

Nested Set Model (NSM)

NSM is a technique for representing trees in relational databases making it easy and fast to query.

Note: this technique can be used when the database doesn't support hierarchical query.

NSM idea is to assign numbers the nodes according to a tree traversal, which visits each node twice, assigning numbers in the order of visiting, and at both visits.

This leaves two numbers for each node, which are stored as two attributes.

Querying becomes inexpensive: hierarchy membership can be tested by comparing these numbers. All children's numbers should be between numbers of the parent.

Updating requires renumbering - and is therefore expensive. Renumbering can be avoided by using **rational numbers instead of integers** (this makes update faster, although more complicated).

https://en.wikipedia.org/wiki/Nested_set_model

