



## Python Assessment

Value Inc. is a retail store that sells household items all over the world in bulk. At the moment, they store their data in a csv sheet called transaction.csv

You can download the transaction.csv file here:

<https://www.dropbox.com/s/6vrq4nq7bs750ys/transaction.csv?dl=0>

The transaction.csv file stores Value Inc transactions for a small period of time. Each row in this file should represent a unique transaction. Customers usually buy items in bulk and Value Inc captures the selling price, cost price, number of items bought and other details in this csv file.

You are required to create a Python script and perform the following:

1. Import the .csv file as a dataframe and provide a summary of the data. *You can use something like the pandas describe() method.*
2. Create an additional column in the dataframe called CostPerTransaction. The formula for CostPerTransaction is the following:  
 $\text{CostPerTransaction} = \text{Number of Items the Customer has Bought} \times \text{Cost Price of the Item}$
3. Using similar logic, create an additional column in the dataframe called SalesPerTransaction. This should show the Selling Price of Each transaction.
4. Create another additional column in the dataframe called ProfitPerTransaction. This should show the Profit of Each transaction.
5. Round the ProfitPerTransaction column to the nearest whole number
6. In the transaction.csv file, the dates are split into 3 separate columns: Day, Month and Year. Combine these 3 columns to create a new date column in the format of "day-month-year" i.e 2-July-2019
7. Change the ItemDescription column in the dataframe to lowercase
8. The ClientKeywords column should ideally be split into 3 different columns in the dataframe:
  - a. ClientAge (Example: Senior, Middle Age, Adult)
  - b. ClientType (Example: Solo Entrepreneur, Corporation, Small Business)
  - c. LengthofContract (Example: New Client, 2-5 Year Client, Loyal Client)
9. You can drop the ClientKeywords column now that it's been split.
10. **Export your final dataframe into a csv and attach it as part of your assessment answers. Please attach your python script as well and return it to [kim.mccallum@vantagedata.co.za](mailto:kim.mccallum@vantagedata.co.za)**

