

Lab Nro. 4: Binary trees

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3) Project questions

3.1

Not for the family tree, because it doesn't have the ability to know which is larger or smaller to locate it to one side or the other. That's why in order to search or insert it becomes more complicated, because one would have to indicate how to get to the insertion position.

3.2

Basically what it does is receive numbers in order and accommodating them, the first one is taken as the root. The next numbers are accommodated regarding if it's larger or smaller to the root. If it's smaller it's located to the left and equal to or larger are located to the right. When this happens a new sub root is created that will be ruled by the same laws as the main root. Then it will print all the numbers as follows: node-left subtree, right subtree.

3.3

$O(n)$

3.4

N is the height of the tree

4) Exam prep

1. Altura(raiz.izq)
Altura(raiz.der)
2. C
3. A) false
B) a.dato
c) a.izq, suma
d) a.der, suma
4. 4.1 d
4.2 c
4.3 d
4.4 a

5.a) `p==toInsert`

`b)(toInsert>=p)`

6.1 `a`

6.2 `retrurn 0`

6.3 `=0`

7.1 `a`

7.2

5) Team Work

Mateo Sánchez Toro: Did exercise 1

Juan Pablo Giraldo Restrepo: Did exercises 2 and 4 and translated the template

Juan Felipe Londoño Gaviria: Did exercise 3 and wrote the template in spanish

Communication was through Whatsapp.

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