7.7.4 String Literals

A string literal is zero or more characters enclosed in single or double quotes. Each character may be represented by an escape sequence.

Syntax

StringLiteral **::**
" *DoubleStringCharacters*$_{opt}$ "
' *SingleStringCharacters*$_{opt}$ '

DoubleStringCharacters **::**
DoubleStringCharacter DoubleStringCharacters$_{opt}$

SingleStringCharacters **::**
SingleStringCharacter SingleStringCharacters$_{opt}$

DoubleStringCharacter **::**
SourceCharacter **but not** *double-quote* **" or** *backslash* **\ or** *LineTerminator*
EscapeSequence

SingleStringCharacter **::**
SourceCharacter **but not** *single-quote* **' or** *backslash* **\ or** *LineTerminator*
EscapeSequence

EscapeSequence **::**
CharacterEscapeSequence
OctalEscapeSequence
HexEscapeSequence
UnicodeEscapeSequence

CharacterEscapeSequence **::**
**** *SingleEscapeCharacter*
**** *NonEscapeCharacter*

SingleEscapeCharacter :: *one of*
' " \ b f n r t v

*NonEscapeCharacter***::**
SourceCharacter **but not** *EscapeCharacter* **or** *LineTerminator*

EscapeCharacter **::**
SingleEscapeCharacter
OctalDigit
x
u

HexEscapeSequence **::**
\x *HexDigit HexDigit*

OctalEscapeSequence **::**
**** *OctalDigit*
**** *OctalDigit OctalDigit*
**** *ZeroToThree OctalDigit OctalDigit*

ZeroToThree :: *one of*
0 1 2 3

UnicodeEscapeSequence **::**
\u *HexDigit HexDigit HexDigit HexDigit*

The definitions of the nonterminals *HexDigit* and *OctalDigit* are given in section Error: Reference source not found.

The above grammar contains an ambiguity where sequences like **\00** can be interpreted either as a one-digit *OctalEscapeSequence* followed by a *SourceCharacter* or as a two-digit *OctalEscapeSequence*. This ambiguity is resolved in favor of the longer *OctalEscapeSequence*. Specifically, we amend the grammar to state that a one-digit *OctalEscapeSequence* expansion applies only if the next character is not an *OctalDigit*. A two-digit *OctalEscapeSequence* expansion whose first digit is between **0** and **3**, inclusive, applies only if the next character is not an *OctalDigit*.