Algorithm Analysis Homework 2

Due by 4/9(Mon.) in class

1. Write a recursive algorithm (in pseudo-code) to calculate *some*(*m*,*n*), where

$$some(m,n) = \begin{cases} some(n,\ m\text{-}1) + some(n\text{-}1,\ m) + some(n\text{-}1,\ m\text{-}1), & \text{when } n\text{>}1 \text{ and } m\text{>}1 \\ 1 & \text{when } n == 1 \text{ or } m == 1 \end{cases}$$

   for *n* > 0 and *m* > 0.

2. Repeat problem 1. At this time write a dynamic programming algorithm (iterative) instead of recursive one.

3. What is time complexity of algorithm in problem 2?

P.S.
- Realize your algorithm for problem 1 and 2, then compare the execution time for various inputs.