Procedural Programming Laboratory

Lab 4

Part 1

Strings

Write a program that reads two strings (string1 and string 2) and an integer from the user. The program should do the following:

- Display the length of both strings.
- Display both strings.
- Compare both strings and display the bigger string.
- Compare a number of characters, specified in the user input, of both strings and display the bigger sub-string.
- Concatenate string2 to string1.
- Display both strings.
- Concatenate the first three characters of string2 to string1.
- Display both strings.
- Copy string2 to string1.
- Display both strings.
- Copy the first three characters of string1 to string2
- Display both strings.

Part 2

1 dimensional Arrays

Write a program that reads 20 integers into an array. It should then find the average of the numbers in the array. Finally, it should display the numbers in the array that are less than the average value calculated.

Part 3

2-D Arrays

Write a program that adds two matrices. The matrices should be of size 3x3 and the user is asked to input the value in both matrices. The program should then display the result of the addition.

Part 4

Functions and File Access

Write a program that uses three functions:

Instructions() is a function that takes no arguments and returns no value but simply displays the instructions on what the program does using printf statements.

Average() is a function that takes 3 integer arguments and returns the average of them as a floating point number

Display() is a function that takes one floating point number as an argument and displays the value of it to screen and writes it to a file called Result.txt

Your program should start by calling Instructions(), then it should read the integers after asking the user for them. It should then call the function Average() to find the average of the three numbers. Finally, it should display the result by calling the function Display().