The Background

Aaron's Delivery Service was founded in 2012. They are a 3rd party delivery service that targets smaller businesses. They started with 2 delivery vehicles. As of 2021, they now operate 18 vehicles. By 2019, there were 9 vehicles running multiple deliveries per day. They grew to 11 vehicles by the end of the year. At this point, the owner decided to move away from basic spreadsheets and purchase a tool to manage the costs of his fleet. The owner decided on Aaron's Fleet Management Cost Software and had the tool implemented.

The Scope Of Work

After discussions, the owner decided on a few metrics he wanted to visualize. These included: Fuel costs, services costs, monthly payments of new vehicles, active vehicles, mileage, and which vehicles were most costly.

The Technical Work

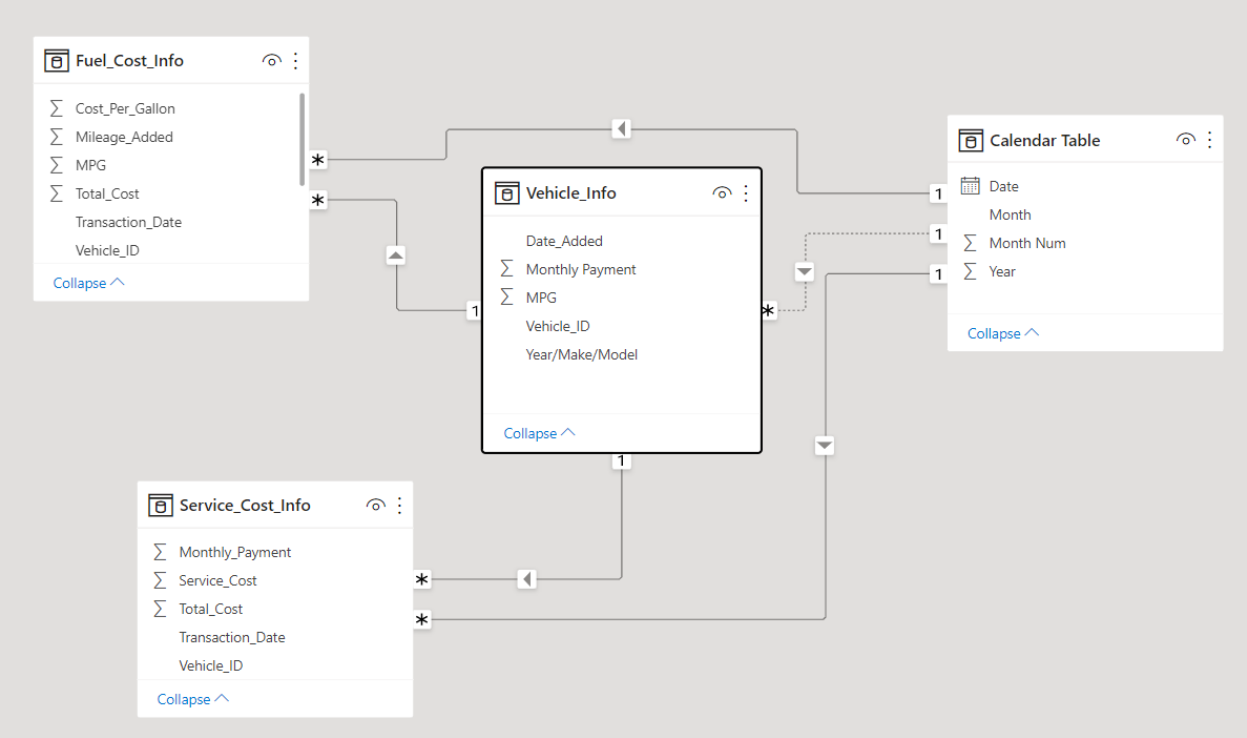
For this project, an Excel file was created to track vehicles, fuel costs, and service costs. Mileage was randomly generated for each vehicle per month. Fuel costs were generated based off US averages during the particular month. Service costs were randomly generated to include things like oil changes, tire changes, and a few big maintenance charges. All costs were compiled into a total at the end of each month. See the data below.

	A	B	C	D	E
1	Vehicle_ID	Year/Make/Model	Date_Adde	Monthly P	MPG
2	VH0001	2016 Ford E-350 Super Duty 01	1/1/2019	0	9
3	VH0002	2016 Ford E-350 Super Duty 02	1/1/2019	0	9
4	VH0003	2016 Ford E-350 Super Duty 03	1/1/2019	0	9
5	VH0004	2017 Ford Transit Connect 01	1/1/2019	0	23

	A	B	C	D	E	F
1	Transaction_Date	Vehicle_	Mileage_Added	Cost_Per_G	MPG	Total_Cost
2	1/31/2019	VH0001	2061	$2.25	9	$515.25
3	1/31/2019	VH0002	1947	$2.25	9	$486.75
4	1/31/2019	VH0003	1732	$2.25	9	$433.00
5	1/31/2019	VH0004	1456	$2.25	23	$142.43
6	1/31/2019	VH0005	1321	$2.25	23	$129.23
7	1/31/2019	VH0006	1567	$2.25	23	$153.29
8	1/31/2019	VH0007	1746	$2.25	23	$170.80

	A	B	C	D	E
	Transaction_	Vehicle_	Service_	Monthl	Total_C t
2	1/31/2019	VH0001	$ -		$ -
3	1/31/2019	VH0002	$ -		$ -
4	1/31/2019	VH0003	$ -		$ -
5	1/31/2019	VH0004	$ 75.00		$ 75.00
6	1/31/2019	VH0005	$ 75.00		$ 75.00
7	1/31/2019	VH0006	$ 75.00		$ 75.00
8	1/31/2019	VH0007	$ 75.00		$ 75.00
9	2/28/2019	VH0001	$ 90.00		$ 90.00
10	2/28/2019	VH0002	$ 90.00		$ 90.00
11	2/28/2019	VH0003	$ 90.00		$ 90.00
12	2/28/2019	VH0004	$ -		$ -
13	2/28/2019	VH0005	$ -		$ -
14	2/28/2019	VH0006	$ -		$ -
15	2/28/2019	VH0007	$ -		$ -
16	3/31/2019	VH0001	$ 700.00		$ 700.00

The data was then imported into Power BI and the star schema model below was created.



In a real business scenario, this data would be held in a SQL Database. We would connect our Power BI model to the database via a gateway. Then select the tables and columns needed for analysis and build the star schema show above.

Project complete.