THIS WORK IS FOR INDIVIDUAL STUDENT

(An Informal Part of Assignment One)

(Informal Part 2 of Quiz One will be in Next Class on Tue March 25)

DUE, HANDWRITTEN ONLY, IN CLASS TUE MARCH 25, 2025

CONCEPT TOPICS: READING FROM AND WRITING TO TEXT AND CSV FILES:

- READ FROM PF TEXTBOOK
- USE CHATGPT TO GENERATE TUTORIALS

Task 1: Please write, in your own words, the answer to the following questions (read pages from textbook, use ChatGPT and internet): DON'T WRITE ANY CODE, JUST EXPLAIN IN PLAIN ENGLISH

1. Without the use **single character by character reading, using only cin,** How to read an English sentence from a user and display the sentence in all UPPERCASE on screen
2. How to read any data type values from a text file?
3. How to read any data type values from a csv file?
4. How to write any data type values to a text file?
5. How to write any data type values to a csv file?
6. How to copy a text file (**containing any data type values**) to another text file.
7. How to read an English Paragraph from a text file and write the paragraph to another text file in all UPPERCASE

Task 2: Write codes as indicated by each problem below:

1. A complete C++ program that does the following steps:
    a. read all the prices from a text file (**file path is provided by the user)**
    b. calculate and write to a text file (**file path is provided by the user)** sum, average, maximum, minimum, frequency of each price.
    c. Display on screen the number of prices equal to, greater or smaller than the average

A sample run of the above program should look like the following (user inputs are shown in **bold and blue)**:

```
a. Please enter the input file path: prices.txt
The following values are read from file "prices.txt": 2.2 3.3 2.2 3.3 3.3 4.4 5.5 4.4 4.4 5.5 4.4
b. Please enter the output file path: result.txt
The following is written to the text file "result.txt":
Sum = 42.9
Average = 3.9
Maximum = 5.5
```

```
Minimum = 2.2
Frequency of 2.2 is 2
Frequency of 3.3 is 3
Frequency of 4.4 is 4
c. Number of prices equal to average of = 3.9 is 0
Number of prices smaller than average of = 3.9 is 6
Number of prices greater than average of = 3.9 is 5
```

2. Write a complete C++ program that copy a text file (**contains any data type values**) to another text file
   A sample run of the above program should look like the following (user inputs are shown in **bold and blue)**:

```
a. Please enter the input file path: file.txt
Please enter the output file path: copy.txt
The following is read from file "file.txt" and written to file << "copy.txt":
This file contains any types of values e.g. 124, 45.67; 99.345, p, q, r, s,t,***, &@#$%
```

3. Write a complete C++ program that does the following steps
   a. reads an English Paragraph from a file (**file path is provided by the user)**
   b. convert all words of the paragraph to all UPPERCASE and write to another text file (**file path is provided by the user)**

   A sample run of the above program should look like the following (user inputs are shown in **bold and blue)**:

```
a. Please enter the input file path: para.txt
Please enter the output file path: para_UPPERCASE.txt
Read following paragraph from file "para.txt"

This is a good coding problem. That can be solved using C++ file library. This includes iostream and
fstream libraries.

Written above paragraph to file "para_UPPERCASE.txt", in all UPPERCASE
```