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Software Construction  
Homework 1 Questions

1. string username = “George”;  
   string group = “All”;  
   string message = “Join our Tigers message group!”;  
   string message\_buffer;

string newMessage = ("|<" + username + "::" + group + ">|");  
message\_buffer = newMessage + message + "\n";

cout << message\_buffer;

1. newMessage = "";  
   string username2 = “Abraham”;  
   string message2 = “Good Morning, Tigers!”;

newMessage = ("|<" + username2 + "::" + group + ">|") + message + “\n”;  
 message\_buffer = newMessage + message\_buffer;

cout << message\_buffer;

1. string message3 = “War Eagle”;  
   string message4 = “Hey!”;

message\_buffer = message3 + “\\n” + message4;

cout << message\_buffer;

1. string.size() returns the length of the string. The function call message.size() on question(2) will return: 21.
2. For question(2), the empty() call will do nothing.

**NOTE: 6-9 are run sequentially to achieve the desired answers.**

1. size\_t problem6beginning = message\_buffer.find("|<");

cout << problem6beginning;

1. size\_t problem7beginning = message\_buffer.find("|<",problem6beginning + 1);

cout << problem7beginning;

1. message\_buffer = message\_buffer.substr(problem6beginning + 2);

username = message\_buffer.substr(0, message\_buffer.find("::"));

message\_buffer = message\_buffer.substr(message\_buffer.find("::") + 2);

cout << username;

1. problem9beginning = message\_buffer.find("|<");

message\_buffer = message\_buffer.substr(problem9beginning + 2);

secondUser = message\_buffer.substr(0, message\_buffer.find("::"));

message\_buffer = message\_buffer.substr(message\_buffer.find("::") + 2);

cout << secondUser;

1. size\_t middle = message\_buffer.find("::") + 2;  
   string firstGroup = message\_buffer.substr(middle, group.size());

cout << firstGroup;

1. size\_t problem11ending1 = message\_buffer.find(">|");  
   size\_t problem11ending2 = message\_buffer.find(">|",problem11ending1 + 1);

string secondMessage = message\_buffer.substr(problem11ending2 + 2, message.size());

cout << secondMessage;

1. The difference is below:  
   [cin >> messagebuffer] will get just the first word in “Aubie Messaging Group”.  
   [getline(cin, messagebuffer)] will read the whole line and get the entire string.