

$$\begin{aligned}
\text{contract} &::= \text{decl}^+ \\
\text{decl} &::= \text{event_decl} \mid \text{protocol_decl} \mid \text{variable_decl} \mid \text{property_decl} \mid \text{rule_decl} \\
\text{event_decl} &::= \mathbf{event} \text{ event_name } (, \text{ event_name })^* ; \\
\text{protocol_decl} &::= \mathbf{protocol} \text{ protocol } ; ; \\
\text{protocol} &::= \mathbf{any} \mid \text{event_name} \mid \text{protocol} ; \text{protocol} \\
&\quad \mid \text{protocol} + \text{protocol} \mid \text{protocol} * \\
\text{variable_decl} &::= \mathbf{variable} \left(\text{var_name } (, \text{ var_name })^* (: \text{type})^? ; \right)^+ \\
\text{type} &::= \mathbf{bool} \mid \mathbf{max} (\text{number}) \\
\text{property_decl} &::= \mathbf{property} (\text{ldl_formula} ;)^+ \\
\text{rule_decl} &::= \mathbf{rule} (\text{rule} ;)^+ \\
\text{rule} &::= \left(\mathbf{except}^? \mathbf{on} \text{ event_name } (, \text{ event_name })^* (\{ \text{code} \})^? \right)^? \\
&\quad \left(\mathbf{when} \text{ condition } (\{ \text{code} \})^? \right)^? \\
&\quad \text{action } (\{ \text{code} \})^? \\
\text{condition} &::= \text{proposition} \mid < \text{ldl_path} > \text{condition} \\
\text{action} &::= \mathbf{ensure} \text{ proposition} \\
&\quad \mid \mathbf{raise} \text{ event_name } (+ \text{ event_name })^* \\
&\quad \mid \mathbf{preserve} (\text{var_name } (, \text{ var_name })^*) \\
&\quad \mid \mathbf{do} (\text{action } (, \text{ action })^*)
\end{aligned}$$