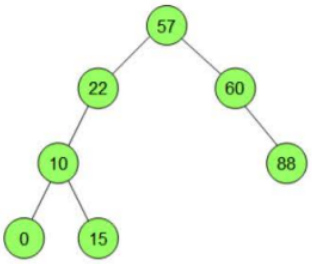
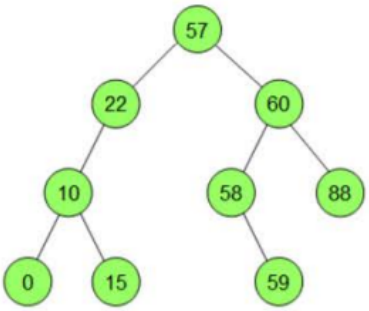
Exercícios escritos Lista Árvore AVL
Integrantes: Fernanda Fernandes Matioli, 2503352
Diego Lucas Hittori Dallaqua, 2337703

1) a. Árvore 1 não é AVL, pois seu segundo nó tem duas a esquerda e nenhum a direita, o que resulta em um 2-0=2. (Nó 22)



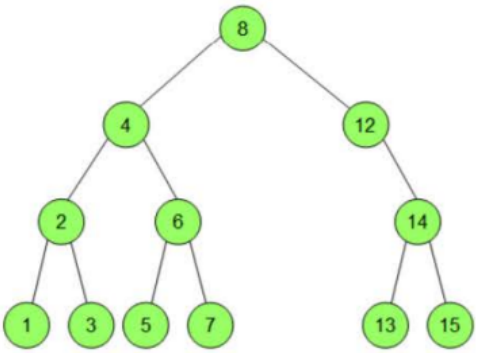
22=2

b. Árvore 2 não é AVL, porque não está balanceada no nó 22.



22=2

c. Árvore 3 é AVL, porque está balanceada.
d. Árvore 4 não é AVl, porque não está balanceada no nó 12.



12=2

2)
a) 50, 30, 20, 70, 40, 35, 37, 38, 10, 32, 45, 42, 25, 47, 36.


2
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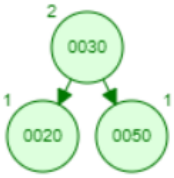
1
0030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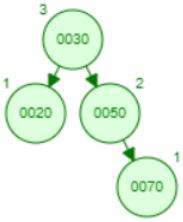
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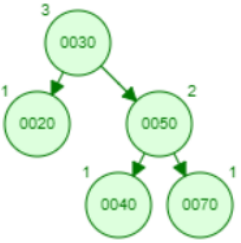
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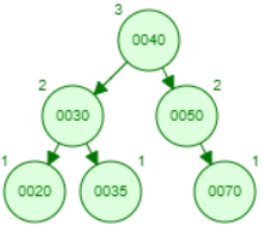
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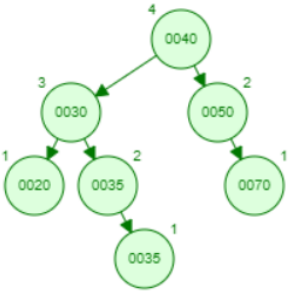
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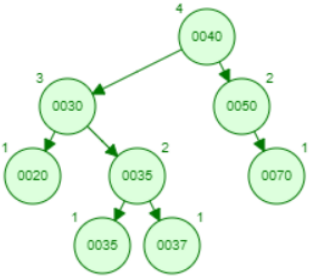
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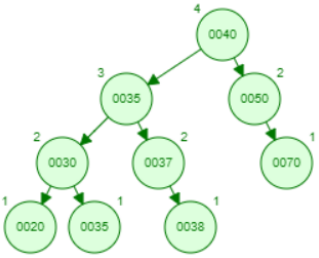
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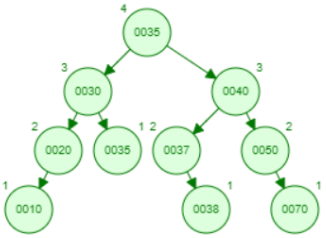
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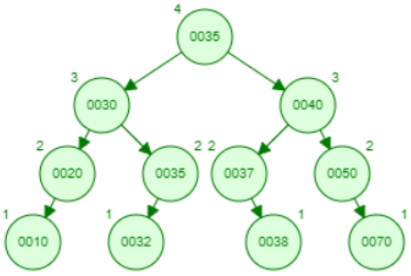
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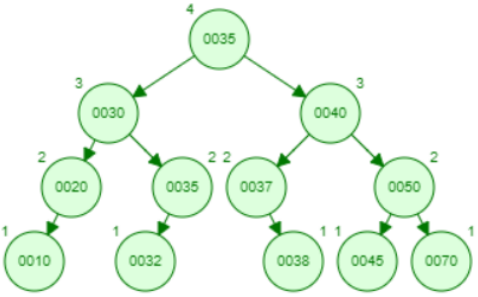
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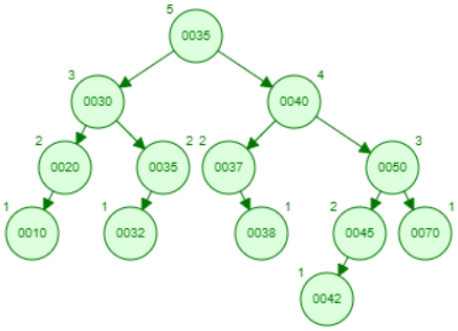
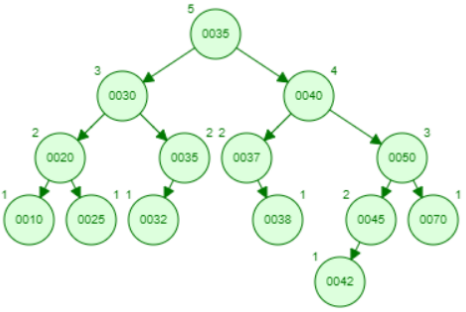
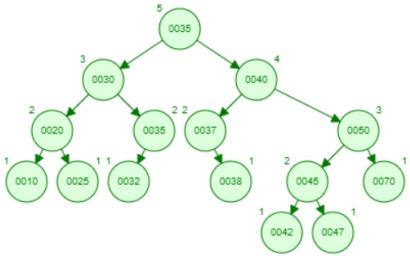
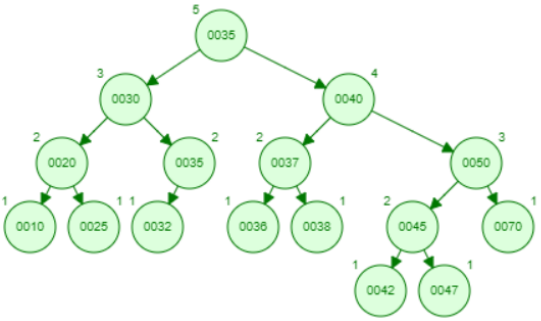
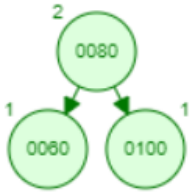


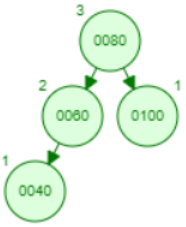


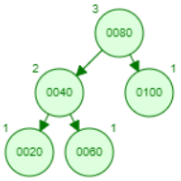


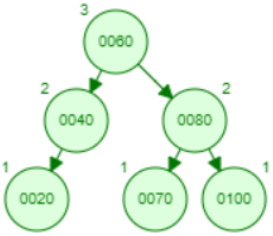


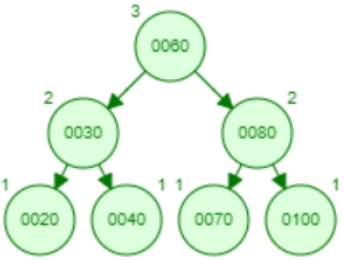
b) 100, 80, 60, 40, 20, 70, 30, 50, 35, 45, 55, 75, 65, 73, 77

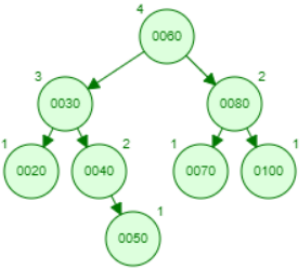


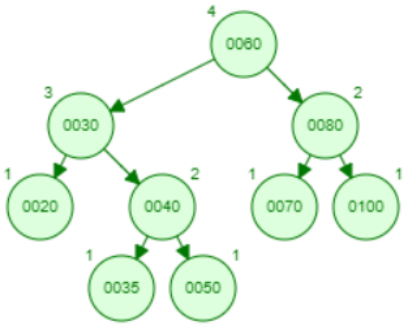


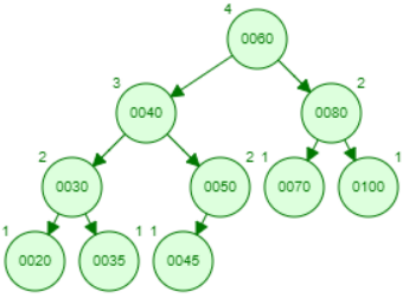


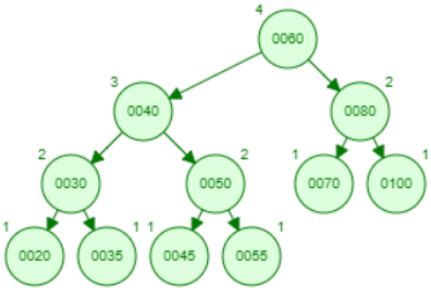


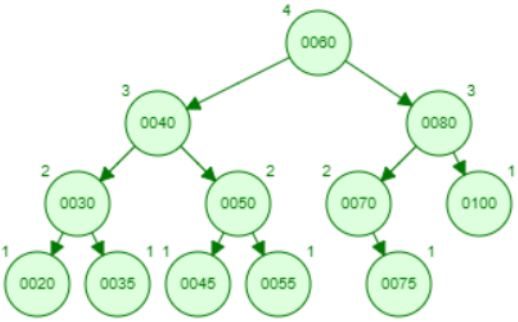


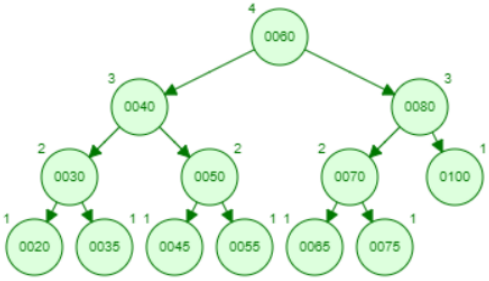


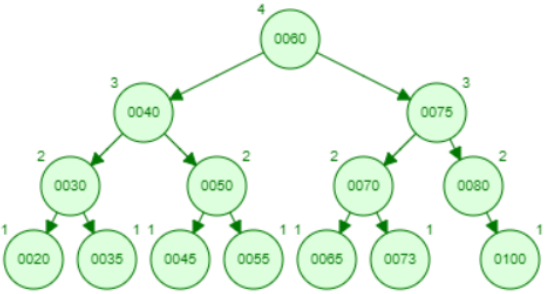


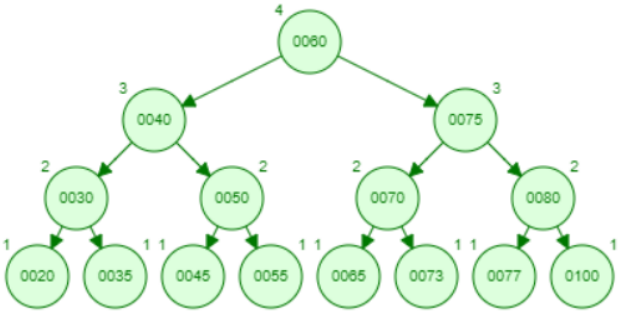




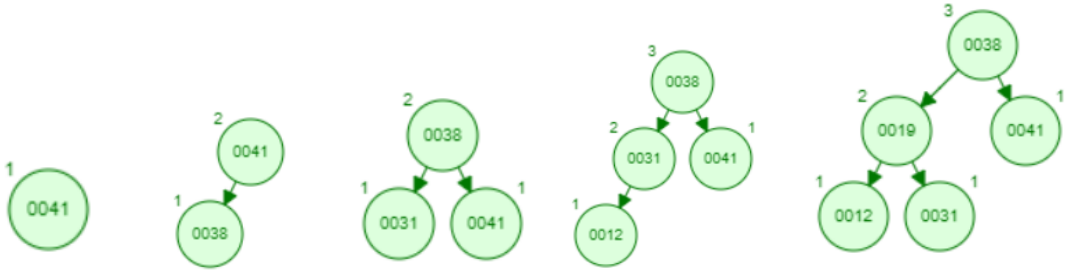




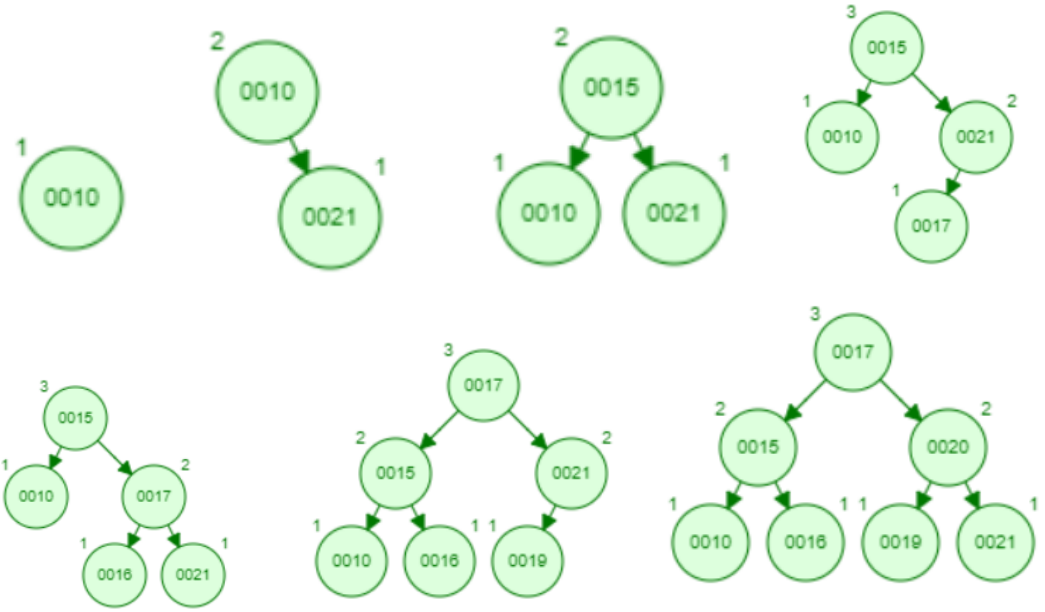




c) 41,38, 31, 12, 19, 8, 27, 49.

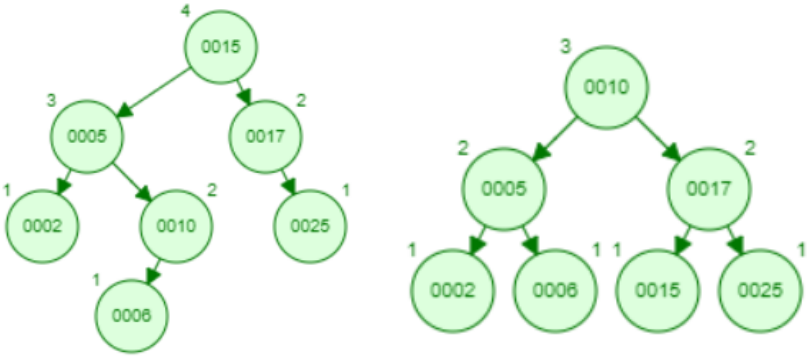


d) 10, 21, 15, 17, 16, 19, 20



3) Um certo professor Amongus afirma que a ordem pela qual um conjunto fixo de elementos é inserido em uma árvore AVL não interessa – sempre resulta na mesma árvore. Apresente um pequeno exemplo que prove que ele está errado.

Para analisar se há diferença na ordem de inserção, vamos avaliar esses dois exemplos:
Ordem: 10-15-17-25-5-2-6 Ordem: 2-5-6-10-15-17-25



É possível notar que há sim importância perante a ordem de inserção de dados em uma árvore AVL.