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DAD-220 7-1: Project Two

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1. Begin by writing SQL commands to **capture usable data** (which you have preloaded into Codio) **for your analysis**. Specifically, the product manager wants you to investigate and analyze the following:
   * **Analyze** the frequency of returns by state and describe your findings in your report.
   * **Analyze** the percentage of returns by product type and describe your findings in your report.  
     Text

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     **SELECT Collaborator.State AS STATE, COUNT(\*) AS RETURN\_FREQUENCY  
     FROM Orders INNER JOIN RMA ON Orders.OrderID = RMA.OrderID  
     INNER JOIN Collaborator ON Collaborator.CustomerID = Orders.CustomerID**  
       
     A picture containing text

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     **SELECT Collaborator.State AS STATE,  
     (COUNT(\*) \* 100 / (SELECT COUNT(\*) FROM Orders INNER JOIN RMA ON Orders.OrderID = RMA.OrderID)) AS RETURN\_PERCENTAGE  
     FROM Orders INNER JOIN RMA ON Orders.OrderID = RMA.OrderID  
     INNER JOIN Collaborator ON Collaborator.OrderID = RMA.OrderID  
     GROUP BY STATE  
     ORDER BY RETURN\_PERCENTAGE DESC;**

Text

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At first, the formatting was done incorrectly as seen above, so I changed one small piece of code at the end to make it output this:

Text

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**SELECT sku AS PRODUCT\_SKU, description AS PRODUCT\_DESCRIPTION, COUNT(\*) AS RETURN\_FREQUENCY  
FROM Orders INNER JOIN RMA ON Orders.OrderID  
GROUP BY PRODUCT\_SKU  
ORDER BY RETURN\_FREQUENCY DESC\G**

Text

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**SELECT sku AS PRODUCT\_SKU, description AS PRODUCT\_DESCRIPTION,  
(COUNT(\*) \* 100 / (SELECT COUNT(\*) FROM Orders INNER JOIN RMA ON Orders.OrderID = RMA.OrderID)) AS RETURN\_PERCENTAGE  
FROM Orders INNER JOIN RMA ON Orders.OrderID = RMA.OrderID  
GROUP BY PRODUCT\_SKU  
ORDER BY RETURN\_PERCENTAGE DESC\G**

1. In your report, **summarize your analysis of the data you’ve captured**. Include screenshots (See above) of the results of each query. When summarizing results, you may want to consider the following questions:
   * How does the data provide the product manager with usable information?

**This data provides the product manager with usable information such as product sale performance, which can show the number of returns for a product. This can help the product manager get an idea of which items are being returned frequently so they can adjust their product development or strategies. Reasons for returns could be that the product is defective or in an unsatisfactory condition.**

* + What are the potential flaws in the data that has been presented?

**In this case, there is a possibility of multiple orders, so Orders should have a “crow’s foot” that states there is a zero to many. For example) Orders ->0----||-RMA. Additionally, errors could lie on my end or from whoever entered the data into the database by incorrectly entering the number of returns.**

* + Are there any limitations on your conclusions, or any angles you haven’t considered?  
    **Limitations lie in determining exact dates that these returns were completed. It would be better to understand the time frame of these returns so we can know when they occurred. I would also like to view returns by city to obtain a better understanding.**

1. Clearly **communicate your findings** to stakeholders.
   * Make sure that all parts of your report are written in a way that very clearly explains the necessary information.

**It appears that there is a fair number of returns, being thousands of returns for each item that was sold. For example, the “Basic Switch 10/100/1000 BaseT 48 Port” had 8,422 returns all by itself. We will need to look further into reasons behind these products having such high return rates. It may also be necessary to adjust our business model to focus more thoroughly on creating quality products so that they are not returned as often. Quality is important in maintaining customers. Above contains an analysis of location, percentage, and frequency of returns as proof that we need to improve our product quality. This data is directly based on our customer’s orders and RMA data.**