# Problem 3.2

The complexity of C(n) is $O(n^2)$. We know that the inside(s) of the if-else statements costs a constant factor. Therefore, they have no influence on the complexity class. The method substring(1) returns a new string that is a substring of the given string that begins with the character at the index 1. At the end of each iteration, the first character of the string will drop and only the rest will be processed at next iteration, until the string is empty. When the string is empty, the while loop will stop. This means that the while loop will iterate $n$ times, which is the size of the input string.

$$\sum_i^n x=(n)+(n-1)+(n-2)+(n-3)+\cdots+3+2+1=\frac{n\times(n-1)}{2}$$