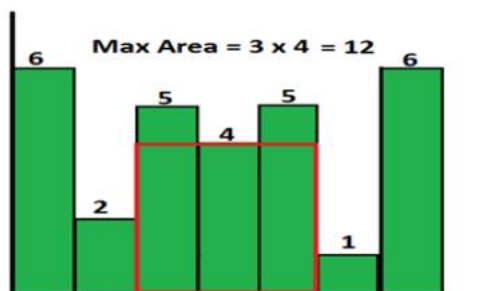


Stack and Queue Assignment

1. Write an algorithm to copy the data elements of one stack to other without changing the order and without using any other data structure
2. Write a function to find the minimum element in stack.
3. Write an algorithm or c code segment to reverse the queue
4. Write an algorithm or c code segment to reverse the first k elements in the queue
5. Given a string consisting of opening and closing parenthesis, find the length of the longest valid parenthesis sub-string.
6. Write an algorithm or c code segment to implement 2 queues using static array.
7. Write an algorithm or c code segment to implement k stacks in single array
8. Find the next greatest element in one array using stack.

Example: {13, 7, 6, 12}	
Element	NGE
13	-1
7	12
6	12
12	-1

9. Find the largest rectangular area possible in a given histogram where the largest rectangle can be made of a number of contiguous bars. For simplicity, assume that all bars have same width and the width is 1 unit. For example, consider the following histogram with 7 bars of heights {6, 2, 5, 4, 5, 1, 6}. The largest possible rectangle possible is 12 (see the below figure, the max area rectangle is highlighted in red).



10. The Tower of Hanoi is a mathematical game or puzzle. It consists of three rods and a number of disks of different sizes, which can slide onto any rod. The puzzle starts with the disks in a neat stack in ascending order of size on one rod, the smallest at the top, thus making a conical shape. The objective of the puzzle is to move the entire stack to another rod, obeying the following simple rules:
 - Only one disk can be moved at a time.
 - Each move consists of taking the upper disk from one of the stacks and placing it on top of another stack.
 - No disk may be placed on top of a smaller disk.

Design an iterative and recursive algorithm or write a C program