In class Practice 11/27/2019

Part I

a) Standard Library algorithms can operate on C-like pointer-based arrays. true

b) Standard Library algorithms are encapsulated as member functions within each container class.
false,they operate indirectly,through iterators

c) When using the remove algorithm on a container, the algorithm does not decrease the size of the container from which elements are being removed.
true

d) One disadvantage of using Standard Library algorithms is that they depend on the implementation details of the containers on which they operate.
false, they dont depend on it

e) The remove_if algorithm does not modify the number of elements in the container, but it does move to the beginning of the container all elements that are not removed.
true

f) The find_if_not algorithm locates all the values in the range for which the specified unary predicate function returns false.
false,it only locate the first value

g) Use the set_union algorithm to create a set of all the elements that are in either or both of two sorted sets (both sets of values must be in ascending order).

true

Part II

1. Can you use the random_shuffle generic algorithm with a list container? What about a vector container? Why or why not?
2. Suppose you have a generic algorithm that requires forward iterators. Can I use it with a vector or a list even though these iterators are random access and bidirectional iterators respectively? Please explain

1. the random_shuffle generic algorithm requires random access. So it cannot work on list, but it works on vector
2. yes. Iterators are an inclusive hierarchy. Random access iterators are bidirectional, and bidirectional iterators are forward iterators. So any iterators will work where a weaker iterator is specified.

Part III

1. Use the reverse algorithm to test if a given string is a palindrome.

2. Enhance q1 to convert all characters to lower case and remove space and punctuation.