**Take Home Program #1 – CS 839 – Due: by 11:59pm Sunday September 9, 2018**

**Objectives:**

Functions call by values and by references.

Using string functions: size() or length(); find(char, 0);

**DisplayLongestString.cpp**

Write a program that prompts the user to enter two strings without spaces. The program returns the longest string among two strings. The program uses the following functions:

* String AskFirstString(string s1); Ask the user to enter the first string; the function also validates the user input. If there is a space character; user must try again until the string without spaces.
  + function to determine if there is a space character. The find() function returns an integer value.
* String AskSecondString(string s2); Ask the user to enter the second string; the function also validates the user input. If there is a space character; user must try again until the string without spaces.
  + Use **s2.find(‘ ‘, 0)** function to determine if there is a space character. The find() function returns an integer value.
* String longest(const string& s1, const string& s2); the main program pass the two strings without spaces to the longest() function.
  + Use s1.size() and s2.size() to count the number of characters of the string s1 and s2.
  + The longest() function returns the string value to the main function.
  + The main function will determine and display the longest string or the two strings are equal.

**Sample Output**

To display the longest string among two strings.

Enter the first string without space characters: Master Card

Your first string has a space character, try again:

Enter the first string without space characters: MasterCard

Enter the second string without space characters: Visa Card

Your second string has a space character, try again:

Enter the second string without space characters: VisaCard

MasterCard is the longest string among the two!

Would you like to try again? (Y/N) y

Enter the first string without space characters: Card1

Enter the second string without space characters: Card2

Both strings have equal length!

Would you like to try again? (Y/N) n

**Part B: Copy and paste your program (source) code and the outputs after this line**

/\*

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September 9, 2018

CSIT 839 - 26953

Longest String

Purpose: to prompt the user to enter

two strings without spaces. The program

returns the longest string among two strings.

\*/

#include <iostream>

#include <string>

using namespace std;

/\* Function Prototypes \*/

string AskFirstString(); /\* ask user to enter first string,

also validates users input if there a space \*/

string AskSecondString(); /\* ask user to enter second string,

validate if there is a space \*/

string Longest(const string&, const string&); /\* main program passes the two strings

without spaces to this function; this

function will then return the longer

string value to main function \*/

/\* Functions \*/

int main() { /\* will determine and display the longest

string or if the strings are equal \*/

string s1, s2, longest, answer;

cout << "I will display the longest string among the two strings that you enter." << endl;

do

{

s1 = AskFirstString();

s2 = AskSecondString();

longest = Longest(s1, s2);

/\* For validation purposes \*/

/\*cout << s1 << endl;

cout << s2 << endl;

cout << longest << endl;\*/

if (s1.size() > s2.size())

{

cout << "\n" << s1 << " is the longest string among your two entries, having " << s1.size() << " character(s)!\n" << endl;

}

else if (s2.size() > s1.size())

{

cout << "\n" << s2 << " is the longest string among your two entries, having " << s2.size() << " character(s)!\n" << endl;

}

else

{

cout << "\nBoth strings have equal length with " << s1.size() << " character(s)!\n" << endl;

}

cout << "Would you like to try again? (Y/N) ";

getline(cin, answer);

/\* while (answer != "y" || answer != "Y" || answer != "yes" || answer != "Yes" || answer != "YES" || answer != "n" || answer != "N" || answer != "no" || answer != "No" || answer != "NO")

{

cout << "Sorry I do not recognize what you want. Please enter again: ";

getline(cin, answer);

} \*/

} while (answer == "y" || answer == "Y" || answer == "yes" || answer == "Yes" || answer == "YES");

return 0;

}

string AskFirstString()

{

string string1;

cout << "\nEnter the first string without space characters: ";

getline(cin, string1);

while (string1.find(' ', 0) != 18446744073709551615)

{

/\*cout << string1.find(' ', 0) << endl; For validation\*/

cout << "\nSorry, your first string has a space character, try again: ";

getline(cin, string1);

}

return string1;

}

string AskSecondString()

{

string string2;

cout << "\nEnter the second string without space characters: ";

getline(cin, string2);

while (string2.find(' ', 0) != 18446744073709551615)

{

/\*cout << string2.find(' ', 0) << endl; For validation\*/

cout << "\nSorry, your second string has a space character, try again: ";

getline(cin, string2);

}

return string2;

}

string Longest(const string& s1, const string& s2)

{

string longest;

/\*cout << s1.size() << endl;

cout << s2.size() << endl;\*/

if (s1.size() > s2.size())

{

longest = s1;

}

else

{

longest = s2;

}

return longest;

}

