

More SQL Queries

The purpose of this assignment is to help you practice the following skills that are essential to your success in this course and in your professional life beyond school as a business analyst.

- Solve real-world problems using the skills that you have acquired.
- Use critical thinking to glean insights about your data.

Another purpose of this assignment is for you to possibly struggle and feel confused while you apply what you have learned in a slightly different context than what was provided in examples. This will allow you to internalize the use of the various techniques and develop your own approach for addressing problems. The purpose is NOT to make you struggle overmuch and hit your head against a brick wall. Work with your study group! If you don't know why something isn't working, ask me! If you are not sure why something is doing something other than you expected, ask me. I am here to help you learn although I do expect you to think about it and try before asking!

Notes about submitting your assignment:

More detailed information was in Assignment 2.

Be sure to save your document periodically. When you have finished the assignment, save the document as a PDF.

Submit the PDF to the assignment.

Work on this assignment on your own. You may not work with anyone else, including others in this class, family, personal friends, acquaintances, or co-workers. If you have a question, ask me.

ALL columns should have appropriate names. Abbreviated names are OK.

You will be using the AdventureWorks relational database for all queries.

1. Today is June 5, 2014. The Sales Manager wants to know how many road bikes were sold last month and for the same month last year. You know that the Product Subcategory name is "Road Bikes" and you only want to write one query to get the answer.
List, in this order, the year of the orders, the name of the months, and the total quantity sold, and the total revenue.
Your results should have two rows.

Paste your entire query into Word.

Use the Snipping Tool to capture the Results area of your query. Paste it into your Word document as Answer #1.

2. After reviewing the numbers provided above, the Sales Manager would like more information on a particular road bike – Product Number BK-R93R-48. How many are currently available for sale? List, in this order, the product name and the QtyOnHand.
There should only be one query and one row in your results.

Paste your entire query into Word.

Use the Snipping Tool to capture the Results area of your query. Paste it into your Word document as Answer #2.

3. The Sales Manager is now concerned that there will be enough product of this model on hand for the holiday season at the end of the year. They believe they can sell in excess of 200 during that period.
You need to produce a report listing the components that are used to manufacture this bicycle along with the QtyOnHand and QtyOnOrder of each component. There will be **14 rows** in the result. You should list these columns in this order - Component Name, QtyOnHand, QtyOnOrder. Sort the list by the Component Name.
Start with the Production.Product table. You have the product number.
The components are found in Production.BillOfMaterials.
Inventory is in Production.Inventory and component orders are in Purchasing.PurchaseOrderDetail.
You will also need Production.Product a second time.

Paste your entire query into Word.

Use the Snipping Tool to capture the Results area of your query. Paste it into your Word document as Answer #3.

4. Will there be a problem with the inventory? Why or Why not? If so, how will it be solved? Elaborate and use complete sentences. This answer must be your own thoughts..

Enter your answer into your Word document as Answer #4.

5. How many of the bikes, product number BK-R64Y-40 were sold in Nov/Dec 2013?
List, in this order, the product name, the Total#Sold, and the TotalRevenue.
You should have 1 row in your result.

Paste your entire query into Word.

Use the Snipping Tool to capture the Results area of your query. Paste it into your Word document as Answer #5.

6. Do you think that the Sales Manager is correct on the sales forecast? Base your answer on evidence. For example compare the growth between 2012 and 2013 or two other comparable time periods in 2013 and 2014. This must be your individual ideas and thoughts. Use complete sentences in your answer and **provide copies of all queries and results used.**

Paste your entire query into Word.

Use the Snipping Tool to capture the Results area of your query. Paste it into your Word document as Answer #6.

7. Which bicycles are the 3 highest sellers based on quantity in the first five months of 2014? List, in this order, the product name and the QtySold.
Your results should have 3 rows.

Paste your entire query into Word.

Use the Snipping Tool to capture the Results area of your query. Paste it into your Word document as Answer #7.

8. Which bicycles are the 3 highest sellers based on Revenue in the first five months of 2014? List, in this order, the product name and the Revenue.
Your results should have 3 rows.

Paste your entire query into Word.

Use the Snipping Tool to capture the Results area of your query. Paste it into your Word document as Answer #8.

9. Are the lists in 7 & 8 the same? What is the difference and why? Explain fully. Work on your own. Use complete sentences.

Enter your answer into your Word document as Answer #9.

10. What is the product name, revenue, total cost, profit, and profit margins (in this order) on each model of road bikes in the first five months of 2014?
The profit margin should be a percentage with 4 decimal places displayed. Sort the results with the largest profit margins at the top.
Do you think these margins are typical? Why or why not?

Paste your entire query into Word.

Use the Snipping Tool to capture the Results area of your query. Paste it into your Word document along with your answer to the question as Answer #10.

11. Submit your PDF to Assignment 11.