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class

std::ios

<ios> <iostream>

typedef basic_ios<char> ios;

Base class for streams (type-dependent components)



Base class for all stream classes using narrow characters (of type char)

This is an instantiation of `basic_ios` with the following template parameters:

template parameter	definition	comments
charT	char	Aliased as member <code>char_type</code>
traits	<code>char_traits<char></code>	Aliased as member <code>traits_type</code>

Both this class and its parent class, `ios_base`, define the components of streams that do not depend on whether the stream is an input or an output stream. `ios_base` describes the members that are independent of the template parameters, while this one describes the members that are dependent on the template parameters.

The class adds to the information kept by its inherited `ios_base` component, the following:

	field	member functions	description
Formatting	fill character	<code>fill</code>	Character to pad a formatted field up to the <i>field width</i> (<i>width</i>).
State	error state	<code>rdstate</code> <code>setstate</code> <code>clear</code>	The current error state of the stream. Individual values may be obtained by calling <code>good</code> , <code>eof</code> , <code>fail</code> and <code>bad</code> . See member type <code>istate</code> .
	exception mask	<code>exceptions</code>	The state flags for which a <code>failure</code> exception is thrown. See member type <code>istate</code> .
Other	tied stream	<code>tie</code>	Pointer to output stream that is flushed before each i/o operation on this stream.
	stream buffer	<code>rdbuf</code>	Pointer to the associated <code>streambuf</code> object, which is charge of all input/output operations.

Member types

member type	definition
<code>char_type</code>	<code>char</code>
<code>traits_type</code>	<code>char_traits<char></code>
<code>int_type</code>	<code>int</code>
<code>pos_type</code>	<code>streampos</code>
<code>off_type</code>	<code>streamoff</code>

Along with the member types inherited from `ios_base`:

<code>event</code>	Type to indicate event type (public member type)
<code>event_callback</code>	Event callback function type (public member type)
<code>failure</code>	Base class for stream exceptions (public member class)
<code>fmtflags</code>	Type for stream format flags (public member type)
<code>Init</code>	Initialize standard stream objects (public member class)
<code>istate</code>	Type for stream state flags (public member type)
<code>openmode</code>	Type for stream opening mode flags (public member type)
<code>seekdir</code>	Type for stream seeking direction flag (public member type)

Public member functions

(constructor)	Construct object (public member function)
(destructor)	Destroy object (public member function)

State flag functions:

<code>good</code>	Check whether state of stream is good (public member function)
<code>eof</code>	Check whether eofbit is set (public member function)
<code>fail</code>	Check whether either failbit or badbit is set (public member function)

ios::operator bool

ios::operator!

ios::rdbuf

ios::rdstate

ios::setstate

ios::tie

ios::widen

protected members:

ios::init

ios::move

ios::set_rdbuf

ios::swap

C++11

C++11

C++11

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bad	Check whether badbit is set (public member function)
operator!	Evaluate stream (not) (public member function)
operator bool <small>C++11</small>	Evaluate stream (public member function)
rdstate	Get error state flags (public member function)
setstate	Set error state flag (public member function)
clear	Set error state flags (public member function)

Formatting:

copyfmt	Copy formatting information (public member function)
fill	Get/set fill character (public member function)

Other:

exceptions	Get/set exceptions mask (public member function)
imbue	Imbue locale (public member function)
tie	Get/set tied stream (public member function)
rdbuf	Get/set stream buffer (public member function)
narrow	Narrow character (public member function)
widen	Widen character (public member function)

fx Protected member functions

init	Initialize object (protected member function)
move <small>C++11</small>	Move internals (protected member function)
swap <small>C++11</small>	Swap internals (protected member function)
set_rdbuf <small>C++11</small>	Set stream buffer (protected member function)

fx Public member functions inherited from ios_base

flags	Get/set format flags (public member function)
setf	Set specific format flags (public member function)
unsetf	Clear specific format flags (public member function)
precision	Get/Set floating-point decimal precision (public member function)
width	Get/set field width (public member function)
imbue	Imbue locale (public member function)
getloc	Get current locale (public member function)
xalloc	Get new index for extensible array [static] (public static member function)
word	Get integer element of extensible array (public member function)
pword	Get pointer element of extensible array (public member function)
register_callback	Register event callback function (public member function)
sync_with_stdio	Toggle synchronization with cstdio streams [static] (public static member function)