



CSCI 2020 – Database Fundamentals

Lab 4 – SELECT & Other DML

Header Comments

Include the standard header comments into your SQL Worksheet in SQL Developer. If you do not enter the header comments, I will take 10% off your grade. Save your file as LastnameFirstinitial_Lab4.sql (e.g., RezwanaT_Lab4.sql).

Tips to remember when designing your queries:

- Pay attention to syntax and any syntax errors.
- Verify the correct spellings of table, column and schema names.
- Verify the type of data you are comparing against. E.g. date or number formats.
- Use column aliases where needed.
- A function can be called multiple times in the same query. In the SELECT clause function calls should be separated by commas similar to column names.
- Use table aliases when doing joins.
- Break up complex queries to understand your results better. For example, execute JOINS first and then apply any conditions using WHERE or HAVING clauses.
- Use semi-colons at the end of each query even if your query runs without the semi-colon.

A. Querying Data [30 points]

For this section, you will be using several tables within the PETSTORE schema. The ERD for this schema is on the last page. You have SELECT access to these tables.

1. Display the name, color, breed and list price of all animals that are dogs and a type of Collie breed. Sort the results by name in ascending order. Format your answer as follows. (3 points)
2. Display all the categories of animals and the number of animals in each category. Sort the results so that the highest category of animals appear first. Format your answer as follows. (3 points)

```
-----  
-- A1. List of all Collie dogs
```

```
-----  
-- A2. Number of animals in each category
```

3. Write a select statement that returns all records from the Customer table that have a phone number that begins with the area code 502. Format your answer as follows. (3 points)

-- A3. Customers phone numbers with area code 502

4. Write a select statement that gives the item name and the average sale price for each item sold. Display only those items whose average sale price is more than \$10. Sort the results by the highest average sale price first. Format your answer as follows. (3 points)

-- A4. Average sale price per item sold

5. The marketing manager would like to know which merchandise items were most frequently ordered from the suppliers. Display the item name, the number of orders that the item was included in and the total quantity of item that was ordered. Sort the results by the most ordered item first. (3 points)

-- A5. Total number of items ordered from suppliers

6. Marketing would also like to know what breeds of animals are the most popular in each category. Display the animal's category, breed and the number of animals sold for each breed. Sort the results by the most sold breed first. Format your answer as follows. (3 points)

-- A6. Most popular breed of animals

7. Display the last name, address, city, state and ZIP of all employees that are an Animal Friend. The complete address should be displayed within one column in the format "Street address, city, state ZIP". E.g., 1234 Boone St, Johnson City, TN 37614. Format your answer as follows. (3 points)

-- A7. Employee's full address

8. Each employee is to be assigned a new email ID. The email ID should be in the format "lastnamefirstinitial@pethaven.com" e.g. eatona@pethaven.com. Display the employee's last name, first name and the new email ID. Sort the results by last name in ascending order. (3 points)

-- A8. New email IDs for employees

9. Display each supplier's name, along with the average number of days taken by each supplier to fulfill an animal order. Round off the average to 2 decimal places. Sort the results by the least average days first. HINT: Subtract order date from receive date to get number of days. (3 points)

-- A9. Average time taken for animal orders by suppliers

10. Write a subquery that displays the category, breed and list price of animals whose list price is greater than the max purchase cost of all animals. HINT: Use the AnimalOrderItem table for the purchase cost. Sort the results by highest list price first. (3 points)

```
-----  
-- A10. Animal list price greater than max purchase cost
```

B. Modifying Data [15 points]

For this section of the assignment, open the Lab7Petstore.sql file on SQL Developer and click "Run Script" or press F5. Ignore the errors from the DROP TABLE statements.

Copy and paste the following statement to verify the number of tables created.

```
SELECT COUNT(*) FROM USER_TABLES;
```

You should have 19 tables created in your schema.

1. Insert yourself as a new customer in the Customer table. (3 points)

```
-----  
-- B1. New customer added to database
```

2. A new cat has been rescued and needs to be added to the database. Add the following data about the cat in the Animal table. (3 points)
- Name: Pickles
 - Breed: Scottish Fold
 - Date born: 3/12/2020
 - Gender: Male
 - Color: Gray
 - List price: 112.5

```
-----  
-- B2. New animal added to database
```

3. A new order has been placed for merchandise by Katy Reasoner who is a manager at the pet store. The order was placed on 2-2-2022 and the merchandise was received on 2-10-2022. The merchandise was ordered from Angela Harrison. Enter this data in the MerchandiseOrder table. (3 points)

```
-----  
-- B3. New merchandise order added to database
```

4. List prices for the following merchandise has changed. Write Update statements to change this data in the Merchandise table. (3 points)
- a. Dog Food Dry 10 pound: 8.5
 - b. Cat litter 10 pound: 10

-- B4. Updates to list prices for merchandise

5. Delete the Shark (animalid: 5) from the Animal table. Note, you will need to delete any child records before you can delete the parent record due to referential integrity constraints. (3 points)

-- B5. Delete Shark from the database

Submit your file, named LastnameFirstinitial_Lab4.sql, to the Lab 4 Dropbox area on D2L by **Wednesday, 2/16/2022 at 11:59 PM. Late Submission Accepted** (please refer to late submission policy in the syllabus if you are not sure what this means).