

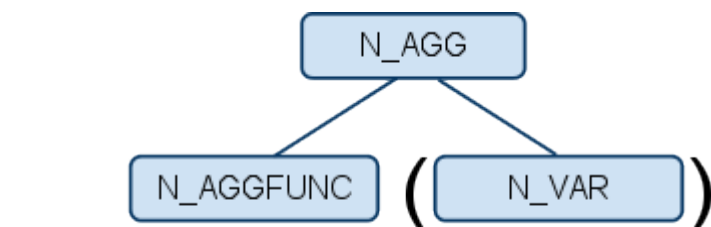
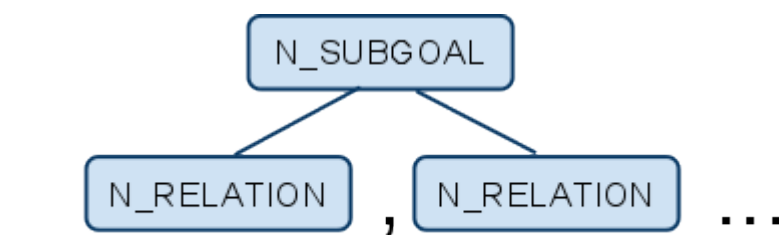
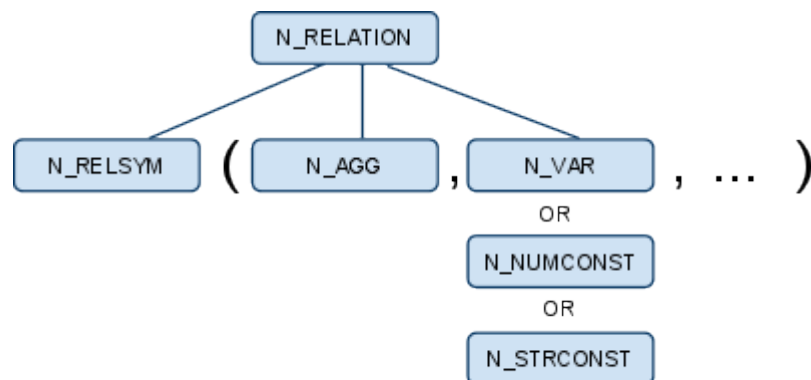
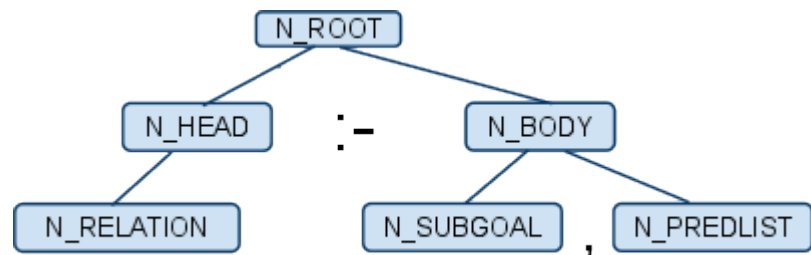
Datalog Grammar Tree :

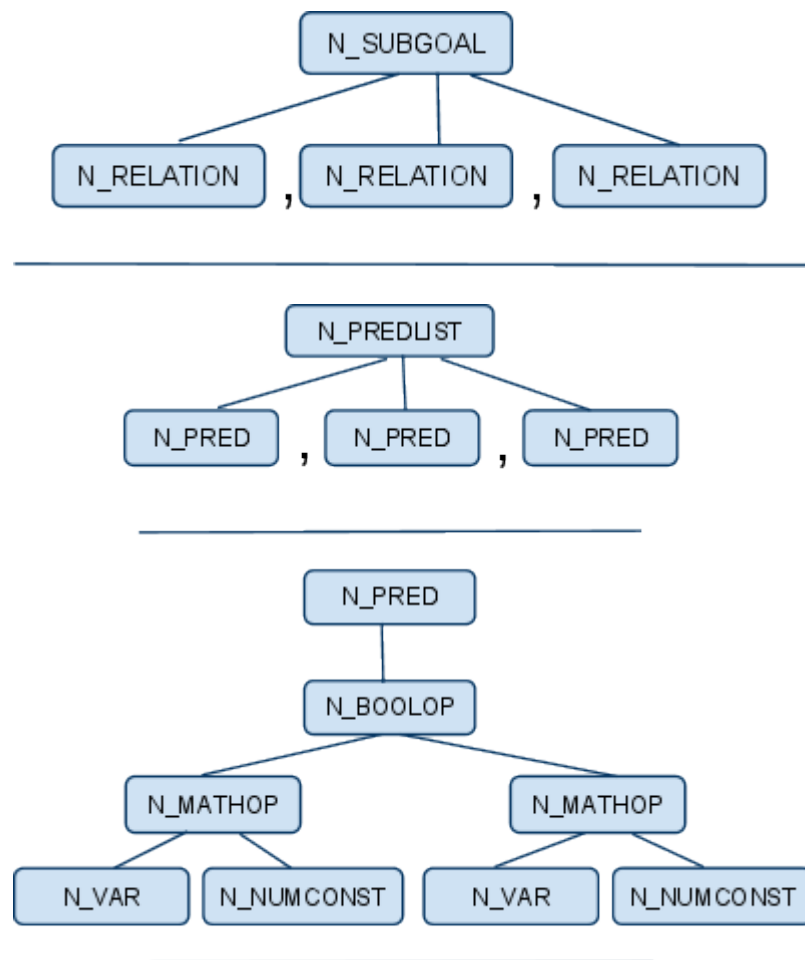
Namespace datalog

Classes : DatalogTree, DatalogParser, DlogTreeNode, DlogNodeValue

Files : datalogtree.h/cpp , dlognodevalue.h/cpp. datalog.l, datalog.ypp, datalogparser.h

Structure of the Grammar tree :





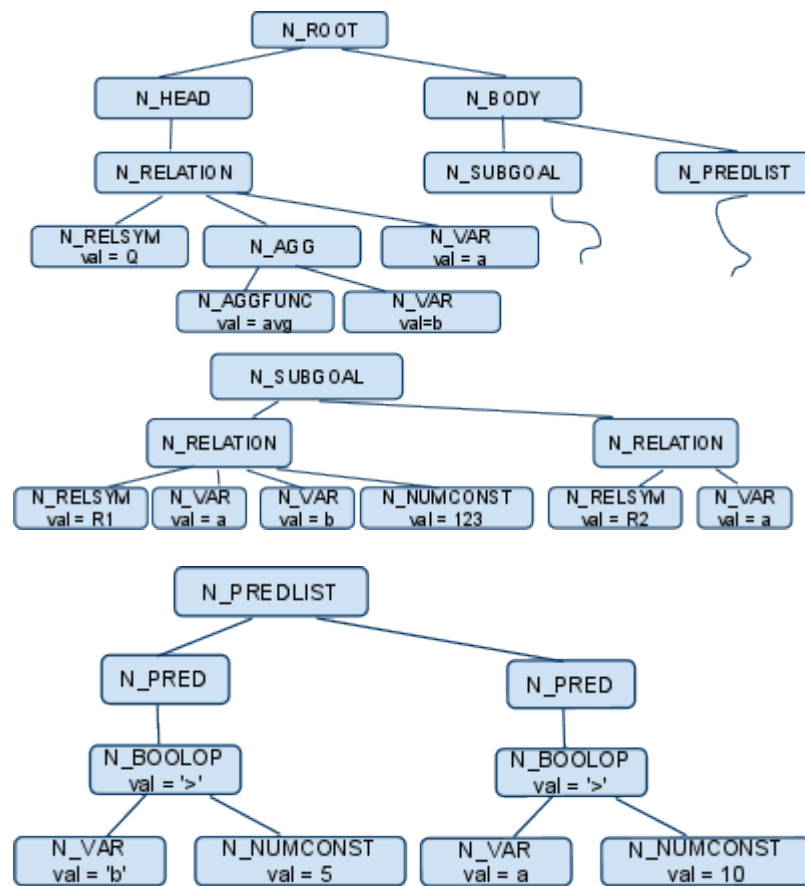
Note : The Node type is defined in DlogTreeNodeType (datalogtree.h)

There is a type N_EXPR defined to refer to an expression tree rooted on an N_BOOLOP node. This can be used when generating the tree. It is not used in the final grammar tree;

An example : $Q(\text{avg}(b), a) :- R1(a, b, 123, \text{'happy'}), R2(a), b > 5, a > 10;$

Note: we require to use variables for no-restrictive variables, instead of a "_" in normal datalog syntax

The tree for Q is



This tree is to be translated into an SQL that reads :

```

SELECT avg('R1.c1'), R1.c2
FROM R1, R2
WHERE
R1.c3=123 and
R1.c4='happy' and
R1.c1 = R2.c1 and
R1.c2>5 and
R1.c1 >10;

```