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.

   ```
   describe customer;
   describe order_line;
   describe orders;
   describe part;
   describe sales_rep;
   ```

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

   ```
   select last_name, first_name, sales_rep_num, city
   from sales_rep;
   ```

3. Select order and customer number from orders.

   ```
   select order_num, customer_num
   from orders;
   ```

4. Select only two rows from order line.

   ```
   select *
   from order_line
   limit 2;
   ```

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

   ```
   select *
   from customer
   where sales_rep_num = 20;
   ```

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

```
select customer_name, balance, credit_limit
from customer
where sales_rep_num = 20;
```

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.

```
select part_num, num_ordered, quoted_price, order_num, (num_ordered * quoted_price) as
"Total Price"
from order_line
where order_num = 21617;
```

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

```
select *
from orders
where order_date between "2010-10-20" and "2010-10-22";
```

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

```
select *
from part
where part_description like "D%" and part_description like "%er";
```

10. Show total balance from customer.

```
select sum(balance) as "Total Balance"
from customer;
```

11. Show minimum balance from customer.

```
select min(balance) as "Minimum Balance"
from customer;
```

12. Count number of customers in customer table.

```
select count(balance) as "Count of Customer"
from customer;
```

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

    ```
    select order_num
    from order_line
    where quoted_price>500 and quoted_price<1000;
    ```

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.

    ```
    select c.customer_name, sp.last_name, sp.first_name, sp.sales_rep_num
    from customer c
    join sales_rep sp on c.sales_rep_num = sp.sales_rep_num;
    ```

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