

# CyndaQuil Grammar Sheet

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$$[\text{Program}] \rightarrow [\text{Statement}]^* \quad (1)$$

$$[\text{Statement}] \rightarrow \begin{cases} \textit{run} \text{ [Expression] } \sim \\ \textit{catch} \text{ [Expression] } \textit{as identifier} \sim \\ \{[\text{Statement}]^*\} \\ \textit{perchance} \text{ [Expression] } [\text{Scope}] \\ [\text{Scope}] \end{cases} \quad (2)$$

$$[\text{Scope}] \rightarrow [\text{Statement}]^* \quad (3)$$

$$[\text{Expression}] \rightarrow \begin{cases} [\text{Term}] \\ [\text{Binary Expression}] \end{cases} \quad (4)$$

$$[\text{Binary Expression}] \rightarrow \begin{cases} [\text{Expression}] * [\text{Expression}] & \text{precedence} = 1 \\ [\text{Expression}] \div [\text{Expression}] & \text{precedence} = 1 \\ [\text{Expression}] + [\text{Expression}] & \text{precedence} = 0 \\ [\text{Expression}] - [\text{Expression}] & \text{precedence} = 0 \end{cases} \quad (5)$$

$$[\text{Term}] \rightarrow \begin{cases} \textit{integer\_literal} \\ \textit{identifier} \\ ([\text{Expression}]) \end{cases} \quad (6)$$