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sf::Utf< 8 > Class Template Reference

Specialization of the [Utf](http://docs.google.com/classsf_1_1Utf.htm) template for UTF-8. [More...](http://docs.google.com/classsf_1_1Utf_3_018_01_4.htm#details)

#include <[Utf.hpp](http://docs.google.com/Utf_8hpp_source.htm)>

| Static Public Member Functions | |
| --- | --- |
| template<typename In > | |
| static In | [decode](http://docs.google.com/classsf_1_1Utf_3_018_01_4.htm#a59d4e8d5832961e62b263d308b72bf4b) (In begin, In end, Uint32 &output, Uint32 replacement=0) |
|  | Decode a single UTF-8 character. |
|  | |
| template<typename Out > | |
| static Out | [encode](http://docs.google.com/classsf_1_1Utf_3_018_01_4.htm#a5fbc6b5a996f52e9e4a14633d0d71847) (Uint32 input, Out output, Uint8 replacement=0) |
|  | Encode a single UTF-8 character. |
|  | |
| template<typename In > | |
| static In | [next](http://docs.google.com/classsf_1_1Utf_3_018_01_4.htm#a0365a0b38700baa161843563d083edf6) (In begin, In end) |
|  | Advance to the next UTF-8 character. |
|  | |
| template<typename In > | |
| static std::size\_t | [count](http://docs.google.com/classsf_1_1Utf_3_018_01_4.htm#af1f15d9a772ee887be39e97431e15d32) (In begin, In end) |
|  | Count the number of characters of a UTF-8 sequence. |
|  | |
| template<typename In , typename Out > | |
| static Out | [fromAnsi](http://docs.google.com/classsf_1_1Utf_3_018_01_4.htm#a1b62ba85ad3c8ce68746e16192b3eef0) (In begin, In end, Out output, const std::locale &locale=std::locale()) |
|  | Convert an ANSI characters range to UTF-8. |
|  | |
| template<typename In , typename Out > | |
| static Out | [fromWide](http://docs.google.com/classsf_1_1Utf_3_018_01_4.htm#aa99e636a7addc157b425dfc11b008f42) (In begin, In end, Out output) |
|  | Convert a wide characters range to UTF-8. |
|  | |
| template<typename In , typename Out > | |
| static Out | [fromLatin1](http://docs.google.com/classsf_1_1Utf_3_018_01_4.htm#a85dd3643b7109a1a2f802747e55e28e8) (In begin, In end, Out output) |
|  | Convert a latin-1 (ISO-5589-1) characters range to UTF-8. |
|  | |
| template<typename In , typename Out > | |
| static Out | [toAnsi](http://docs.google.com/classsf_1_1Utf_3_018_01_4.htm#a3d8b02f29021bd48831e7706d826f0c5) (In begin, In end, Out output, char replacement=0, const std::locale &locale=std::locale()) |
|  | Convert an UTF-8 characters range to ANSI characters. |
|  | |
| template<typename In , typename Out > | |
| static Out | [toWide](http://docs.google.com/classsf_1_1Utf_3_018_01_4.htm#ac6633c64ff1fad6bd1bfe72c37b3a468) (In begin, In end, Out output, wchar\_t replacement=0) |
|  | Convert an UTF-8 characters range to wide characters. |
|  | |
| template<typename In , typename Out > | |
| static Out | [toLatin1](http://docs.google.com/classsf_1_1Utf_3_018_01_4.htm#adf6f6e0a8ee0527c8ab390ce5c0b6b13) (In begin, In end, Out output, char replacement=0) |
|  | Convert an UTF-8 characters range to latin-1 (ISO-5589-1) characters. |
|  | |
| template<typename In , typename Out > | |
| static Out | [toUtf8](http://docs.google.com/classsf_1_1Utf_3_018_01_4.htm#aef68054cab6a592c0b04de94e93bb520) (In begin, In end, Out output) |
|  | Convert a UTF-8 characters range to UTF-8. |
|  | |
| template<typename In , typename Out > | |
| static Out | [toUtf16](http://docs.google.com/classsf_1_1Utf_3_018_01_4.htm#a925ac9e141dcb6f9b07c7b95f7cfbda2) (In begin, In end, Out output) |
|  | Convert a UTF-8 characters range to UTF-16. |
|  | |
| template<typename In , typename Out > | |
| static Out | [toUtf32](http://docs.google.com/classsf_1_1Utf_3_018_01_4.htm#a79395429baba13dd04a8c1fba745ce65) (In begin, In end, Out output) |
|  | Convert a UTF-8 characters range to UTF-32. |
|  | |

## Detailed Description

template<>

class sf::Utf< 8 >

Specialization of the [Utf](http://docs.google.com/classsf_1_1Utf.htm) template for UTF-8.

Definition at line [48](http://docs.google.com/Utf_8hpp_source.htm#l00048) of file [Utf.hpp](http://docs.google.com/Utf_8hpp_source.htm).

## Member Function Documentation

template<typename In >

| | static std::size\_t [sf::Utf](http://docs.google.com/classsf_1_1Utf.htm)< 8 >::count | ( | In | *begin*, | | --- | --- | --- | --- | |  |  | In | *end* | |  | ) |  |  | | static |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

Count the number of characters of a UTF-8 sequence.

This function is necessary for multi-elements encodings, as a single character may use more than 1 storage element, thus the total size can be different from (begin - end).

Parameters

| begin | Iterator pointing to the beginning of the input sequence |
| --- | --- |
| end | Iterator pointing to the end of the input sequence |

ReturnsIterator pointing to one past the last read element of the input sequence

template<typename In >

| | static In [sf::Utf](http://docs.google.com/classsf_1_1Utf.htm)< 8 >::decode | ( | In | *begin*, | | --- | --- | --- | --- | |  |  | In | *end*, | |  |  | Uint32 & | *output*, | |  |  | Uint32 | *replacement* = 0 | |  | ) |  |  | | static |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

Decode a single UTF-8 character.

Decoding a character means finding its unique 32-bits code (called the codepoint) in the Unicode standard.

Parameters

| begin | Iterator pointing to the beginning of the input sequence |
| --- | --- |
| end | Iterator pointing to the end of the input sequence |
| output | Codepoint of the decoded UTF-8 character |
| replacement | Replacement character to use in case the UTF-8 sequence is invalid |

ReturnsIterator pointing to one past the last read element of the input sequence

template<typename Out >

| | static Out [sf::Utf](http://docs.google.com/classsf_1_1Utf.htm)< 8 >::encode | ( | Uint32 | *input*, | | --- | --- | --- | --- | |  |  | Out | *output*, | |  |  | Uint8 | *replacement* = 0 | |  | ) |  |  | | static |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

Encode a single UTF-8 character.

Encoding a character means converting a unique 32-bits code (called the codepoint) in the target encoding, UTF-8.

Parameters

| input | Codepoint to encode as UTF-8 |
| --- | --- |
| output | Iterator pointing to the beginning of the output sequence |
| replacement | Replacement for characters not convertible to UTF-8 (use 0 to skip them) |

ReturnsIterator to the end of the output sequence which has been written

template<typename In , typename Out >

| | static Out [sf::Utf](http://docs.google.com/classsf_1_1Utf.htm)< 8 >::fromAnsi | ( | In | *begin*, | | --- | --- | --- | --- | |  |  | In | *end*, | |  |  | Out | *output*, | |  |  | const std::locale & | *locale* = std::locale() | |  | ) |  |  | | static |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

Convert an ANSI characters range to UTF-8.

The current global locale will be used by default, unless you pass a custom one in the *locale* parameter.

Parameters

| begin | Iterator pointing to the beginning of the input sequence |
| --- | --- |
| end | Iterator pointing to the end of the input sequence |
| output | Iterator pointing to the beginning of the output sequence |
| locale | Locale to use for conversion |

ReturnsIterator to the end of the output sequence which has been written

template<typename In , typename Out >

| | static Out [sf::Utf](http://docs.google.com/classsf_1_1Utf.htm)< 8 >::fromLatin1 | ( | In | *begin*, | | --- | --- | --- | --- | |  |  | In | *end*, | |  |  | Out | *output* | |  | ) |  |  | | static |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

Convert a latin-1 (ISO-5589-1) characters range to UTF-8.

Parameters

| begin | Iterator pointing to the beginning of the input sequence |
| --- | --- |
| end | Iterator pointing to the end of the input sequence |
| output | Iterator pointing to the beginning of the output sequence |

ReturnsIterator to the end of the output sequence which has been written

template<typename In , typename Out >

| | static Out [sf::Utf](http://docs.google.com/classsf_1_1Utf.htm)< 8 >::fromWide | ( | In | *begin*, | | --- | --- | --- | --- | |  |  | In | *end*, | |  |  | Out | *output* | |  | ) |  |  | | static |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

Convert a wide characters range to UTF-8.

Parameters

| begin | Iterator pointing to the beginning of the input sequence |
| --- | --- |
| end | Iterator pointing to the end of the input sequence |
| output | Iterator pointing to the beginning of the output sequence |

ReturnsIterator to the end of the output sequence which has been written

template<typename In >

| | static In [sf::Utf](http://docs.google.com/classsf_1_1Utf.htm)< 8 >::next | ( | In | *begin*, | | --- | --- | --- | --- | |  |  | In | *end* | |  | ) |  |  | | static |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

Advance to the next UTF-8 character.

This function is necessary for multi-elements encodings, as a single character may use more than 1 storage element.

Parameters

| begin | Iterator pointing to the beginning of the input sequence |
| --- | --- |
| end | Iterator pointing to the end of the input sequence |

ReturnsIterator pointing to one past the last read element of the input sequence

template<typename In , typename Out >

| | static Out [sf::Utf](http://docs.google.com/classsf_1_1Utf.htm)< 8 >::toAnsi | ( | In | *begin*, | | --- | --- | --- | --- | |  |  | In | *end*, | |  |  | Out | *output*, | |  |  | char | *replacement* = 0, | |  |  | const std::locale & | *locale* = std::locale() | |  | ) |  |  | | static |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

Convert an UTF-8 characters range to ANSI characters.

The current global locale will be used by default, unless you pass a custom one in the *locale* parameter.

Parameters

| begin | Iterator pointing to the beginning of the input sequence |
| --- | --- |
| end | Iterator pointing to the end of the input sequence |
| output | Iterator pointing to the beginning of the output sequence |
| replacement | Replacement for characters not convertible to ANSI (use 0 to skip them) |
| locale | Locale to use for conversion |

ReturnsIterator to the end of the output sequence which has been written

template<typename In , typename Out >

| | static Out [sf::Utf](http://docs.google.com/classsf_1_1Utf.htm)< 8 >::toLatin1 | ( | In | *begin*, | | --- | --- | --- | --- | |  |  | In | *end*, | |  |  | Out | *output*, | |  |  | char | *replacement* = 0 | |  | ) |  |  | | static |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

Convert an UTF-8 characters range to latin-1 (ISO-5589-1) characters.

Parameters

| begin | Iterator pointing to the beginning of the input sequence |
| --- | --- |
| end | Iterator pointing to the end of the input sequence |
| output | Iterator pointing to the beginning of the output sequence |
| replacement | Replacement for characters not convertible to wide (use 0 to skip them) |

ReturnsIterator to the end of the output sequence which has been written

template<typename In , typename Out >

| | static Out [sf::Utf](http://docs.google.com/classsf_1_1Utf.htm)< 8 >::toUtf16 | ( | In | *begin*, | | --- | --- | --- | --- | |  |  | In | *end*, | |  |  | Out | *output* | |  | ) |  |  | | static |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

Convert a UTF-8 characters range to UTF-16.

Parameters

| begin | Iterator pointing to the beginning of the input sequence |
| --- | --- |
| end | Iterator pointing to the end of the input sequence |
| output | Iterator pointing to the beginning of the output sequence |

ReturnsIterator to the end of the output sequence which has been written

template<typename In , typename Out >

| | static Out [sf::Utf](http://docs.google.com/classsf_1_1Utf.htm)< 8 >::toUtf32 | ( | In | *begin*, | | --- | --- | --- | --- | |  |  | In | *end*, | |  |  | Out | *output* | |  | ) |  |  | | static |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

Convert a UTF-8 characters range to UTF-32.

Parameters

| begin | Iterator pointing to the beginning of the input sequence |
| --- | --- |
| end | Iterator pointing to the end of the input sequence |
| output | Iterator pointing to the beginning of the output sequence |

ReturnsIterator to the end of the output sequence which has been written

template<typename In , typename Out >

| | static Out [sf::Utf](http://docs.google.com/classsf_1_1Utf.htm)< 8 >::toUtf8 | ( | In | *begin*, | | --- | --- | --- | --- | |  |  | In | *end*, | |  |  | Out | *output* | |  | ) |  |  | | static |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

Convert a UTF-8 characters range to UTF-8.

This functions does nothing more than a direct copy; it is defined only to provide the same interface as other specializations of the sf::Utf<> template, and allow generic code to be written on top of it.

Parameters

| begin | Iterator pointing to the beginning of the input sequence |
| --- | --- |
| end | Iterator pointing to the end of the input sequence |
| output | Iterator pointing to the beginning of the output sequence |

ReturnsIterator to the end of the output sequence which has been written

template<typename In , typename Out >

| | static Out [sf::Utf](http://docs.google.com/classsf_1_1Utf.htm)< 8 >::toWide | ( | In | *begin*, | | --- | --- | --- | --- | |  |  | In | *end*, | |  |  | Out | *output*, | |  |  | wchar\_t | *replacement* = 0 | |  | ) |  |  | | static |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

Convert an UTF-8 characters range to wide characters.

Parameters

| begin | Iterator pointing to the beginning of the input sequence |
| --- | --- |
| end | Iterator pointing to the end of the input sequence |
| output | Iterator pointing to the beginning of the output sequence |
| replacement | Replacement for characters not convertible to wide (use 0 to skip them) |

ReturnsIterator to the end of the output sequence which has been written

The documentation for this class was generated from the following file:

* [Utf.hpp](http://docs.google.com/Utf_8hpp_source.htm)

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