Laboratory practice No. 2: Big O Notation

Santiago Isaza Cadavid
Universidad EAFIT
Medellín, Colombia
sisazac@eafit.edu.co

Hamilton Smith Gómez Osorio
Universidad EAFIT
Medellín, Colombia
hsgomezo@eafit.edu.co

August 31, 2018

1) Midterm Simulation

1.a. Exercise 1

c) O(n+m)

1.b. Exercise 2

a) O($m * n$)

1.c. Exercise 3

b) O(ancho)

1.d. Exercise 4

b) O(n^3)

1.e. Exercise 5

d) O(n^2)

1.f. Exercise 6

a) T(n)= T(n-1)+T(n-2)+C

1.g. Exercise 7

1.7.1 Worst case-scenario number of steps

T(n)=T(n-1)+C

1.7.2 Asymptotic Complexity

O(n)

1.h. Exercise 8

The mystery(n) function executes $n * \sqrt{n}$ steps

1.i. Exercise 9

d) Executes more than $n^2 + n * m$

1.j. Exercise 10

a) Executes less than $n * \log n$ steps

1.k. Exercise 11

c) Executes T(n) = T(n-1)+T(n-2)+C steps

1.l. Exercise 12

b) O($m\sqrt{n}$)

1.m. Exercise 13

a) O(n^3)

Professor Mauricio Toro Bermudez
Phone: (+57)(4)2619500 Ext. 9473. Office: 19 – 627
E-mail: mtorobe@eafit.edu.co