CS211 Homework – 5

Total Marks: 100

Due Date: 11/04/2019

This homework assignment has **2 parts** which require submitting **2 separate programs** to blackboard. *Do Not Use Predefined Functions from the cstring Library.*

Question 1 of 2. **Case insensitive string compare**: *[40 marks]* Write a function that compares two strings while ignoring the case of alphabetical characters.

Your program will take two strings as input from the user and use your function to compare them. Assume a maximum C-string size of 1000 characters.

Make sure your code works for any input number, not just the test cases. Your code will be tested on other test cases not listed here.

Please properly comment your code before submission.

For this part of the assignment, name your source file as StringCompare_WSUID.cpp. For example, if your user ID is A999B999 name your file as StringCompare_A999B999.cpp.

Sample Test Cases:

Test Case 1: **Input:** First String: HeLLo WoRLd Second String: hELLO worlD **Output:** Strings are the same	**Test Case 2:** **Input:** First String: 5 Apples Second String: 5 aPPles **Output:** Strings are the same
Test Case 3: **Input:** First String: 5 Apples Second String: 6 aPPles **Output:** Strings are NOT the same	**Test Case 4:** **Input:** First String: HeLLo WoRLd Second String: how are you? **Output:** Strings are NOT the same

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Question 2 of 2. **Substring matching**: *[60 marks]* Write a function which checks if a given string is a substring of another string.

Your program will take two strings as input from the user and use your function to compare them and find if the substring exists. If the substring exists, print the index of the string where the substring starts. Your comparison function should indicate that a substring is found only if a **complete match** of the string being search for is present inside the string being searched in. Your comparison function should also be **case sensitive**. Assume a maximum C-string size of 1000 characters.

A substring is defined as any subset of characters present in a string in a contiguous order. Please look at test cases for some examples.

Make sure your code works for any input, not just the test cases. Your code will be tested on other test cases not listed here.

Please properly comment your code before submission.

For this part of the assignment, name your source file as FindSubstr_WSUID.cpp. For example, if your user ID is A999B999 name your file as FindSubstr_A999B999.cpp.

Sample Test Cases:

Test Case 1: **Input:** First String: London bridge is falling down Second String: bridge **Output:** Substring exists at index: 7	**Test Case 2:** **Input:** First String: London bridge is falling down Second String: Bridge **Output:** Substring DOES NOT exist
Test Case 3: **Input:** First String: Hello World Second String: llo Wor **Output:** Substring exists at index: 2	**Test Case 4:** **Input:** First String: Hello World how are you Second String: Worlds **Output:** Substring DOES NOT exist