**Problem Statement**

**Company Information**

An automobile consultancy firm “*Mycar* *Dream*” provides assistance to its clients in making appropriate car deals, based on their requirements.

Based on various market surveys, the firm has gathered a large dataset of different types of cars and their attributes across the world. The business model of the company is solely based on consumer interest, aiming to provide the most appropriate car to their clients and hence maximise the customer satisfaction.

**Problem Statement:**

Nowadays, the automobile market has become very dynamic as the buyers have varied preferences. Customers look for various features (brand value, mileage, model\_year etc) in their dream car. In order to fulfil it's customer requirement, *Mycar* *Dream* wants to automate the process of predicting the car mileage which fits the customer preferences, based on the dataset of car features and attributes obtained by market surveys.

 The data set contains the following details about cars:

The aim here is to predict the city-cycle fuel consumption in miles per gallon, in terms of 3 multivalued discrete and 5 continuous attributes. Below is the data dictionary to be used for the dataset.

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| **Data Dictionary** | | |
| **Sl.No.** | **Variables** | **Description** |
| 1 | Mpg | Mileage per gallon (continuous variable) |
| 2 | Cylinders | Number of cylinders in car (multi-valued discrete) |
| 3 | Displacement | Volume of fuel inside the engine i.e size of engine (continuous ) |
| 4 | Horsepower | picks up of the car (continuous) |
| 5 | Weight | Weight of car (continuous) |
| 6 | Acceleration | Acceleration of car (continuous) |
| 7 | Model year | Year when the car launched (multi-valued discrete) |
| 8 | Origin | Origin of car (multi-valued discrete) |
| 9 | Car name | Name of car company (unique for each instance) |