# DAD 220 Project Two Template

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## RMA Report

Write a report to respond to the manager’s requests. In the report, you should complete the following actions:

* Summarize the data you’ve been working with.
* Identify key information that will help the company streamline operations.

Your report should explain your findings in a way nontechnical stakeholders can understand and use.

Use the steps below to capture the required data and produce the analysis report.

1. Begin by writing SQL commands to **capture** specific **usable data** for your analysis. You already preloaded the data you need into Codio.
2. Specifically, the product manager wants you to complete the following analysis:
   1. **Analyze** the number of **returns by state** and describe findings to include in your report.

A screen shot of a computer

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A screenshot of a computer program

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The first image shows a SQL query that counts the number of returns for each state. Based on the results in the second image, it appears Massachusetts, Arkansas, and Oregon have the highest number of returns. On the other hand, South Carolina, New Jersey, and Colorado seem to have the fewest returns.

COMMAND USED:

SELECT Customers.State, COUNT(\*) AS NumberOfReturns

FROM Customers INNER JOIN Orders ON Customers.CustomerID = Orders.CustomerID

INNER JOIN RMA ON Orders.OrderID = RMA.OrderID

GROUP BY State

ORDER BY NumberOfReturns DESC;

* 1. **Analyze** the percentage of **returns by product type** and describe findings to include in your report.

A screenshot of a computer program

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The first image displays the total number of returns for each item. The second image shows the percentage each item contributes to the total returns. It appears that BAS-48-1 C (22.04%), ENT-48-40F (16.28%), and ENT-48-10F (11.41%) are the most frequently returned items.

COMMANDS USED:

SELECT SKU, COUNT(\*) AS NumberOfReturns

FROM Orders INNER JOIN RMA ON Orders.OrderID=RMA.OrderID

GROUP BY SKU

ORDER BY NumberOfReturns DESC;

SELECT SKU, COUNT(\*) \* 100 /(SELECT COUNT(\*) FROM RMA) AS Percentage

FROM Orders INNER JOIN RMA ON Orders.OrderID=RMA.OrderID

GROUP BY SKU

ORDER BY Percentage DESC;

1. Write a report to clearly **summarize** your RMA **data analysis** for stakeholders. When you summarize the results, consider the following questions:
   1. How does the data provide the product manager with usable information?
   2. What are the potential flaws in the data that has been presented?
   3. Are there any limitations on your conclusions or any other ways of looking at your findings that you haven’t considered? Clearly communicate your findings to stakeholders.

By analyzing return trends by state, product managers can gain valuable insights and make data-driven decisions using the information provided above. High return rates in states like Massachusetts, Arkansas, and Oregon could signal product issues, marketing shortcomings, or even unique customer preferences in those regions. Additionally, states with lower return rates, such as South Carolina, New Jersey, and Colorado, might indicate a strong product-market fit.

One of the potential flaws in the data analysis is that it may be limited by a lack of context. The timeframe for this data is unclear. Is it a one-month snapshot or a year's worth of information? Analyzing a full year of data would provide the product manager with a more comprehensive picture. Additionally, the data lacks the reason for returns, but we can address this with another database query. Finally, external factors like competitor marketing strategies and presence could also influence return rates and should be considered for a complete understanding.

While this analysis provides a starting point for understanding regional return variations, the limitations of state-level data need more investigation. To get a better perspective, the analysis should include segmented returns by product category. This would allow us to identify if specific items are driving the high return rates in certain regions. Additionally, adding common return reasons data provides valuable insights into potential product issues or regional marketing inefficiencies. By addressing these limitations and conducting a more comprehensive analysis, we can find the root causes of high return rates and develop solutions to improve customer satisfaction and reduce overall return volume.