ECE2036: (Week 13) Useful C++ String Member Functions (Front)

String objects in C++ are powerful objects that help with string manipulation. Here is a list of useful string member functions that will be helpful in the lab and I will expect you to know for the final exam. To use these, remember that you must use the following preprocessor directive.

#include<string>

stringobject.size();

   /*This returns the length of the stringobject*/

stringobject.find ("jeff");

   /* The member function find() returns the starting position of the first occurrence of the substring "jeff" in stringobject. If "jeff" is NOT found in stringobject, then string::npos is returned. Zero indexing is used.*/

stringobject.rfind ("jeff");

   /* Same as find() EXCEPT that it starts search from the end of the stringobject */

stringobject.find_first_of ("aeiou");

   /*This member function returns the position of the first occurance of the any of the characters in the string "aeiou". So in this example, this would return the first occurance of a vowel in string object */

stringobject.find_last_of ("aeiou");

   /*Same as find_first_of EXCEPT it finds the last occurrence in stringobject */

stringobject.find_first_not_of ("aeiou");

   /*This returns the first of occurrence of characters NOT in the string "aeiou".

stringobject.c_str();

   /*This converts the C++ string object into a c-style string with a NULL character at the end. */

stringobject.substr(beginningPosition, length);

   /*This returns a substring contained in the stringobject starting at beginningPosition and have a given length. Putting in string::npos for length will go to the end of the string *

stringobject.erase(beginningPosition, length);

   /*This will change the stringobject. It will erase the section specified by the beginningPosition and goes for a given length. If string::npos is put in for the length, then it will go to the end of the string.

stringobject.insert(location, "insert this text");

   /*This will insert the substring, which is "insert this text" for this example, into the stringobject start at location. */

```
#include <iostream>
#include <string>
using namespace std;

int main()
{
string examplestring = "This is an example of a string example";
string fruit = "apple ";

cout << examplestring << endl;
cout <<"01234567890123456789012345678901234567" << endl;

cout << "The length of the string " << examplestring.size() << endl;

cout << "The position of \"example\" using find();" <<endl;
cout << examplestring.find("example") << endl;

cout << "The position of \"example\" using rfind();" <<endl;
cout << examplestring.rfind("example") << endl;

cout << "The position of using find_first_of(\"aeiou\");" <<endl;
cout << examplestring.find_first_of("aeiou") << endl;

cout << "The position of using find_last_of(\"aeiou\");" <<endl;
cout << examplestring.find_last_of("aeiou") << endl;

cout << "The position of using find_first_not_of(\"aeiou\");" <<endl;
cout << examplestring.find_first_not_of("aeiou") << endl;

cout << "The substr(0,6) example (rem 6 = length)" << endl;
cout << examplestring.substr(0,6) << endl;  //Do string::npos example to end

cout << "The erase(0,4) changes the string in this way." << endl;
examplestring.erase(0,4);
cout << examplestring << endl;

cout << "The insert(5,fruit) changes the string in this way." << endl;
examplestring.insert(5, fruit);
cout << examplestring << endl;

cout <<"Example of overloaded + : examplestring+examplestring+fruit " <<endl;
cout << examplestring+examplestring+fruit << endl;

}
```

```
This is an example of a string example
01234567890123456789012345678901234567
The length of the string 38
The position of "example" using find();
11
The position of "example" using rfind();
31
The position of using find_first_of("aeiou");
2
The position of using find_last_of("aeiou");
37
The position of using find_first_not_of("aeiou");
0
The substr(0,6) example (rem 6 = length)
This i
The erase(0,4) changes the string in this way.
 is an example of a string example
The insert(5,fruit) changes the string in this way.
 is aapple n example of a string example
Example of overloaded + : examplestring+examplestring+fruit
 is aapple n example of a string example is aapple n example of a string exampleapple
```