Montpellier Business School

Team project task

Note: Please answer all questions and hand in your source codes, results, and report.

(10 pts) Q1.

Insecure passwords have caused 80 percent of all data breaches, resulting in financial losses for both businesses and consumers.

(5 pts) (A) If the password is recognized as secure if and only if it satisfies both the following requirements,

1. at least 9 characters, and
2. at least 1 uppercase letter.

Please write a Python code to implement a password checker that will check any string entered by the users. The code can remind the users of the validity of the password. If the password is valid, then output valid. Otherwise, the code should indicate the specific error for the password.

(5 pts) (B) Continue with (A), the security level of a password can be enhanced by increasing the requirements of a password. Please write a Python code to implement an advanced password checker that verifies the password satisfies all the following requirements,

1. at least 9 characters,
2. at least one uppercase letter, and
3. at least one lowercase letter.

Please write a Python code to implement a password checker that will check any string entered by the users. The code can remind the users of the validity of the password. If the password is valid, then output valid. Otherwise, the code should indicate the specific error for the password.

(10 pts) Q2. Descriptive analysis of data is essential for business analytics. Please work with the wine dataset, Wine.xlsx

- Detail information about each column
    - country: string
    - land: string
    - province: string
    - region_1: string
    - winery: string
    - year: string
    - description: string
    - points: integer
    - price: integer
    - title: string
    - variety: string

For questions A to E, please hand in all source codes, report and the results.

(2 pts) A. Please load the dataset and show the last 50 records. <u>Please attach the screenshot to the report.</u>

(2 pts) B. Top 5 Bordeaux wineries are Château Margaux, Château Latour, Château Lafite Rothschild, Château Cheval Blanc and Château Mouton Rothschild. Please find the wine produced by these 5 wineries and export them in a file named as Q2B_Margaux.xlsx, Q2B_Latour.xlsx, and so on and so forth.

(2 pts) C. Continue with A, please compute the descriptive statistics (i.e., min, max, mean, 25 quantiles, and 75 quantiles) of the wine price of these five wineries and export the results in a file named Q2C_Margaux.xlsx, Q2C _Latour.xlsx and so on and so forth.

(2 pts) D. Burgundy is also well-known for its wine. Please compute the descriptive statistics as you have done in the previous question of prices and points from Burgundy and export the result to Q2D_Burgundy.xlsx

(2 pts) E. New-world wines are the wines outside Europe, such as Argentina, Canada, South Africa, etc. Please calculate the average price and points of wines for each country of new-world wine and export to Q2E_Argentina.xlsx and so on and so forth.