Object Oriented Programming (IGS2130)

Lab 12

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Exercise #1

- Run the program code below and compare the output to your predictions.

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

int main() {
    string str1 = "I like ";
    string str2 = "string class";
    string str3 = str1 + str2;

    cout << str1 << endl;
    cout << str2 << endl;
    cout << str3 << endl;

    str1 += str2;
    if (str1 == str3)
        cout << "The two strings are identical." << endl;
    else
        cout << "The two strings are different." << endl;

    string str4;
    cout << "Enter a string: ";
    cin >> str4;
    cout << "You entered: " << str4 << endl;

    return 0;
}
```

Exercise #2

- Create a user-defined string class named InhaString so that the provided main() function below produces results exactly the same as the output in Ex#1.
  - Only allows the following member variables:

```
class InhaString {
private:
    char* m_msg;
    int m_len;
};
```

```
#include <iostream>
#include "InhaString.h"
using namespace std;

int main() {
    InhaString str1 = "I like ";
    InhaString str2 = "string class";
    InhaString str3 = str1 + str2;

    cout << str1 << endl;
    cout << str2 << endl;
    cout << str3 << endl;

    InhaString st{ str3 };

    str1 += str2;
    if (str1 == str3)
        cout << "The two strings are identical." << endl;
    else
        cout << "The two strings are different." << endl;

    InhaString str4;
    cout << "Enter a string: ";
    cin >> str4;
    cout << "You entered: " << str4 << endl;

    return 0;
}
```

Exercise #2

- Hint.
  - Create constructor, destructor, copy constructor and assignment operator(=)
  - Create overloaded operators for +, +=, ==
  - Create overloaded operators for I/Os: <<, >>