**Abroi binari. Arbori binari de căutare**

# Bibliografie

* [**https://web.stanford.edu/class/archive/cs/cs161/cs161.1168/lecture8.pdf**](https://web.stanford.edu/class/archive/cs/cs161/cs161.1168/lecture8.pdf) **(similar Cormen)**
* [**https://www.geeksforgeeks.org/binary-search-tree-data-structure/?ref=lbp**](https://www.geeksforgeeks.org/binary-search-tree-data-structure/?ref=lbp)
* [**https://algs4.cs.princeton.edu/32bst/**](https://algs4.cs.princeton.edu/32bst/) **- si cartea Algorithms,** [**https://algs4.cs.princeton.edu/lectures/keynote/32BinarySearchTrees.pdf**](https://algs4.cs.princeton.edu/lectures/keynote/32BinarySearchTrees.pdf)

# Probleme

1. <https://leetcode.com/problems/binary-tree-preorder-traversal/> și nerecursiv
2. Parcurgerea unui arbore binar pe niveluri – laboratorul 2 <https://leetcode.com/problems/binary-tree-level-order-traversal/description/>
3. Implementați operațiile de bază pentru un arbore binar de căutare **recursiv/nerecursiv**

* Inserarea unei valori date

[**https://leetcode.com/problems/insert-into-a-binary-search-tree/**](https://leetcode.com/problems/insert-into-a-binary-search-tree/)

[**https://www.techiedelight.com/?problem=InsertKeyIntoBST**](https://www.techiedelight.com/?problem=InsertKeyIntoBST)

* Parcurgerea în inordine

[**https://www.pbinfo.ro/probleme/3010/bst**](https://www.pbinfo.ro/probleme/3010/bst)

* Căutarea unei valori date

[**https://www.techiedelight.com/?problem=SearchKeyInBST**](https://www.techiedelight.com/?problem=SearchKeyInBST)

* Determinarea valorii minime și maxime din arbore
* Determinarea celei mai apropiate valori mai mare/mai mică decât o valoare dată (succesor / predecesor în inordine)

[**https://www.techiedelight.com/?problem=InorderPredecessorBST**](https://www.techiedelight.com/?problem=InorderPredecessorBST)

[**https://www.techiedelight.com/?problem=InorderSuccessorBST**](https://www.techiedelight.com/?problem=InorderSuccessorBST)

* Ștergerea valorii minime
* Ștergerea unei valori date

[**https://leetcode.com/problems/delete-node-in-a-bst/**](https://leetcode.com/problems/delete-node-in-a-bst/)

[**https://www.techiedelight.com/?problem=DeleteKeyFromBST**](https://www.techiedelight.com/?problem=DeleteKeyFromBST)

1. <https://leetcode.com/problems/range-sum-of-bst/description/>
2. <https://leetcode.com/problems/maximum-depth-of-binary-tree/>
3. <https://leetcode.com/problems/balanced-binary-tree/>
4. leetcode.com/problems/lowest-common-ancestor-of-a-binary-search-tree/
5. [**https://www.techiedelight.com/?problem=LowestCommonAncestorII**](https://www.techiedelight.com/?problem=LowestCommonAncestorII) (similar cu 6, dar aici nodurile pot sa nu fie în arbore)
6. <https://leetcode.com/problems/construct-binary-tree-from-preorder-and-inorder-traversal/description/> (divide et impera)