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Project Two

08/13/2023

**Analyzing Databases**

Our data analytics team has conducted an analysis of return merchandise authorizations (RMAs) that have been received on behalf of Quantigration’s product manager. We constructed a database and then loaded it with available data sets covering Quantigration’s customers, orders, and RMA lists. We ran some queries(found at the end of this document) against this data to provide some insight into Quaternation’s RMAs. Query 1 produces a table that displays the number of returns by state. Query 2 displays the percentage of returns by product type, as defined by a unique product number (SKU).

This data provides some interesting and useful data for Quantigration’s product manager and their team. Query 1 shows that there is a relatively high number of returns in relation to the number of orders; in some cases even more returns than orders. It can also be seen that the number of returns is relatively even across all states. Query 2 shows that the percentage of returns is very high among nine specific SKUs: ranging from 97% to 99%.

The data set is limited so it is important to be aware of potential flaws. For instance, the number of unique orders in Query 1 does not specify if there is perhaps multiple quantities of items on an order that then results in multiple RMAs per order. Query 2 does not account for a time frame. This means it cannot be said for certain if items are being returned after a day or a year or more. So in drawing conclusions from this data it is important to not assume too much.

There are some limitations to the conclusions we can draw from this data but it does give us some new insight into Quantigrations’s RMAs. We can see that returns are fairly even in all states so it is not likely that region is a factor. While we can’t say exactly why the nine items on the RMA list have such a high return percentage, we can certainly conclude that it is something that warrants further analysis. Quantigration should start collecting and considering data about the specific reason for a return as well as the time from the purchase of an item until its return to gain further insight into the reason behind the high return percentage. Items returned right away may reflect may indicate an overall defective or improperly marketed product. Items returned after several years may need to be subjected to a warranty to reduce late returns that may be harming revenue. Upon further investigation, it may also be advisable for Quantigration to consider the possibility of unwitting or malicious actors abusing their return policy.

In conclusion, it is our findings that Quantigration is right to be looking more closely at their returns numbers and policies and that the issue certainly requires a deeper inquest. It is our recommendation that the high percentage of returns should be addressed with a continued analysis of return policies as well expanded review of product quality assurance(QA) measures.

Query 1:

Number of orders and returns sorted by state.

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Query 2:

Percentage of returns organized by product sku.

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