# **Chapter 07 File IO**

## Objective

In this lab you'll open and read a file containing data from a few car manufacturing companies.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Jan 2019** | **Feb 2019** | **Mar 2019** | **Apr 2019** | **May 2019** | **Jun 2019** | **Jul 2019** | **Aug 2019** |
| **Ford Motor Company** | 16,629 | 10,390 | 40,755 | 18,074 | 19,892 | 22,049 | 17,049 | 10,764 |
| **Volkswagen UK** | 13,224 | 7,960 | 38,335 | 15,161 | 15,737 | 20,474 | 15,183 | 11,334 |
| **Mercedes-Benz UK** | 12,249 | 6,088 | 33,536 | 11,739 | 14,431 | 14,947 | 12,056 | 5,040 |
| **Vauxhall Motors** | 12,250 | 4,905 | 37,769 | 10,639 | 13,461 | 15,540 | 10,398 | 4,864 |
| **BMW** | 9,553 | 6,870 | 30,330 | 10,868 | 12,415 | 19,985 | 9,198 | 4,853 |

We've stored the above info into a partial CSV (comma separated values) format file called ***carSale.csv*** as seen below.  
  
Ford Motor Company

16629,10390,40755,18074,19892,22049,17049,10764

Volkswagen UK

13224,7960,38335,15161,15737,20474,15183,11334

Mercedes-Benz UK

12249,6088,33536,11739,14431,14947,12056,5040

Vauxhall Motors

12250,4905,37769,10639,13461,15540,10398,4864

BMW

9553,6870,30330,10868,12415,19985,9198,4853

## Instructions

Your task is to read the data and display the following stats:

1. Sum of cars sold in each month.
2. Total yearly sales by each manufacturer.

*For more instructions view the next page.*

\*\*\* End \*\*\*

The result will look like:

63905

36213

180725

66481

75936

92995

63884

36855

Grand total: 616994

## Step by step

1. Create two Lists as:

companies = []

sales = []

1. Read all the lines from carSale.csv file
2. Loop through the resulting lines and place companies into the companies List (using the append() method) and then place the data line into the sales.

**Tip 1:** you will need to go through the lines that you've read in steps of 2 like:  
for x in range(0, len(lines),2):

**Tip 2:** you will need to make a numeric List out of the sales data line using code like

data = line.strip().split(',')

sales.append(list(map(int,data)))

1. Now that you've all the data in Lists you can do the calculations