CIS-310 Database Design
Small Group Activity #8
30 points

Names of group members: _____

_____

1. Get in touch with your group. (See Groups folder on Blackboard.)
2. Discuss and complete the assignment together via E-mail, Discussion Forum, Blackboard Collaborate Ultra, and/or MS Teams.
3. Choose a recorder to prepare the final copy (one per group) and submit it via the Blackboard Assignments/Small Group Activities folder to the instructor.
4. Be sure all group members' names are on final copy. Do not add names of your group classmates who did not participate in the assignment.
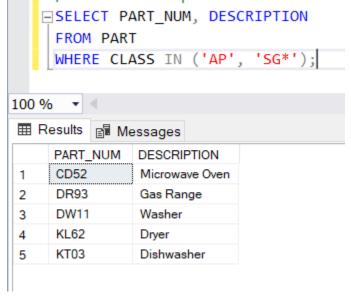
After you have successfully completed Assignments 4 and 7 as well as Small Group Activity 7, the Premiere Products database containing five tables (REP, CUSTOMER, ORDERS, PART, and ORDER_LINE) populated with the data and the entity relationship diagram (ERD) should already be in your SQL Server account. You will find the five database tables at the end of this document.

Using the Premiere Products database write the SQL queries for the following ten problems. Discuss each of the ten problems with your group, write a query for each problem, and run the query on SQL server. Save the ten queries in a single file or in ten separate files in your account on J drive. Every group member should run each of the ten queries and save them in his/her account on J drive. Paste your queries and the outputs they generated after each of the ten problems.

After you paste the queries and the output they produced save this document as Word or pdf file named SGA8_Groupxx, where xx stand for the group number and submit via Blackboard. See the Assignments/Small Group Activities/Small Group Activity 8 folder.

Problem 1.

Use the IN operator to list the part number and part description of each part in item class AP or SG. Run the query on SQL server. Paste the query and the output from the query below.

```
SELECT PART_NUM, DESCRIPTION
FROM PART
WHERE CLASS IN ('AP', 'SG*');
```

100 %

Results | Messages

	PART_NUM	DESCRIPTION
1	CD52	Microwave Oven
2	DR93	Gas Range
3	DW11	Washer
4	KL62	Dryer
5	KT03	Dishwasher

Problem 2.

List the sales rep numbers and sum of the balances of all customers for each sales rep, but restrict the output to those sales reps for whom the sum is more than $10,000. Name the unnamed column as SUM_OF_BALANCES. Order and group the results by sales rep number. Use the HAVING clause. Run the query on SQL server. Paste the query and the output from the query below.

```
SELECT REP_NUM, SUM(BALANCE) AS SUM_AS_BALANCES
FROM CUSTOMER
GROUP BY REP_NUM
HAVING SUM(BALANCE)>10000
ORDER BY REP_NUM;
```

100 % ▼ ◀

⊞ Results 📄 Messages

	REP_NUM	SUM_AS_BALANCES
1	20	27533.00
2	65	11303.00

Problem 3.

List the order number, order date, customer number, and customer name for every customer that placed an order. Restrict the output to the orders placed on or after Oct 21 2020. Order the rows by the order number. Run the query on SQL server. Paste the query and the output from the query below.

```
SELECT ORDER_NUM, ORDER_DATE, CUSTOMER_NUM
FROM ORDERS
WHERE ORDER_DATE>='21-Oct-2020'
ORDER BY ORDER_NUM;
```

100 % ▼ ◀

⊞ Results 📄 Messages

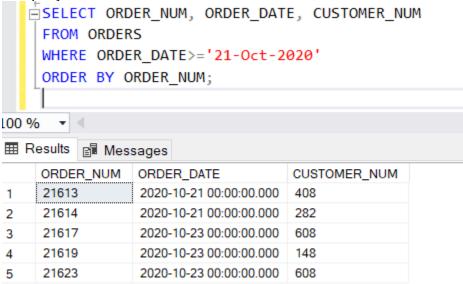|	ORDER_NUM	ORDER_DATE	CUSTOMER_NUM
1	21613	2020-10-21 00:00:00.000	408
2	21614	2020-10-21 00:00:00.000	282
3	21617	2020-10-23 00:00:00.000	608
4	21619	2020-10-23 00:00:00.000	148
5	21623	2020-10-23 00:00:00.000	608

Problem 4.

Use the IN operator to find the number and name of each customer that placed an order on October 23, 2020. Run the query on SQL server. Paste the query and the output from the query below.

```
SELECT CUSTOMER.CUSTOMER_NUM, CUSTOMER_NAME
FROM CUSTOMER
JOIN ORDERS ON CUSTOMER.CUSTOMER_NUM = ORDERS.CUSTOMER_NUM
WHERE ORDER_DATE IN (SELECT ORDER_DATE FROM ORDERS
                     WHERE ORDER_DATE ='23-Oct-2020');
```

100 % ▾ ◀

⊞ Results 🗟 Messages

	CUSTOMER_NUM	CUSTOMER_NAME
1	608	Johnson's Department Store
2	148	Al's Appliance and Sport
3	608	Johnson's Department Store

Problem 5.

Find the number and name of each customer whose name begins with the letter "B". Run the query on SQL server. Paste the query and the output from the query below.

```
SELECT CUSTOMER_NAME
FROM CUSTOMER
WHERE CUSTOMER_NAME LIKE 'B%';
```

100 % ▾ ◀

⊞ Results 🗟 Messages

	CUSTOMER_NAME
1	Brookings Direct
2	Bargains Galore

Problem 6.

For each order, list the order number, order date, part number, part description, and item class for each part that makes up the order. Order the rows by item class and then by order number. (Note that you need to pull the data from several tables.) Run the query on SQL server. Paste the query and the output from the query below.

```sql
SELECT L.ORDER_NUM, ORDER_DATE, P.PART_NUM, DESCRIPTION, CLASS
FROM ORDER_LINE L
JOIN ORDERS O ON L.ORDER_NUM = O.ORDER_NUM
JOIN PART P ON L.PART_NUM = P.PART_NUM
ORDER BY CLASS, L.ORDER_NUM;
```
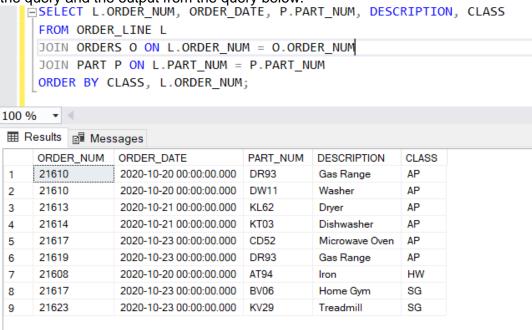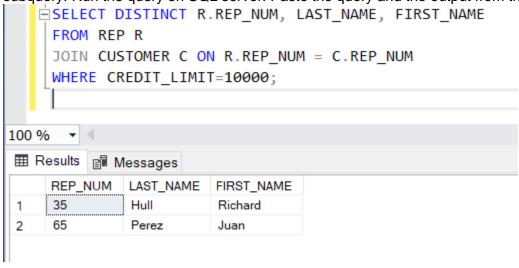
100 %

Results   Messages

	ORDER_NUM	ORDER_DATE	PART_NUM	DESCRIPTION	CLASS
1	21610	2020-10-20 00:00:00.000	DR93	Gas Range	AP
2	21610	2020-10-20 00:00:00.000	DW11	Washer	AP
3	21613	2020-10-21 00:00:00.000	KL62	Dryer	AP
4	21614	2020-10-21 00:00:00.000	KT03	Dishwasher	AP
5	21617	2020-10-23 00:00:00.000	CD52	Microwave Oven	AP
6	21619	2020-10-23 00:00:00.000	DR93	Gas Range	AP
7	21608	2020-10-20 00:00:00.000	AT94	Iron	HW
8	21617	2020-10-23 00:00:00.000	BV06	Home Gym	SG
9	21623	2020-10-23 00:00:00.000	KV29	Treadmill	SG

Problem 7.

Find the rep number, last name, and first name of each sales rep who represents at least one customer with a credit limit of $10,000. List each sales rep only once in the results. Do not use a subquery. Run the query on SQL server. Paste the query and the output from the query below.

```sql
SELECT DISTINCT R.REP_NUM, LAST_NAME, FIRST_NAME
FROM REP R
JOIN CUSTOMER C ON R.REP_NUM = C.REP_NUM
WHERE CREDIT_LIMIT=10000;
```

100 %

Results   Messages

	REP_NUM	LAST_NAME	FIRST_NAME
1	35	Hull	Richard
2	65	Perez	Juan

4

Problem 8.

List the part number, part description, and item class for each pair of parts that are in the same item class. Order the output by class and then by part number. (Note that you need to link PART to itself.) Run the query on SQL server. Paste the query and the output from the query below.

```
SELECT P.PART_NUM, P.DESCRIPTION, P.CLASS, T.PART_NUM, T.DESCRIPTION,T.CLASS
FROM PART P
JOIN PART T
ON P.CLASS=T.CLASS
AND P.DESCRIPTION<>T.DESCRIPTION
ORDER BY P.CLASS, P.PART_NUM;
```
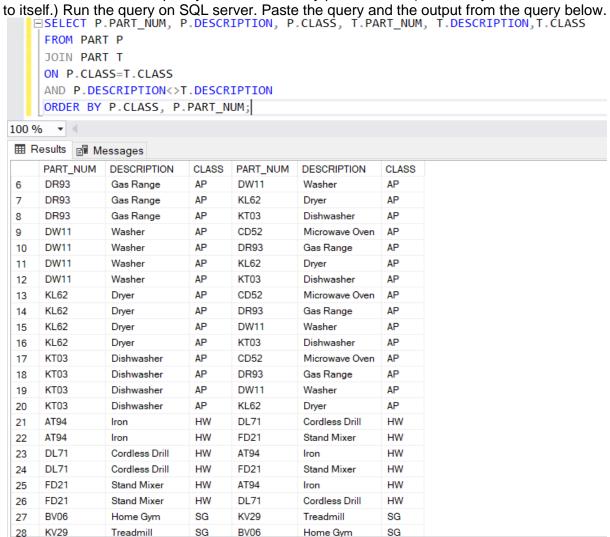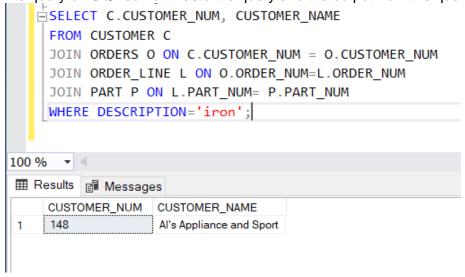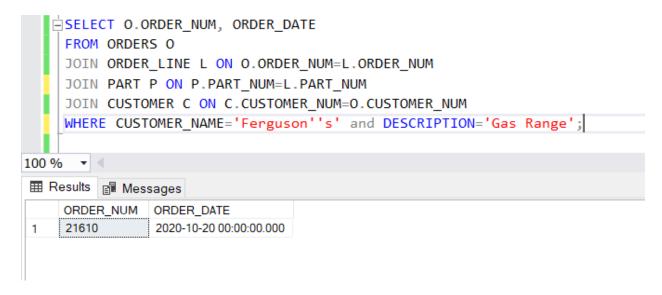
100 %

Results | Messages

	PART_NUM	DESCRIPTION	CLASS	PART_NUM	DESCRIPTION	CLASS
6	DR93	Gas Range	AP	DW11	Washer	AP
7	DR93	Gas Range	AP	KL62	Dryer	AP
8	DR93	Gas Range	AP	KT03	Dishwasher	AP
9	DW11	Washer	AP	CD52	Microwave Oven	AP
10	DW11	Washer	AP	DR93	Gas Range	AP
11	DW11	Washer	AP	KL62	Dryer	AP
12	DW11	Washer	AP	KT03	Dishwasher	AP
13	KL62	Dryer	AP	CD52	Microwave Oven	AP
14	KL62	Dryer	AP	DR93	Gas Range	AP
15	KL62	Dryer	AP	DW11	Washer	AP
16	KL62	Dryer	AP	KT03	Dishwasher	AP
17	KT03	Dishwasher	AP	CD52	Microwave Oven	AP
18	KT03	Dishwasher	AP	DR93	Gas Range	AP
19	KT03	Dishwasher	AP	DW11	Washer	AP
20	KT03	Dishwasher	AP	KL62	Dryer	AP
21	AT94	Iron	HW	DL71	Cordless Drill	HW
22	AT94	Iron	HW	FD21	Stand Mixer	HW
23	DL71	Cordless Drill	HW	AT94	Iron	HW
24	DL71	Cordless Drill	HW	FD21	Stand Mixer	HW
25	FD21	Stand Mixer	HW	AT94	Iron	HW
26	FD21	Stand Mixer	HW	DL71	Cordless Drill	HW
27	BV06	Home Gym	SG	KV29	Treadmill	SG
28	KV29	Treadmill	SG	BV06	Home Gym	SG

Problem 9.
Find the number and name of each customer that currently has an order on file for an Iron. Run the query on SQL server. Paste the query and the output from the query below.

```sql
SELECT C.CUSTOMER_NUM, CUSTOMER_NAME
FROM CUSTOMER C
JOIN ORDERS O ON C.CUSTOMER_NUM = O.CUSTOMER_NUM
JOIN ORDER_LINE L ON O.ORDER_NUM=L.ORDER_NUM
JOIN PART P ON L.PART_NUM= P.PART_NUM
WHERE DESCRIPTION='iron';
```

100 %

⊞ Results ⬛ Messages

	CUSTOMER_NUM	CUSTOMER_NAME
1	148	Al's Appliance and Sport

Problem 10.

List the order number and order date for each order that was placed by Ferguson's and that contains an order line for a Gas Range. (Hint: Use the string literal as 'Ferguson''s' for comparison.) Run the query on SQL server. Paste the query and the output from the query below.

```sql
SELECT O.ORDER_NUM, ORDER_DATE
FROM ORDERS O
JOIN ORDER_LINE L ON O.ORDER_NUM=L.ORDER_NUM
JOIN PART P ON P.PART_NUM=L.PART_NUM
JOIN CUSTOMER C ON C.CUSTOMER_NUM=O.CUSTOMER_NUM
WHERE CUSTOMER_NAME='Ferguson''s' and DESCRIPTION='Gas Range';
```

100 %

⊞ Results ⬛ Messages

	ORDER_NUM	ORDER_DATE
1	21610	2020-10-20 00:00:00.000

PREMIERE PRODUCTS SCHEMA

TABLE REP

	REP_NUM	LAST_NAME	FIRST_NAME	STREET	CITY	STATE	ZIP	COMMISSION	RATE
1	20	Kaiser	Valerie	624 Randall	Grove	FL	33321	20542.50	0.05
2	35	Hull	Richard	532 Jackson	Sheldon	FL	33553	39216.00	0.07
3	65	Perez	Juan	1626 Taylor	Fillmore	FL	33336	23487.00	0.05

TABLE CUSTOMER

	CUSTOMER_NUM	CUSTOMER_NAME	STREET	CITY	STATE	ZIP	BALANCE	CREDIT_LIMIT	REP_NUM
1	148	Al's Appliance and Sport	2837 Greenway	Fillmore	FL	33336	6550.00	7500.00	20
2	282	Brookings Direct	3827 Devon	Grove	FL	33321	431.50	10000.00	35
3	356	Ferguson's	382 Wildwood	Northfield	FL	33146	5785.00	7500.00	65
4	408	The Everything Shop	1828 Raven	Crystal	FL	33503	5285.25	5000.00	35
5	462	Bargains Galore	3829 Central	Grove	FL	33321	3412.00	10000.00	65
6	524	Kline's	838 Ridgeland	Fillmore	FL	33336	12762.00	15000.00	20
7	608	Johnson's Department Store	372 Oxford	Sheldon	FL	33553	2106.00	10000.00	65
8	687	Lee's Sport and Appliance	282 Evergreen	Altonville	FL	32543	2851.00	5000.00	35
9	725	Deerfield's Four Seasons	282 Columbia	Sheldon	FL	33553	248.00	7500.00	35
10	842	All Season	28 Lakeview	Grove	FL	33321	8221.00	7500.00	20

TABLE ORDERS

	ORDER_NUM	ORDER_DATE	CUSTOMER_NUM
1	21608	2020-10-20 00:00:00.000	148
2	21610	2020-10-20 00:00:00.000	356
3	21613	2020-10-21 00:00:00.000	408
4	21614	2020-10-21 00:00:00.000	282
5	21617	2020-10-23 00:00:00.000	608
6	21619	2020-10-23 00:00:00.000	148
7	21623	2020-10-23 00:00:00.000	608

TABLE PART

	PART_NUM	DESCRIPTION	ON_HAND	CLASS	WAREHOUSE	PRICE
1	AT94	Iron	50	HW	3	24.95
2	BV06	Home Gym	45	SG	2	794.95
3	CD52	Microwave Oven	32	AP	1	165.00
4	DL71	Cordless Drill	21	HW	3	129.95
5	DR93	Gas Range	8	AP	2	495.00
6	DW11	Washer	12	AP	3	399.99
7	FD21	Stand Mixer	22	HW	3	159.95
8	KL62	Dryer	12	AP	1	349.95
9	KT03	Dishwasher	8	AP	3	595.00
10	KV29	Treadmill	9	SG	2	1390.00

TABLE ORDER_LINE

	ORDER_NUM	PART_NUM	NUM_ORDERED	QUOTED_PRICE
1	21608	AT94	11	21.95
2	21610	DR93	1	495.00
3	21610	DW11	1	399.99
4	21613	KL62	4	329.95
5	21614	KT03	2	595.00
6	21617	BV06	2	794.95
7	21617	CD52	4	150.00
8	21619	DR93	1	495.00
9	21623	KV29	2	1290.00