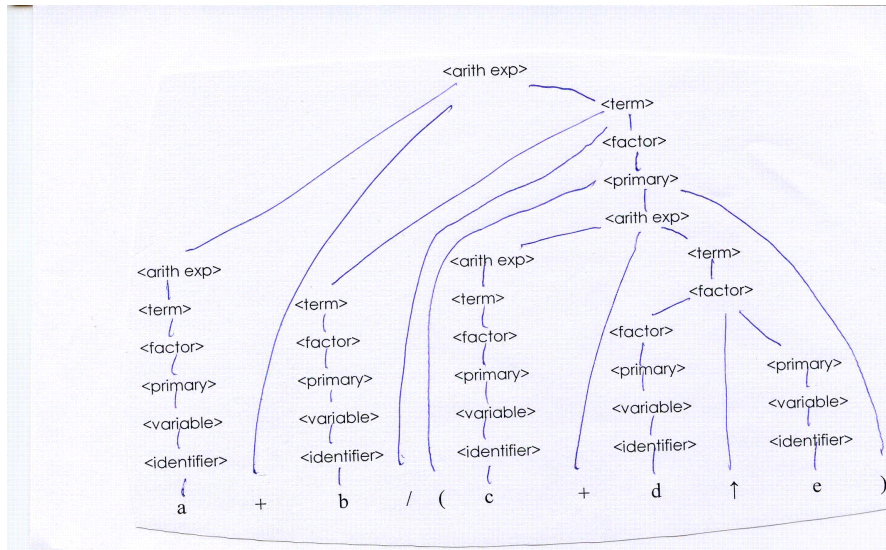


BNF Example

G_1 is a (context free) BNF grammar for a simple programming language arithmetic expression.

\langle arithmetic expression \rangle	\square	\langle term \rangle \langle arithmetic expression \rangle + \langle term \rangle \langle arithmetic expression \rangle - \langle term \rangle
\langle term \rangle	\rightarrow	\langle factor \rangle \langle term \rangle x \langle factor \rangle \langle term \rangle / \langle factor \rangle
\langle factor \rangle	\rightarrow	\langle primary \rangle \langle factor \rangle \uparrow \langle primary \rangle
\langle primary \rangle	\rightarrow	\langle variable \rangle \langle number \rangle (\langle arithmetic expression \rangle)
\langle variable \rangle	\rightarrow	\langle identifier \rangle \langle identifier \rangle [\langle subscript list \rangle]
\langle subscript list \rangle	\rightarrow	\langle arithmetic expression \rangle \langle subscript list \rangle , \langle arithmetic expression \rangle



a+b/(c+d^e)

The same language may be defined by many different grammars.

G_2 is another BNF grammar for a simple programming language arithmetic expression equivalent to grammar G_1 .

\langle arithmetic expression \rangle	\square	\langle term \rangle \langle arithmetic expression \rangle \uparrow \langle term \rangle \langle arithmetic expression \rangle x \langle term \rangle \langle arithmetic expression \rangle + \langle term \rangle
\langle term \rangle	\rightarrow	\langle primary \rangle \langle term \rangle - \langle primary \rangle \langle term \rangle / \langle primary \rangle
\langle primary \rangle	\rightarrow	\langle variable \rangle \langle number \rangle (\langle arithmetic expression \rangle)
\langle variable \rangle	\rightarrow	\langle identifier \rangle \langle identifier \rangle [\langle subscript list \rangle]
\langle subscript list \rangle	\rightarrow	\langle arithmetic expression \rangle \langle arithmetic expression \rangle , \langle subscript list \rangle