**SQL Practice Problems**

Use the tables in the attached Excel file (‘MSBA SQL Tables.xlsx’) to write SQL queries that will answer the questions below. Be sure to spend a couple minutes exploring and understanding the data. You don’t need to report the actual answer, whether it’s a specific value or the resulting table – just write the query that would allow you to retrieve the solution. Keep in mind there are many ways to get to the same answer! Also, StackOverflow and Google are your friends.

Good luck!

***For questions 1-10, use the Shipments table in the attached Excel file.***

1. How many shipments are in the dataset?
2. Using the Shipments table, find out the minimum ship date (as min\_ship\_date), the maximum ship date (as max\_ship\_date), and the average weight (as avg\_weight).
3. Provide the number of LTL shipments.
4. Provide the number of unique origin zip codes.
5. How many shipments are greater than 100 and less than 250 lbs?
6. What is the average number of pallets per LTL shipments less than 500 lbs?
7. We want to get an idea of how many shipments are sent each month. Use SQL to count the number of shipments by year-month. Note that by year-month, we mean that May 2013 and May 2014 should be considered as different year-months. The resulting table should show year-month and count, and order results by year-month.
8. How many unique cities have shipments originating from them?
9. What is the average shipment weight leaving each city? The resulting table should include origin city name and each city's average weight. Limit results to those that have an average weight over 15000 pounds and sort the results in descending order by weight.
10. Find the set of shipments that are shipping out of an origin with 'City' in the name (i.e., Johnson City, Salt Lake City, Kansas City, etc.). Report ID number and origin city name.

***For questions 11-15, use the Workers, Bonus, and Title tables in the attached Excel file.***

1. Write a SQL query to print the first name and title of the workers who are also managers.
2. Write a SQL query to print the worker ID's who have had a bonus and the corresponding bonus values.
3. Select the ID of workers who have had bonuses, the bonus date, bonus amount, and the title for each worker.
4. Select full name (this means the result should return one column with the full name) and corresponding bonuses for workers who received higher than average bonuses.
5. Write a SQL query to print first name, last name, title, and salary of workers who have the highest salary for each of the departments.

***Extra (helpful) resources:***

<https://www.kaggle.com/learn/intro-to-sql>

<https://www.codecademy.com/learn/learn-sql>

<https://www.datacamp.com/courses/intermediate-sql>

<https://www.datacamp.com/courses/joining-data-in-postgresql>

<https://mode.com/sql-tutorial/>