Rose tree

From Wikipedia, the free encyclopedia

For the species of rhododendron, see Rhododendron maximum.

In computing, a **multi-way tree** or **rose tree** is a tree data structure with a variable and unbounded number of branches per node.[1][*better source needed*] The name *rose tree* for this structure is prevalent in the functional programming community, e.g., in the context of the Bird–Meertens formalism.[2] It was coined by Lambert Meertens to evoke the similarly-named, and similarly-structured, common rhododendron.[3]

Definition [edit]

The following is a definition in Haskell:

```
data RoseTree a = RoseTree a [RoseTree a]
```

Sources [edit]

1. ^ Haskell Wiki, accessed 26 January 2012
2. ^ Malcolm, Grant (1990). "Data structures and program transformation". *Science of Computer Programming* **14** (2): 255–279.
3. ^ Skillicorn, David B. (1996). "Parallel implementation of tree skeletons" (PDF). *J. Parallel and Distributed Computing* **39** (2): 115–125.

External links [edit]

- Rose tree on the Haskell wiki
- Bayesian Rose Trees
- Data.Tree, an implementation of basic rose tree operations in the Haskell containers package

v · t · e	**Tree data structures**	[hide]
Search trees (dynamic sets/associative arrays)	2–3 · 2–3–4 · AA · (a,b) · AVL · B · B+ · B* · B^X · (Optimal) Binary search · Dancing · HTree · Interval · Order statistic · (Left-leaning) Red-black · Scapegoat · Splay · T · Treap · UB · Weight-balanced
Heaps	Binary · Binomial · Fibonacci · Leftist · Pairing · Skew · Van Emde Boas
Tries	Hash · Radix · Suffix · Ternary search · X-fast · Y-fast
Spatial data partitioning trees	BK · BSP · Cartesian · Hilbert R · *k*-d (implicit *k*-d) · M · Metric · MVP · Octree · Priority R · Quad · R · R+ · R* · Segment · VP · X
Other trees	Cover · Exponential · Fenwick · Finger · Fusion · Hash calendar · iDistance · K-ary · Left-child right-sibling · Link/cut · Log-structured merge · Merkle · PQ · Range · SPQR · Top

This computer science article is a stub. You can help Wikipedia by expanding it.

Categories: Computer science stubs | Trees (data structures)