

Feature: Car Health Rating

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Major Positives

1. Clear step by step flow of the sequence diagram showing all layers and what each layer does. Also, more details are provided since the class diagrams were also included to provide a better understanding of the features.
2. Enough detail is provided in the sequence diagram that it will be easier for debugging and the feature seems robust enough that it can handle errors. Such as giving success cases of if they try to use the feature if they don't have 10 valid logs or if they have no valid vehicle profiles to retrieve.
3. Clear use of SQL and what is being returned or passed to each layer in the sequence diagram. Also showing that even errors return a response to the user showing the robustness of the feature.

Major Negatives

1. The CHR-RetrieveVehicleProfiles cases seem unnecessary since there is already a user case in Vehicle Profile feature that retrieves vehicle profiles. Therefore, it is unnecessary to create this service since another service already exists that retrieves vehicle profiles.
2. The CHR-RetrieveVehicleProfiles_NoVehicle and CHR_GiveRank_LessThan10Logs seem to do the same thing with the only difference being that one is for one having less than 10 logs and the other having no logs at all. Both users' stories can be combined into one that allows for both conditions and the one with less than 10 logs should already include one that has none.
3. This is an oversight on the BRD but only state we will give them points on the events, but we never state how much weight each point holds or what is the maximum of point that could be gained. Also, what if the user only performs maintenance on the same 1 or 2

parts over and over. Will the points still be given to them or will they be overwritten if it the same part.

Unmet Requirements

All requirements met.

Design Recommendations

This feature can be combined into just one sequence diagram since the first user story simply checks if it can go ahead to the second user story to calculate the points. This way it makes it simpler to have it all in one place instead of doing multiple sequence diagrams for each user story. This means it will only need multiple success stories of one user story. First, it first can call the vehicle profile retrieval service from Vehicle Profile feature to list, the user's vehicle profiles. Then it can check if it has more than 10 maintenance events and if it does it goes ahead a calculates each event and outputs the points for the user can see. The only other pass case that will be needed is if the vehicle profile does not contain more than 10 maintenance events then it just tells the user that the vehicle profile cannot be calculated because it contains insufficient maintenance events.

Test Recommendations

One test recommendation is to see if points are being assigned correctly following the point table. This way a more accurate rating can be given to the vehicle profile and shows the user a breakdown of their rating. Another is if there are more than 10 Maintenance events to check that

it is getting the most recent events by checking the date of the event and showing the whole event list to compare that they are in order by date.