# DAD 220 Analysis and Summary Template

Replace the bracketed text in this template with your responses and any supporting screenshots. Then submit it to the Module Five Activity for grading and feedback. Rename this document by adding your last name to the file name before you submit.

1. **Analyze the data** you’ve been provided with to **identify themes**:
   1. Which parts are being replaced most?

A screenshot of a computer program

Description automatically generated

Explanation: Using the SELECT query above we can see that the parts that are being replaced the most are “Fule” tanks (95) followed by tire repairs (74), and tire replacement (66).

Is there a region of the country that experiences more part failures and replacements than others?

* + 1. Identify region:

A screenshot of a computer program

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Explanation: With the utilized query we can see that Midwest has the highest number of repairs at 260. Followed by Northeast at 208, Southeast at 142, West at 66, and Southwest at 63.

How might the fleet maintenance team use the information to update its maintenance schedule?

* 1. The fleet maintenance team can leverage this valuable information in multiple ways to enhance its maintenance schedule and resource allocation. By analyzing the repair data for different regions, the team can make informed decisions to prepare and allocate resources effectively. This proactive approach can have several significant benefits: Firstly, region-specific resource allocation allows for better preparedness, ensuring that regions with consistent high repair demands, such as the Midwest, have the necessary manpower and parts readily available to minimize downtime. Secondly, workforce training and hiring can be strategically planned, optimizing staff skill sets to match regional needs. Thirdly, efficient budget allocation based on repair data helps control costs. Moreover, this approach enhances overall fleet reliability, reduces breakdowns, and boosts operational efficiency by scheduling maintenance tasks effectively.
     1. Which parts are being replaced most due to corrosion or rust?

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Explanation: The part replaced most by corrosion or rust is the wheel arch with 55 repairs. Followed by the fender with 54 repairs and the rocker panel with 53 repairs.

Which parts are being replaced most because of mechanical failure or accident, like a flat tire or rock through the windshield?

A screenshot of a computer repair program

Description automatically generated

Explanation: The parts replaced the most because of mechanical failure or accidents are tire repairs (74), tire replacements (66), and windshield replacement (63).

1. **Write a brief summary of your analysis** thattakes the information from Step 1 and presents it in a way that nontechnical stakeholders can understand.
   1. After pulling all the data I can conclude there are some aspects that need our attention. First, the Midwest region has the most repairs in the country with 260 repairs. Knowing this information, the maintenance team should prepare in advance to tackle these repairs. Secondly, the fuel tank is the most frequently replaced part. This shows that improvements need to be done for this part or a countermeasure needs to be presented to lower the replacements of this part. Lastly, the team should work on a preventative measure for dealing with corrosion and rust o car parts. More specifically on the wheel arch, the fenders, and the rocker panels.
2. **Outline the approach** that you took to conduct the analysis.
   1. What queries did you use to identify trends or themes in the data?

For identifying trends in the data I utilized union to find all the information from the regions. I also utilized the like statement (WHERE UPPER(reason) LIKE '%FLAT%' OR UPPER(reason) LIKE '%CRACK%') to find the exact type of repair I was looking for.

* 1. What are the benefits of using these queries to retrieve the information in a way that allows you to provide valuable information to your stakeholders?

There are many benefits of using these queries. Firstly, the queries can easily allow you to find any specific thing and identify all its information with ease. Secondly, the queries allow for easy planning based on current reports which can help with time management, accuracy, budgeting, and more. Lastly, following with planning analysts can utilize all the collected data to find trends in the business and make recommendations to stakeholders.

1. **Explain how the functions in the analysis tool** allowed you to organize the data and retrieve records quickly.

The functions within the analysis tool greatly facilitated organization and data retrieval. It proved to be quick and efficient, provided that the correct syntax was used. Some of the functions that enabled me to organize my data included the 'SELECT' function, which allowed me to specify the data fields I wanted to retrieve. The 'GROUP BY' function helped me group the data according to specified criteria. The 'COUNT' function provided accurate totals for the elements I queried. With the 'ORDER BY' function, I could arrange the data as per my request; in this assignment, I used descending order. Lastly, the 'UNION' function allowed me to combine data from multiple queries or, in this case, from multiple regions.