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public member function

std::ios_base::iword

<ios> <iostream>

long& iword (int idx);

Get integer element of extensible arrayReturns a reference to the object of type long which corresponds to index *idx* in the *internal extensible array*.

If *idx* is an index to a new element and the internal extensible array is not long enough (or is not yet allocated), the function extends it (or allocates it) with as many zero-initialized elements as necessary.

The reference returned is guaranteed to be valid at least until another operation is performed on the stream object, including another call to `iword`. Once another operation is performed, the reference may become invalid, although a subsequent call to this same function with the same *idx* argument returns a reference to the same value within the *internal extensible array*.

The *internal extensible array* is a general-purpose array of objects of type long (if accessed with member `iword`) or void* (if accessed with member `pword`). Libraries may implement this array in diverse ways: `iword` and `pword` may or may not share a unique array, and they may not even be arrays, but some other data structure.

Parameters

idx

An index value for an element of the *internal extensible array*.Some implementations expect *idx* to be a value previously returned by member `xalloc`.**Return Value**A reference to the element in the internal extensible array whose index is *idx*.

This value is returned as a reference to an object of type long.

On failure, a valid long& initialized to 0L is returned, and (if the stream object inherits from `basic_ios`) the badbit state flag is set.

Example

```
1 // internal extensible array
2 #include <iostream> // std::cout, std::cerr
3
4 // custom manipulator with per-stream static data:
5 std::ostream& Counter (std::ostream& os) {
6     const static int index = os.xalloc();
7     return os << ++os.iword(index);
8 }
9
10 int main()
11 {
12     std::cout << Counter << ": first line\n";
13     std::cout << Counter << ": second line\n";
14     std::cout << Counter << ": third line\n";
15     // cerr has its own count
16     std::cerr << Counter << ": error line\n";
17     return 0;
18 }
```

Possible output:

```
1: first line
2: second line
3: third line
1: error line
```

Data races

May modify the stream object. The returned value may also be used to modify it. Concurrent access to the same stream object may cause data races.

Exception safety

Basic guarantee: if an exception is thrown, the stream is in a valid state.

See also

ios_base::width

ios_base::xalloc

member types:

ios_base::event

ios_base::event_callback

ios_base::failure

ios_base::fmtflags

ios_base::Init

ios_base::iostate

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ios_base::seekdir

ios_base::xalloc	Get new index for extensible array [static] (public static member function)
ios_base::pword	Get pointer element of extensible array (public member function)

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