, show the TrainStation and Gate as part of the resulting dataset. If a passenger has taken more than one train to Alberta that passenger will appear more than once in the resulting dataset.

E. Find the total number of tickets where the passengers are from Ontario with the Destination of Alberta. Passengers who have taken more than one train to Alberta will be included in the answer for each train (ticket) that they have taken. Label this result field as: Alberta Trains

F. Find the passenger first name, passenger last name, Passenger Identification number (PassengerID), TrainStation, Gate and date of the train for all of the trains that you are the conductor. (use your last name and first name in the query not the CID). List the passengers in ascending order by the passenger's names.

PASSENGER

PassengerID	Lastname	Firstname	Street	City	Province	Postal	Phone
0000131	Ward	Burt	22-30 Silverbro	London	Ontario	N6A 1H5	(519) 555-2118
0004785	West	Adam	1085 Prince Phi	London	Ontario	N5D 4L9	(226) 555-8412
0056348	Dunsel	Ima	389 Foyston St.	Toronto	Ontario	M3B 4J1	(416) 555-1745
0135955	Gorshin	Frank	72 Notting Hill	London	Ontario	N2B 5M3	(519) 555-2225
0200045	Romero	Ceser	42-30 Clarendo	Lambeth	Ontario	N5Z 6K5	(519) 555-0334

Record: 6 of 6 No Filter Search

train

CID	DID
001289348	1010001
019018237	1030030
019018237	1040005
001289230	1050020
001904384	1070010

Record: 6 of 6

tickets

PassengerID	DID	Price	Travel Date
0000131	1010002	193.41	9/4/2019
0004785	1040001	174.99	8/7/2019
0056348	1010001	221.04	9/29/2017
0135955	1030030	193.41	4/29/2019
0200045	1070010	202.62	12/12/2016
0200045	1050020	174.99	12/12/2016
0056348	1010001	208.76	10/17/2017
0004785	1010002	165.78	10/17/2017
1050012	1040005	245.6	5/4/2017
		0	

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DESTINATION

DID	Province	TrainStation	Gate	Class
1010001	Quebec	BEC-1020	A	001
1010002	Quebec	BEC-1020	B	002
1020006	Ontario	RIO-1027	B	003
1020007	Ontario	RIO-1028	A	001
1030030	British Columbia	bia-3232	E	001
1040001	Manitoba	oba-1020		001
1050012	Alberta	rta-1025	E	001
1050020	Alberta	rta-2214	E	001
1090004	Saskatchewan	wan-1026	E	001

Record: 10 of 10 No Filter Search

CONDUCTOR

CID	Lastname	Firstname	Classificatio	Transponder	Salary	Hired-On
001289230	Robbins	Lynda	MC 378	6893	$77,578.23	10/28/2000
001289348	Magguilli	Max	UC 308	5721	$70,003.73	8/23/1988
001904384	Goldstein	Diane	MC 366	1190	$129,125.46	7/1/1971
019018237	Maggs	Sam	SSC 4402	4978	$64,023.81	7/1/1989
					$0.00	

Record: 5 of 5 No Filter Search

Save the SQL statements in the same Word document named "youraccountname_sql.docx" and attach the file to your submission. You only submit one (1) MS Word document for Project 1 and Project 3. Both Project 1 AND Project 3 are included in the one (1) MS Word document. Do NOT submit two separate MS Word documents for the SQL (Project1 and Project 3).

You MUST clearly indicate which solutions are for Project 1 and which solutions are for Project 3.

The format (how the SQL statements are written) MUST match the style shown in the notes.

Project 4: Final Exam Multiple Choice Questions

Write Three (3) multiple choice questions you think would be appropriate for the final exam. Base these questions on material covered in the slides or in class.
The file name for Project 4 must be *youraccountname*_companyname_A5.docx

- Ensure that each multiple choice question has five choices
- Ensure that the majority of questions are framed in a positive context
  (do not use questions that ask "Choose the option that does not belong)
- Avoid using "all of the above" or "none of the above" answer options, or answers consisting of specific option numbers as possible responses.
- Provide the correct answer for each question.
- You can NOT use questions from the quizzes – they MUST be original questions.

This will help the professor to gage the level of difficulty expected by the students and will demonstrate the students proficiency in the material.

(…and, if I use your question(s) you will already know the answer(s))

Enter these questions in a new (different from the file used for Project 1 and Project 3).
You will submit two (2) MS Word documents for this assignment (and obviously an MS Access file).
Both Project 1 AND Project 3 are included in the one (1) separate MS Word document.
The file name for Project 1 and Project 3 must be *youraccountname*_SQL.docx

Project 4 is to be placed in a different (separate) MS Word document.
The file name for Project 4 must be *youraccountname*_companyname_A5.docx

The two SQL projects [Project One (1) and Project Three (3)] are included in the single MS Word document with the file name: *youraccountname*_SQL.docx and Project 4 is included in the separate (different) file name: *youraccountname*_companyname_A5.docx

The format of these document should be similar to format you used in Assignment One (1).
Place your name, followed by the company name at the top.
At the top of the document, include your name, Student number and Western ID (the first part of your Western email (i.e. if your email was - **derntwis@uwo.ca** your ID would be - **derntwis**)
Fill in the required information after.
Formatting is not important as long as the document is easy to follow:

This documents must be a Word file saved and submitted as a .docx file
The *youraccountname* must be your Western Account Name.

Submission Instructions:

You must upload, attach and submit, via the CS1032 course website in WebCT, the following 3 files:

- youraccountname_sql.docx
- youraccountname_Movies.accdb
- youraccountname_companyname_A5.docx

NOTE: This description of the assignment contains instructions that tell you to create files with names that have a specific format. In these file names; the "youraccountname" is your UWO username.

AND AGAIN PLEASE: Do not cheat or copy.

> When I ask students what I can do to limit the cheating, they recommend I remind the students that we do check the work and that there is a high probably they will be caught. So, here is that reminder.

besides, you will need to know how to do these tasks on the final exam …