

C++ Visualizer: C++ Interpreter BNF Grammar

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This document defines the full specification for the BNF grammar used by the interpreter.

1 C++ Interpreter BNF Grammar

$$\begin{aligned} \textit{statement} \quad &\rightarrow \quad \mathbf{ID} = \textit{expression} ; \\ &| \quad \textit{declaration} \mathbf{ID} = \textit{expression} ; \\ &| \quad \mathbf{COUT INSERT} \textit{expression} ; \\ &| \quad \textit{declaration} \mathbf{ID} ; \end{aligned}$$
$$\begin{aligned} \textit{declaration} \quad &\rightarrow \quad \mathbf{INT} \\ &| \quad \mathbf{DOUBLE} \\ &| \quad \mathbf{FLOAT} \\ &| \quad \mathbf{CHAR} \\ &| \quad \mathbf{BOOL} \end{aligned}$$
$$\begin{aligned} \textit{expression} \quad &\rightarrow \quad - \textit{expression} \\ &| \quad (\textit{expression}) \\ &| \quad \mathbf{NUM} \\ &| \quad \mathbf{CHARACTER} \\ &| \quad \mathbf{ID} \end{aligned}$$