Assignment 2

Q1 What is the time, space complexity of following code:

1: int a = 0, b = 0;

for (i = 0; i < N; i++) {

a = a + 1;

}

2: for (j = 0; j < M; j++) {

b = b+1;

}

Ans: time complexity O(N) for code one

Time complexity O(Mj) for code 2

Q2 What does it mean when we say that an algorithm X is asymptotically more efficient than Y?

a)X will be a better choice for all inputs

b)X will be a better choice for all inputs except possibly small inputs

c)X will be a better choice for all inputs except possibly large inputs

d)Y will be a better choice for small inputs

Ans: a)X will be a better choice for all inputs