

**Practice makes your coding skill perfect. So, whenever you are given an exercise, please try and practice it**

**Remember that computer coding skills need a systematic approach. Therefore, every week's learning is built on the current week and previous week learning.**

### **Lab 10- Python Pandas**

Task 1: Read and manipulate CSV data using the Python **Panda library**

- Read the Cars.csv file
  - View data
  - Display the number of columns and rows
  - Check if there are missing or empty cells.
  - Replace the missing values of each column with the mean value of this column.
  - Replace the missing values of each column with the median value of this column.
  - Print the Cumulative product of values.
  - Save the min, max, sum, std and median of each column in a dictionary.
  - Print the summary statistics of the data.
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### **Lab 10- Python Matplotlib**

Task 2: Visualise the CSV data using the Python Matplotlib library

- Read the Cars.csv file
- Plot the lines of all columns, e.g., one line for each column
- Plot **mpg** vs **cyl**
- Plot **gear** vs **carb**
- Plot the lines of all columns using different colors and shapes (example of shapes are 'o', '.', ',', 'x', '+', 'v', '^', '<', '>', 's', 'd')
- Create the histogram of all columns.