# 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?

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The Fule Tank is being replaced the most as it has 95 repairs.

I did this problem by changing the Repair to Repairs by using the Alias AS which only lasts during the duration of the query. I then did the same thing with count(\*) changing it to NUMBER. I than grouped the Repairs to get all different Repairs in the table and ordered them in counting, from descending order.

* 1. Is there a region of the country that experiences more part failures and replacements than others?
     1. Identify region:

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The Midwest has the most reasons for replacements.

* + 1. How might the fleet maintenance team use the information to update its maintenance schedule?

They would schedule more maintenance teams in the Midwest, than descend from there by the Northeast, than the Southeast, than the West, and Southwest would have the least. There would be more people scheduled in the Midwest than any other Region for how many repairs they get which is 228 repairs. For this problem I had to use the UNION button to make sure I could add all the SELECT statements together to get the results of each region. I did this by:

SELECT ‘Southwest’ AS Region, count(\*) AS Repairs

FROM Parts\_Maintenance

WHERE State in (listed the states in each Region)

UNION

And repeated until all five Regions were done.

* 1. Which parts are being replaced most due to corrosion or rust?

The wheel arch is being replace most by corrosion or rust which is 55.

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* 1. Which parts are being replaced most because of mechanical failure or accident, like a flat tire or rock through the windshield?
     1. The most parts being replaced are tire repairs which there are 74 repairs logged in Parts\_Maintenance.

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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. The information gathered in step 1 is the most common types of repairs that Parts\_Maintenance must repair most often starting from descending order. Starting with fuel tank is the most common type of repair at 95. The least common repair is dent repair rear at 25. So, fuel tanks are almost 3 times more likely to be repaired than dent repair rear.
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?

I used the SELECT statement to specify which columns I wanted to search through for values, which was mostly repair and count(\*). Which count(\*) searches for number of rows that match my WHERE statement.

I used mostly GROUP BY Repair to get all different types of repairs and then I used ORDER BY DESC to have the highest number of repairs on the top and lowest on the bottom. Also, I used the WHERE clause for column name to then use ‘in’ operator to specify the value I was looking for in repairs like corrosion or rust. I used the LIKE operator to search for patterns in the WHERE clause by:

WHERE Repair LIKE ‘tire%’ OR ‘windshield%’. This LIKE operator than searches the Repair column for anything like tire repair, tire replacement, or windshield replacement.

* 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?
     1. The benefits of using operators LIKE, in, ORDER BY, GROUP BY are by using these we don’t have to do individual searches for one specified item in a column like tire repair. Instead, we can use WHERE Repair LIKE ‘tire%’ to search all rows associated with name tire. Providing a whole list in Repair we can do by GROUP BY Repair and then we can even order then by ascending order or descending order. This will provide stakeholders with faster information from better query searches and provide a way for them to search 805 rows in matter of seconds instead of going one row at a time using a person to find information which has a possibility of human error.

1. **Explain how the functions in the analysis tool** allowed you to organize the data and retrieve records quickly.
   1. I organized data by GROUP BY column name and organized even more by ORDER BY descending order. I was also able to search for words in repair like corrosion, rust by using the in operator. Then, use LIKE operator to search for values in the rows of a column LIKE ‘tire%’ OR operator ‘windshield%’ in the Repair table. I also used the UNION operator which adds SELECT statements together. I used UNION for the Southwest, Northeast, etc... to get a full table of regions with most repairs and again used ORDER BY descending order from highest number to lowest number. These tools allowed me to organize data by searching for certain words, words associated with repairs, order their values least to greatest, and group by column name, to group all rows in that column.