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 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. Show the inventory total and average price of items by animal category. Only display the information with an inventory total and average price under 100.

Part 4: Challenging Calculations (1%)
Calculate the 'Potential Earnings' of the stock remaining if we were to sell all of it. All 20 items should occupy their own row. Be sure to show the 'Product', 'Price', 'Stock Remaining', and 'Species' as well. Prices should be concatenated with the dollar sign (eg. $55). Order the table from most 'Potential Earnings' to the least.