ESTRUCTURA DE DATOS 1
Código ST0245

Laboratory practice No. 4:

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3) Practice for final project defense presentation

3.1 Even though our solution did not work completely correctly for the first problem, we did have a clear idea of the data structure we were using. We used a tree where you could find every folder and the files inside each folder. Each folder had child nodes, being the files or folders it contains. Therefore every file became a leaf because there is nothing to go underneath it. The search complexity for this tree would be O(n) as n would be the number of elements/nodes in the tree.

3.2 OPTIONAL

3.3 OPTIONAL

3.4 For the problem solved in the numeral 2.1 we have two major things to do. First we have to insert the data into each node/leaf and afterwards we have to get that value in order to print it. Following the process, the two main operations are insert and search. In this case the complexity for both of these is O(n) and therefore the complexity of the problem is O(n)

3.5 Since we are dealing with a binary tree, the nodes can only be divided into two different branches. The variable node is used to determine a certain element in the tree, beginning with the root element at the top. Then we have the values of *left* and *right* which determine the child nodes/leafs for each of the nodes. Then the complexity is O(n) with n being the number of elements in the tree, because that is the number of data that has to be checked.

4) Practice for midterms

4.1 a
O(1)

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4.2 c

4.3

4.3.1 *return false;*
4.3.2 *return suma == a.dato;*
4.3.3 return sumaElCamino(a.izq, suma - a.dato)
4.3.4 || sumaElCamino(a.der, suma - a.dato);

4.4 ***opcional***

4.5 **opcional**

4.6 op:

4.6.1 línea 4: return 0
4.6.2 línea 6: ==0

4.7

4.7.1 a
4.7.2 d

4.8 b

4.9 a

4.10 b

4.11

4.11.1 b
4.11.2 a
4.11.3 b

4.12

4.12.1 i
4.12.2 a
4.12.3 a

4.13

4.13.1 Línea 10: raiz.id
4.13.2 a

5) Recommended reading

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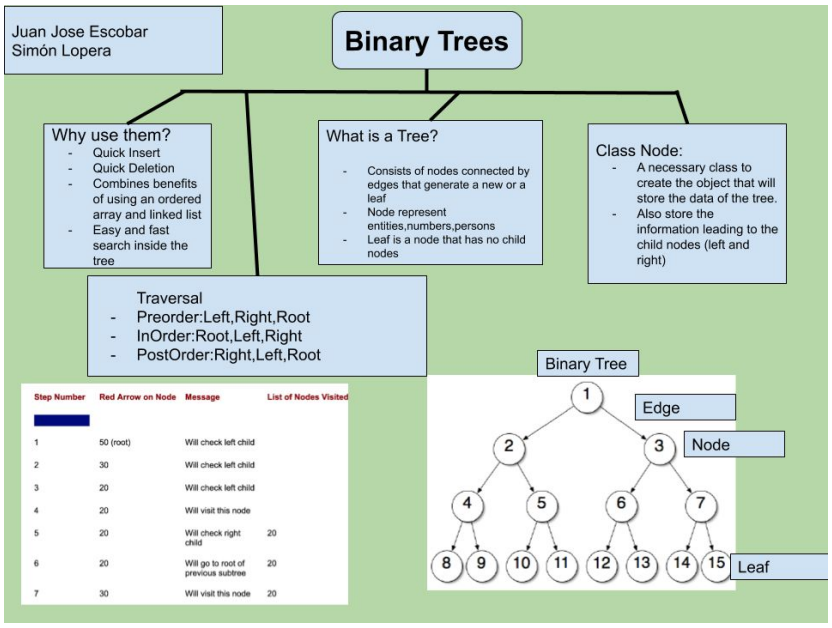
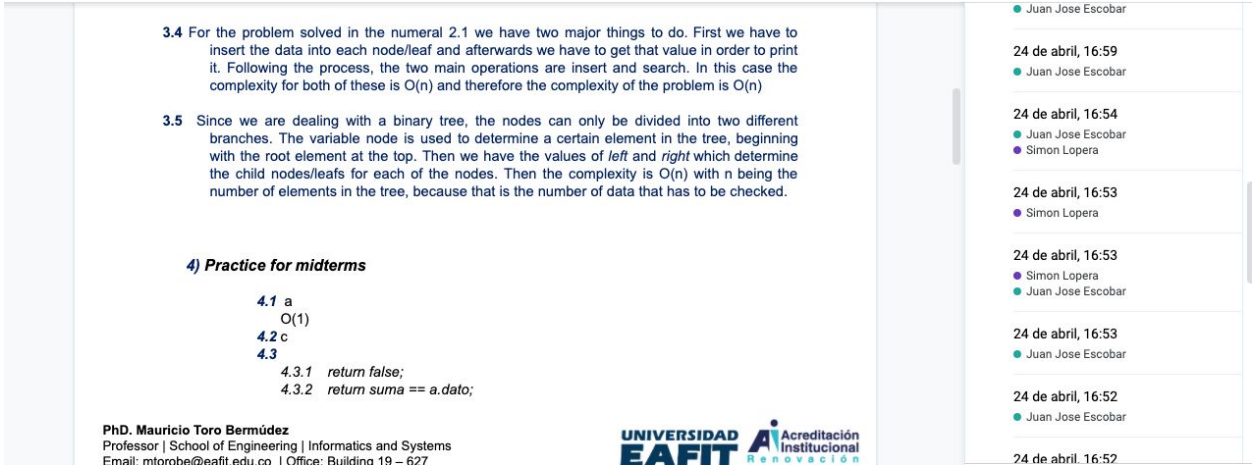


6)Teamwork y Progress



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24 de abril, 16:59
Juan Jose Escobar
24 de abril, 16:54
Juan Jose Escobar
Simon Lopera
24 de abril, 16:53
Simon Lopera
24 de abril, 16:53
Simon Lopera
Juan Jose Escobar
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24 de abril, 16:52
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We worked simultaneously in the coding of Part 1 and 2 through a Discord call while sharing screen.