Lab 4: Aggregate Functions (6% of total grade)

Submission: Use the included .sql file to put your answers in, then upload only the SQL file to Blackboard (Assessments > Lab 4 - Aggregate Functions).

Name your file: HTTP5126-L4-AggFns-*LastNameFirstName*.SQL, replace *LastNameFirstName* with your name as displayed in Blackboard.

Purpose: To implement new keywords and clauses learned in Lesson 4 in order to provide grouped or, “aggregate”, result sets.

Requirements: For this assignment, you will use the provided Pet Store data tables.

NOTE: Run your queries on your database to make sure desired results are retrieved. Also import and execute your sql file to ensure it runs all your queries before submitting.

Pre-Lab:

1. Start your mySQL server and open phpMyAdmin or Adminer.
2. Feel free to reuse the database from lab 2 or create a new one for lab 4 using the **pet_store_tables.sql** file (same file as lab 2).

Part 1: MIN(), MAX(), AVG(), & SUM() (2%)

For each of the following, create a SQL query that returns the number requested.

A. “What is the lowest price of any item?”
B. “What is the greatest quantity of any item in stock?”
C. “What is the average price of all the items in the store?”
D. “What is the total inventory of all the items in the store?”

Part 2: Count ’Em By Groups (1.5%)

A. Provide a count of employees grouped by role. Include the role and the count in your results.
B. Create a count of items by category that excludes the fish category (“piscine”). Put 'Mammals’ as the heading for the category.
C. Find the ‘Average Price ($)’ of items for each category. Include the average price and category in your results. Don’t include items that are out of stock in your averages.

Part 3: Groups & Having (1.5%)

A. Manager: “Inventory time. I need the total number of remaining stock for each animal category. Sort it by the fewest items to the most items. At the top of the chart I want to see ‘In Stock’, and ‘Species’.”
B. Manager: “Get the total stock and average price for each animal category. Include categories with fewer than 100 items in stock and an average price below 100.”

Part 4: Challenging Calculations (1%)

A. Manager: “Calculate our ‘Potential Earnings’ for the remaining stock if we were to sell everything. Each of the 20 items should have its own row. Show me the ‘Product’, ‘Price’, ‘Stock Remaining’, and ‘Species’. Display prices with a dollar sign (e.g., $55). Sort the table from highest to lowest ‘Potential Earnings’.”