

Individual Project 4  
DS160-02  
Introduction to Data Science  
Fall 2023

Writing SQL Queries (50 points)

**Goal:** This project aims to write several different SQL queries to extract data from a database.

**Instructions:** For this project, create an .sql script titled **IP4\_XXX.sql**, where **XXX** are your initials. Also create a GitHub repository titled **IP4\_XXX** to which you can push your code. Write and execute the following queries. **Add the snippet of the output in this document and submit it with the sql script.**

The dataset contains five tables: Customer, order line, orders, part, sales rep. Note down all of the primary keys.

1. Print all rows and columns of the dataset.

```
1 • USE premier_products;  
2 • SELECT * FROM customer;  
3 • SELECT * FROM order_line;  
4 • SELECT * FROM orders;  
5 • SELECT * FROM part;  
6 • SELECT * FROM sales_rep;
```

**Customer**

	customer_num	customer_name	street	city	state	zip	balance	credit_limit	sales_rep_num
▶	148	Al's Appliance and Sport	2837 Gree...	Fillmore	FL	33336	6550.00	7500.00	20
	282	Brookings Direct	3827 Devon	Grove	FL	33321	431.50	10000.00	35
	356	Ferguson's	382 Wildw...	Northfield	FL	33146	5785.00	7500.00	65
	408	The Everything Shop	1828 Raven	Crystal	FL	33503	5285.25	5000.00	35
	462	Bargains Galore	3829 Central	Grove	FL	33321	3412.00	10000.00	65
	524	Kline's	838 Ridgel...	Fillmore	FL	33336	12762.00	15000.00	20
	608	Johnson's Department Store	372 Oxford	Sheldon	FL	33553	2106.00	10000.00	65
	687	Lee's Sport and Appliance	282 Evergr...	Altonville	FL	32543	2851.00	5000.00	35
	725	Deerfield's Four Seasons	282 Columbia	Sheldon	FL	33553	248.00	7500.00	35
	842	All Season	28 Lakeview	Grove	FL	33321	8221.00	7500.00	20
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

*Primary Key:* customer\_num

**Order line**

Result Grid				
		Filter Rows:		
		Edit:		
	order_num	part_num	num_ordered	quoted_price
▶	21608	AT94	11	21.95
	21610	DR93	1	495.00
	21610	DW11	1	399.99
	21613	KL62	4	329.95
	21614	KT03	2	595.00
	21617	BV06	2	794.95
	21617	CD52	4	150.00
	21619	DR93	1	495.00
	21623	KV29	2	1290.00
*	NULL	NULL	NULL	NULL

Primary Key: order\_num & part\_num


### Orders


Result Grid			
		Filter Rows:	
		Edit:	
	order_num	order_date	customer_num
▶	21608	2010-10-20 00:00:00	148
	21610	2010-10-20 00:00:00	356
	21613	2010-10-21 00:00:00	408
	21614	2010-10-21 00:00:00	282
	21617	2010-10-23 00:00:00	608
	21619	2010-10-23 00:00:00	148
	21623	2010-10-23 00:00:00	608
*	NULL	NULL	NULL


Primary Key: order\_num

### Parts

Result Grid

 Filter Rows:

 Edit:

 Export/Import:

	part_num	part_description	on_hand	class	warehouse	price
▶	AT94	Iron	50	HW	3	24.95
	BV06	Home Gym	45	SG	2	794.95
	CD52	Microwave Oven	32	AP	1	165.00
	DL71	Cordless Drill	21	HW	3	129.95
	DR93	Gas Range	8	AP	2	495.00
	DW11	Washer	12	AP	3	399.99
	FD21	Stand Mixer	22	HW	3	159.95
	KL62	Dryer	12	AP	1	349.95
	KT03	Dishwasher	8	AP	3	595.00
	KV29	Treadmill	9	SG	2	1390.00
*	NULL	NULL	NULL	NULL	NULL	NULL

Primary Key: part\_num

### Sales\_rep

	sales_rep_num	last_name	first_name	street	city	state	zip	commission	rate
▶	20	Kaiser	Valerie	624 Randall	Grove	FL	33321	20542.50	0.05
	35	Hull	Richard	532 Jackson	Sheldon	FL	33553	39216.00	0.07
	65	Perez	Juan	1626 Taylor	Fillmore	FL	33336	23487.00	0.05
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

Primary Key: sales\_rep\_num

2. All rows, last name , first name, sales rep number, city from sales rep table

9 #2.

10 • `SELECT * FROM sales_rep;`






	sales_rep_num	last_name	first_name	street	city	state	zip	commission	rate
▶	20	Kaiser	Valerie	624 Randall	Grove	FL	33321	20542.50	0.05
	35	Hull	Richard	532 Jackson	Sheldon	FL	33553	39216.00	0.07
	65	Perez	Juan	1626 Taylor	Fillmore	FL	33336	23487.00	0.05
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

3. Select order and customer number from orders.

11 #3.

12 • `SELECT order_num, customer_num FROM orders;`

---

Result Grid   Filter Rows:  Edit:    Export/Import





	order_num	customer_num
▶	21608	148
	21610	356
	21613	408
	21614	282
	21617	608
	21619	148
	21623	608
*	NULL	NULL

4. Select only two rows from order line.

13 #4.

14 • `SELECT * FROM order_line LIMIT 2;`

---

Result Grid   Filter Rows:  Edit:  









	order_num	part_num	num_ordered	quoted_price
▶	21608	AT94	11	21.95
	21610	DR93	1	495.00
*	NULL	NULL	NULL	NULL

5. Select all of the entries from customer where sales rep num=20

15 #5.

16 • `SELECT * FROM customer WHERE sales_rep_num = 20;`

---

Result Grid   Filter Rows:  Edit:    Export/Import:   Wrap Cell Content: 

	customer_num	customer_name	street	city	state	zip	balance	credit_limit	sales_rep_num
▶	148	Al's Appliance and Sport	2837 Gree...	Fillmore	FL	33336	6550.00	7500.00	20
	524	Kline's	838 Ridgel...	Fillmore	FL	33336	12762.00	15000.00	20
	842	All Season	28 Lakeview	Grove	FL	33321	8221.00	7500.00	20
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

6. Select only customer name, balance, credit limit from customer where sales rep num=20

17 #6.

18 • `SELECT customer_name, balance, credit_limit FROM customer WHERE sales_rep_num = 20;`

Result Grid	Filter Rows:	Export:	Wrap Cell Content:
customer_name	balance	credit_limit	
Al's Appliance and Sport	6550.00	7500.00	
Kline's	12762.00	15000.00	
All Season	8221.00	7500.00	

7. Select part num, num ordered, quoted price and **total price** where total price is (num\_ordered \* quoted\_price) where only 1 num ordered and the order number is 21617.

19 #7.

20 • `SELECT part_num, num_ordered, quoted_price, (num_ordered * quoted_price) AS total_price`  
21 `FROM order_line`  
22 `WHERE num_ordered = 2 AND order_num = 21617;`

Result Grid	Filter Rows:	Export:	Wrap Cell Content:
part_num	num_ordered	quoted_price	total_price
BV06	2	794.95	1589.90

Num\_ordered = 2 not 1

8. Show all the orders from order date between '2010-10-20' and '2010-10-22.'

23 #8.

24 • `SELECT * FROM orders WHERE order_date BETWEEN '2010-10-20' AND '2010-10-22';`

Result Grid	Filter Rows:	Edit:	Export/Import:	Wrap Cell Content:
order_num	order_date	customer_num		
21608	2010-10-20 00:00:00	148		
21610	2010-10-20 00:00:00	356		
21613	2010-10-21 00:00:00	408		
21614	2010-10-21 00:00:00	282		
NULL	NULL	NULL		

9. List all of parts where the part description starts with 'D' and end with 'er'

25 #9.

26 • `SELECT * FROM part WHERE part_description LIKE 'D%er';`

Result Grid

Filter Rows:

Edit:

Export/Import:

Wrap Cell Content:

	part_num	part_description	on_hand	class	warehouse	price
	KL62	Dryer	12	AP	1	349.95
	KT03	Dishwasher	8	AP	3	595.00
*	NULL	NULL	NULL	NULL	NULL	NULL

10. Show total balance from customer.

27 #10.

28 • `SELECT SUM(balance) AS Total_Balance FROM customer;`

Result Grid

Filter Rows:

Export:

Wrap Cell Content:

	Total_Balance
▶	47651.75

11. Show minimum balance from customer.

29 #11.

30 • `SELECT min(balance) AS Minimum_Balance FROM customer;`

Result Grid

Filter Rows:

Export:

Wrap Cell Content:

	Minimum_Balance
▶	248.00

12. Count number of customers in customer table

31 #12.

32 • `SELECT COUNT(*) AS NumberOfCustomers FROM customer;`

Result Grid

Filter Rows:

Export:

Wrap Cell Content:

	NumberOfCustomers
▶	10

13. Select order number where the quote price is more than 500 but less than 1000.

```
33 #13.
34 • SELECT order_num FROM order_line WHERE quoted_price > 500 AND quoted_price < 1000;
```

Result Grid | | Filter Rows:  | Export: | Wrap Cell Content:

order_num
21614
21617

14. Create a new table of customer name, last name, and first name from customer and sales rep table by matching up their primary key.

```
35 #14.
36 • select customer_name, last_name, first_name
37 from customer c
38 join sales_rep sr on sr.sales_rep_num=c.sales_rep_num;
```

Result Grid | | Filter Rows:  | Export: | Wrap Cell Content:

customer_name	last_name	first_name
Al's Appliance and Sport	Kaiser	Valerie
Brookings Direct	Hull	Richard
Ferguson's	Perez	Juan
The Everything Shop	Hull	Richard
Bargains Galore	Perez	Juan
Kline's	Kaiser	Valerie
Johnson's Department Store	Perez	Juan
Lee's Sport and Appliance	Hull	Richard
Deerfield's Four Seasons	Hull	Richard
All Season	Kaiser	Valerie

**Project Submission:** Upload a link to your GitHub repository for the project in the area provided in Moodle by the deadline specified.