

A quine program written in K-framework

Radu Mereuță (radu.mereuta@info.uaic.ro)

University of Al. I. Cuza, Iași

Usage: `kompile` and then run with `krun -output-mode=none`

MODULE QUINE-EXPLICIT

CONFIGURATION:

Diagram illustrating the transformation of a KQL query into a JSON string:

- k**: Input KQL query: `""`
- out**: Output JSON string: `"/!*!"`
- prefix**: The transformation process involves escaping and wrapping the query into a JSON object structure, including fields like `title`, `author`, `texttt`, `organization`, and `@Usage`.

`suffix`

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"" ↪ " syntax" ↪ " K ::= escape(String) [function]" ↪ " rule" ↪ " escape(S:String) => replaceAll(replaceAll(replaceAll(S, "\\|\\|\\|\\|", "\\|\\|\\|\\|\\|\\|"), "\\|\\n\\|", "\\|\\|\\|\\n\\|"), "\\|\\|\\|\\|\\|\\|", "\\|\\|\\|\\|\\|\\|\\|\\|")" ↪ "" ↪ " rule" ↪ " <k> (S1 => S1 +String P +String "\\n\\n\\n") ~> (S2 => S2 +String
```

SYNTAX $K ::= \text{escape } (String) [\text{function}]$

RULE	$\text{escape} (S:String)$
	$\text{replaceAll} (\text{replaceAll} (\text{replaceAll} (S, "\\\"", "\"\\\""), "\\n\"", "\"\\n\""), "\\\"", "\"\\\"")$

RULE

$\frac{S1}{S1 + \text{String } P + \text{String } "\\n"} \xrightarrow{\quad} \frac{S2}{S2 + \text{String } "\\\" + \text{String } \text{escape}(P) + \text{String } "\\\" \sim \>\\n\"}$

$\frac{P:\text{String}}{\bullet_K}$

RULE

<div style="border: 1px solid black; border-radius: 50%; padding: 10px; width: 150px; margin: 0 auto;"> <div style="border: 1px solid black; border-radius: 50%; padding: 2px; text-align: center; width: 20px; float: left; margin-bottom: 5px;">k</div> $\frac{S1 \sim S2}{\text{" " } \sim \text{" "}}$ </div>	<div style="border: 1px solid black; border-radius: 50%; padding: 10px; width: 150px; margin: 0 auto;"> <div style="border: 1px solid black; border-radius: 50%; padding: 2px; text-align: center; width: 60px; float: left; margin-bottom: 5px;">prefix</div> $\frac{\bullet_K}{0}$ </div>	<div style="border: 1px solid black; border-radius: 50%; padding: 10px; width: 500px; margin: 0 auto;"> <div style="border: 1px solid black; border-radius: 50%; padding: 2px; text-align: center; width: 40px; float: left; margin-bottom: 5px;">out</div> $\frac{\bullet_{List}}{S1 + String S2 + String \text{" .\n </prefix>\n <suffix>\n"}}$ </div>
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RULE

$\frac{S1}{S1 + \text{String } P + \text{String } "\backslash n"} \curvearrowright \frac{S2}{S2 + \text{String } "\" + \text{String } \text{escape } (P) + \text{String } "\" \sim > \backslash n"}$

suffix: $P:\text{String}$, \bullet_K

prefix: 0

Figure 1 illustrates the three rules of the algorithm. Each rule is represented by a cloud-like shape with a label above it and a mathematical expression inside.

- Rule 1 (labeled 'k'):** The expression is
$$\frac{S1 \rightarrow S2}{\bullet_K}$$
 where \bullet_K is a bullet point followed by K .
- Rule 2 (labeled 'suffix'):** The expression is
$$\frac{\bullet_K}{0}$$
 where \bullet_K is a bullet point followed by K .
- Rule 3 (labeled 'out'):** The expression is
$$\frac{\bullet_{List}}{S2 + \text{String } ".\n </suffix>\n" + \text{String } S1}$$
 where \bullet_{List} is a bullet point followed by $List$.

END MODULE