Homework 2

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CS 577

February 13, 2019

Question 1.

Algorithm 3 and Algorithm 4 contain four procedures that are supposed to compute F_n, the n -th Fibonaci number, for a non-negative integer n. Recall that Fibonacci numbers are defined by $F_0 = 0, F_1 = 1,$ and $F_n = F_{n-1} + F_{n-2}$ for integers $n \geq 2$

Algorithm 1 Count Minimum Number of Inversions

```
1: procedure MERGE_AND_COUNT
2:     i ¡- 1
3:     j ¡- 1
4:     k ¡- 1
5:     c ¡- 0
6:     while i ≤ m do
7:         while j ≤ m do
8:             if L[i] ¿ R[j] and i ¡ j then
9:                 c ¡- c + 13 3
10:                i
11:
```