

String literals

[/Reference manual/Non-standard extensions to Z](#)

Within a Z specification, a string literal may be written by enclosing it in double quotes, e.g. *"hello, world"*.

In the lexis, the characters of a string are expected to appear literally, with escaped-denotations provided for just the string delimiter (`\`) and the escape character (`\\`). The character `'''` remains in the *SYMBOL* class and can be used in a *WORDPART*, but not as the first character in a *WORD*.

In mark-up, characters may be denoted using similar conventions to those used in the C programming language.

$$STRING = ''' , \{STRCHAR\} , ''' ;$$

$$STRCHAR = '\backslash , ESCAPE$$

$$| \quad ? \text{ any UCS character other than '\backslash , '' and NLCHAR ?}$$

$$;$$



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$$\begin{aligned}
 \textit{ESCAPE} &= 'n' & (* \text{ continuation character} \\
 &| 't' & (* \text{ base character} \\
 &| 'b' & (* \text{ encoding character} \\
 &| 'r' & (* \text{ UCS character} \\
 &| 'f' & \\
 &| "'" & \\
 &| '\ ' & \\
 &| \textit{NLCHAR} & \\
 &| \textit{OCTAL} | \textit{OCTAL}, \textit{OCTAL} | \textit{OCTAL}, \textit{OCTAL}, \textit{OCTAL} & \\
 &| 'u', \textit{HEX}, \textit{HEX}, \textit{HEX}, \textit{HEX} & \\
 &| 'U', \textit{HEX}, \textit{HEX}, \textit{HEX}, \textit{HEX}, \textit{HEX}, \textit{HEX}, \textit{HEX}, \textit{HEX} & \\
 &; &
 \end{aligned}$$

$$\textit{OCTAL} = '0' | '1' | '2' | '3' | '4' | '5' | '6' | '7';$$

$$\textit{HEX} = '0' | '1' | '2' | '3' | '4' | '5' | '6' | '7' | '8' | '9' | 'a' | 'b' | 'c' | 'd' | 'e' | 'f' | 'A' | 'B';$$

Also, a \ followed by any other character is taken to be just that character.

In the concrete syntax, strings are used as literals in expressions and for commentary as predicates.

$$\textit{Predicate} = \textit{comment}, \textit{STRING};$$

$$\textit{Expression} = \textit{STRING};$$

There is no limit on the length of a string.

String literals are of type $\textit{seq } \mathbb{A}$, with the numbers being UCS encodings.

There is no notation for denoting a character literal. (The delimiter used in most



other languages having been reserved in Z for use as a decoration.)

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