IT 166 Lab 13

In this lab, we will analyze Apple's stock price based on a dataset from a CSV file.

Objectives

- Be able to load data into a Pandas DataFrame from a CSV file
- Be able to apply pandas mathematical and statistical methods to analyze the data in a DataFrame

Preparation

- Launch the Jupyter notebook.
- Rename the notebook page as “Lab13”

Please finish the following taskes

0. Make sure the CSV file (AAPL.csv) is on the current working directory.

1. Load data from AAPL.csv to a pandas dataframe. Display the first three rows.

2. Change the index to the column "Date"

3. For each year contained in the index, create a separate dataframe. For example, create a dataframe df_2017 to contain all stock prices in 2017; and the same for 2018, 2019, 2020, 2021, 2022.

4. Find the correlation between the daily highest and lowest stock prices.

5. Find the correlation between each pair of columns.

6. Find the mean, highest, lowest values for each column.

7. Find which days the highest and the lowest values occurred.