

## A BNF grammar for BNF

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The following rules define the non-terminals for the meta-grammar of BNF. The special production for the first rule makes it easier to define the start symbol to be the left-hand side of the first production.

$\langle bnf \rangle$	$::=$	$\langle first\_rule \rangle \langle rules \rangle$
$\langle first\_rule \rangle$	$::=$	$\langle rule \rangle$
$\langle rule \rangle$	$::=$	$\langle non\_terminal \rangle \langle maybe \rangle \langle sequence \rangle \langle alternatives \rangle$
$\langle rules \rangle$	$::=$	$\langle empty \rangle$   $\langle rule \rangle \langle rules \rangle$
$\langle alternatives \rangle$	$::=$	$\langle empty \rangle$   $\langle bar \rangle \langle sequence \rangle \langle alternatives \rangle$
$\langle sequence \rangle$	$::=$	$\langle empty \rangle$   $\langle sequence1 \rangle$
$\langle sequence1 \rangle$	$::=$	$\langle element \rangle$   $\langle sequence1 \rangle \langle delimited\_element \rangle$   $\langle sequence1 \rangle \langle space \rangle \langle element \rangle$
$\langle delimited\_element \rangle$	$::=$	$\langle non\_terminal \rangle$   $\langle delimited\_terminal \rangle$
$\langle element \rangle$	$::=$	$\langle non\_terminal \rangle$   $\langle terminal \rangle$
$\langle non\_terminal \rangle$	$::=$	$\langle left\_angle \rangle \langle identifier \rangle \langle right\_angle \rangle$
$\langle delimited\_terminal \rangle$	$::=$	$\langle quote \rangle \langle non\_quote\_seq \rangle \langle quote \rangle$   $\langle dquote \rangle \langle non\_dquote\_seq \rangle \langle dquote \rangle$
$\langle terminal \rangle$	$::=$	$\langle delimited\_terminal \rangle$   a sequence of non-space, non “<>:=“” characters.

The following rules define some of the terminals for the meta-grammar of BNF.

$\langle empty \rangle$	$::=$	“”
$\langle quote \rangle$	$::=$	“ ’ ”
$\langle left\_angle \rangle$	$::=$	‘ < ’
$\langle maybe \rangle$	$::=$	‘ ::= ’
$\langle dquote \rangle$	$::=$	“ ” ’
$\langle right\_angle \rangle$	$::=$	‘ > ’
$\langle bar \rangle$	$::=$	‘   ’

The rules for *identifier*, *non\_quote\_seq* and *non\_dquote\_seq* remain undefined at this point, but these are easily specified.