Notes From Class

Monday, July 10, 2017   8:00 AM

Project 1 Scores Have Been Released
  - Average: 94.07 Out Of 100
  - 83 Students Received A Perfect Score! Nice Job!
Project 2 Is Due Wednesday At 9 PM
  - I Appreciate Your Patience Over The Next Few Days As The TAs And
    I Get Them Scored
I Hope To Release Project 3 Wednesday
  - Due July 18th At 9 PM
  - We Need To Discuss A Bit About Strings And String Handling

Working With Functions

Working with Strings

#include <string>
using namespace std;

string s = "Hello";
string t = "";
string u = "       ";
s.size();
s.length();    /// the exact same thing         the number of letters in the string
==

if (s.length() != 0)
{

}
If (s.size() != 0)
{

}
If (s == ""
{

}
if (s == "Regular")
{
}

// code that walks a string letter - by - letter
// loop process each letter

string s = "Hello"; // 5
for( int i = 0; i < s.size(); i++ ) // counter is I
for( size_t i = 0; i < s.size(); i++ )
// warnings int is a signed quantity + & -
// size of a string is an unsigned quantity 0 or more
{
    // I - 0, 1, 2, 3, 4
    // first letter is in position 0
    // last letter is in position .size()-1
    // grab an individual letter from a string....
    char letter = s[ i ]; // square brackets offset to a particular
        // no checking... at runtime bad value...
    char letter = s.at( i ); // exact same thing does bounds checking..
    if (letter == "H")
    {
        // is this letter in the string....
    }
    if (letter == 'H')
    {
        // is this letter in the string...
    }
    switch( letter )
    {
        case 'A':
        case 'E':
        case 'I':
        case 'O':
        case 'U':
        case 'Y':
            cout << " a vowel " << endl;
            break;
        default:
            cout << " not a vowel " << endl;
```cpp
break;
}
cout << "the letter at position " << i << " = " << letter << endl;
}

char anA = 'A';    /// numerical equivalent to int 65
anA.size( );
anA.length( );     /// do not work....
string someString = "A";
someString.size( );
someString.length( );
/// does not have the value 65....

char bad = 'AA';   // fail...
string longerString = "AA";

Goals: supplying you some code that turns
"51" ----> int value of 51
"1000" --->                    1000

'5'   ----->      5
char five = '5';      ----->  value 5
int value = five - '0';

Convert digit sets of characters into their int equivalent
"21"    ----->  value 21
    loop that works letter by letter
    accumulate each digit  - '0';
    base 10    * 10

    2   ----->  value 2
    1   ----->  2*10 + 1

"210"
```