In [1]:
```python
# Name: sanket jagrut
# Rollno: 823 [H1]
# PRN:202201060040



import pandas as pd

# Read the dataset from a file
df = pd.read_csv('dataset#2.csv')

# a. Find the most expensive car
most_expensive_car = df.loc[df['Price_in_thousands'].idxmax()]

# b. Calculate average sale of all cars
average_sale = df['Sales_in_thousands'].mean()

# c. Find the total number of passenger cars
total_passenger_cars = df[df['Vehicle_type'] == 'Passenger'].shape[0]

# d. Find the car with the maximum engine size
car_with_max_engine = df.loc[df['Engine_size'].idxmax()]

# e. Find the car with the minimum horsepower
car_with_min_horsepower = df.loc[df['Horsepower'].idxmin()]

# f. Find all passenger cars manufactured by 'Ford'
ford_passenger_cars = df[(df['Manufacturer'] == 'Ford') & (df['Vehicle_type']

# g. Convert "Width" column values into integer values
df['Width'] = df['Width'].astype(int)

# Display the results
print("Most Expensive Car:")
print(most_expensive_car)
print("\nAverage Sale of All Cars:", average_sale)
print("\nTotal Number of Passenger Cars:", total_passenger_cars)
print("\nCar with Maximum Engine Size:")
print(car_with_max_engine)
print("\nCar with Minimum Horsepower:")
print(car_with_min_horsepower)
print("\nPassenger Cars Manufactured by 'Ford':")
print(ford_passenger_cars)
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Most Expensive Car:
Manufacturer            Audi
Model                     A8
Sales_in_thousands         1
Vehicle_type       Passenger
Price_in_thousands      62.0
Engine_size              4.2
Horsepower               310
Wheelbase              113.0
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Width                      74.0
Length                    198.2
Curb_weight               3.902
Fuel_capacity              23.7
Fuel_efficiency              21
Latest_Launch         2/27/2012
Name: 2, dtype: object


Average Sale of All Cars: 103.6896551724138


Total Number of Passenger Cars: 20


Car with Maximum Engine Size:
Manufacturer              Dodge
Model                   Durango
Sales_in_thousands          101
Vehicle_type                Car
Price_in_thousands        26.31
Engine_size                 5.2
Horsepower                  230
Wheelbase                 115.7
Width                      71.7
Length                    193.5
Curb_weight               4.394
Fuel_capacity              25.0
Fuel_efficiency              17
Latest_Launch         6/27/2012
Name: 16, dtype: object


Car with Minimum Horsepower:
Manufacturer          Chevrolet
Model                     Metro
Sales_in_thousands           22
Vehicle_type          Passenger
Price_in_thousands        9.235
Engine_size                 1.0
Horsepower                   55
Wheelbase                  93.1
Width                      62.6
Length                    149.4
Curb_weight               1.895
Fuel_capacity              10.3
Fuel_efficiency              45
Latest_Launch         4/13/2012
Name: 8, dtype: object


Passenger Cars Manufactured by 'Ford':
   Manufacturer     Model  Sales_in_thousands Vehicle_type  Price_in_thousands
\
18         Ford    Escort                  70    Passenger              12.070
19         Ford   Mustang                 113    Passenger              21.560
20         Ford   Contour                  35    Passenger              17.035
21         Ford    Taurus                 246    Passenger              17.885

    Engine_size  Horsepower  Wheelbase  Width  Length  Curb_weight  \
18          2.0         110       98.4   67.0   174.7        2.468
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19          3.8         190       101.3   73.1    183.2         3.203
20          2.5         170       106.5   69.1    184.6         2.769
21          3.0         155       108.5   73.0    197.6         3.368

        Fuel_capacity   Fuel_efficiency  Latest_Launch
18          12.7                    30      3/31/2012
19          15.7                    24      1/31/2012
20          15.0                    25      8/20/2012
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