Laboratory practice No. 4: Trees

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3) Practice for final project defense presentation

3.1
3.2 Yes, if we assign an integer to each node in the tree instead of going through the whole tree and comparing each String, we can get an O (Log n). Because every time we asked, reduce ½ the processes number.

3.3
3.4
3.5
3.6

4) Practice for midterms

4.1
- **a)** int izqu = altura(node.left);
- **b)** int der = altura(node.right)

4.2
c) 3.

4.3
- ***a)*** return False;
- ***b)*** return suma == 0;
- ***c)*** a.izq, suma – a.dato;
- ***d)*** a.der, suma – a.dato;

4.4
4.4.1
c) T(n) = 2.T(n/2)+c

4.4.2
a) O(n)

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4.4.3
d) Wilkenson, Joaquina, Eustaquia, Florinda, Eustaquio, Jovín, Sufranio, Piolina, Wilberta, Piolín, Usnavy

4.4.4
Teacher, I did not understand the options, the answer is this:

```
03 printAUX(node.left);
04 printAUX(node.right);
05 System.out.println(node.data);
```

4.5
a) (p.dato ==toInsert &&p.left==null)|| (p.dato ==toInsert &&p.right==null)
b) toInsert > p.dato

4.6
4.6.1 d) 4
4.6.2 return 0;
4.6.3 if(raiz.hijos.size() -1 == 0)

4.7.1
4.7.1 a) 0, 2, 1, 7, 5, 10, 13, 11, 9, 4
4.7.2 b) 2
4.7.4 d) O(n)

4.8 b) 2

4.9 a) 5, 3, 6, 1, 7, 4, 8, 0, 2

4.10 b) No.

4.11.1 b) 2, 3, 4, 0, 5, 7, 6

4.11.2 a) 5

4.11.3 a) Sí

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