Laboratory practice No. 3: Big O Notation

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4) Midterm Simulation

Exercise 1

a) Look for any data in a list

Exercise 2

c) O(*n*)

Exercise 3

a) q.size()!=1

b) <=

c) I

d) q.getFirst();

Exercise 4

a) lista.size()

b) lista.push(auxiliary.removeFirst())

Exercise 5

a) auxiliar1.size()>0 , auxiliar2.size()>0

b) personas.offer(edad);

Exercise 6

c) n^2

Exercise 7

d) n^3

Exercise 8

d) O(1)

Exercise 9

9.1 a) O(k)
9.2 b) 9
9.3 c) O(1)

Exercise 10

10.1 d) O(n)
10.2 a) 6
10.3 b) O(n)

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1.7.1 Asymptotic Complexity

O(n)

1.b. Exercise 8

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

1.c. Exercise 9

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

1.d. Exercise 10

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

1.e. Exercise 11

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

1.f. Exercise 12

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

1.g. Exercise 13

a) O(n^3)

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