12/2/21, 12:28 AM 02 Describe Data

```
In [1]:
           import pandas as pd
In [16]:
           car_sales = pd.read_csv("data/car-sales.csv")
           car_sales
Out[16]:
             Make Colour Odometer (KM) Doors
                                                      Price
            Toyota
                     White
                                   150043
                                                   $4,000.00
             Honda
                                    87899
                                                   $5,000.00
                       Red
             Toyota
                      Blue
                                    32549
                                               3
                                                   $7,000.00
              BMW
                      Black
                                    11179
                                               5
                                                  $22,000.00
             Nissan
                     White
                                   213095
                                                   $3,500.00
             Toyota
                     Green
                                    99213
                                                   $4,500.00
            Honda
                      Blue
                                    45698
                                                   $7,500.00
            Honda
                      Blue
                                    54738
                                                   $7,000.00
                     White
             Toyota
                                    60000
                                                   $6,250.00
             Nissan
                     White
                                    31600
                                                   $9,700.00
 In [4]:
           # To get the data type of each column (String are considered as objects)
           car_sales.dtypes
          Make
                            object
 Out[4]:
          Colour
                            object
          Odometer (KM)
                             int64
          Doors
                             int64
                            object
          Price
          dtype: object
 In [5]:
           # To show the column names
           car_columns = car_sales.columns
           car_columns
          Index(['Make', 'Colour', 'Odometer (KM)', 'Doors', 'Price'], dtype='object')
 Out[5]:
 In [6]:
           # To get the range of index values (For rows)
           car sales.index
          RangeIndex(start=0, stop=10, step=1)
 Out[6]:
In [15]:
           # To get count, mean, std, min , . . . of numeric columns
           # Price is a string field. So It wont display
           car_sales.describe()
Out[15]:
                 Odometer (KM)
                                   Doors
```

Odometer (KM)

Doors

```
count
                     10.000000
                               10.000000
                   78601.400000
                                4.000000
          mean
                  61983.471735
                                0.471405
            std
           min
                  11179.000000
                                3.000000
           25%
                  35836.250000
                                4.000000
           50%
                  57369.000000
                                4.000000
           75%
                  96384.500000
                                4.000000
                 213095.000000
                                5.000000
           max
In [17]:
           # To display the details of the DataFrame (Ex: column names, data types, number of elem
          car sales.info()
          <class 'pandas.core.frame.DataFrame'>
          RangeIndex: 10 entries, 0 to 9
         Data columns (total 5 columns):
               Column
                              Non-Null Count Dtype
                              -----
                                               ____
           0
               Make
                              10 non-null
                                               object
           1
                              10 non-null
                                               object
               Colour
                                               int64
           2
               Odometer (KM) 10 non-null
           3
               Doors
                              10 non-null
                                               int64
               Price
                              10 non-null
                                               object
          dtypes: int64(2), object(3)
         memory usage: 528.0+ bytes
In [21]:
          # To display sum of each column (string columns will be concatenate)
          car sales.sum()
         Make
                           ToyotaHondaToyotaBMWNissanToyotaHondaHondaToyo...
Out[21]:
                               WhiteRedBlueBlackWhiteGreenBlueBlueWhiteWhite
          Colour
         Odometer (KM)
                                                                        786014
         Doors
                                                                            40
          Price
                           $4,000.00$5,000.00$7,000.00$22,000.00$3,500.00...
         dtype: object
In [25]:
          # Display sum of Doors colums only
          car_sales["Doors"].mean()
Out[25]:
In [24]:
           # Each column in DataFrame are Series.
           # To get mean of a Series (Same as above)
          car_prices = pd.Series([1000, 2000, 3000])
          car prices.sum()
          6000
Out[24]:
```

In [26]:	<pre># To get the number of rows len(car_sales)</pre>
Out[26]:	10
In []:	