

# Iterator Concepts

	<a href="#">indirectly_readable</a>	specifies that a type is indirectly readable by applying operator *
	<a href="#">indirectly_writable</a>	specifies that a value can be written to an iterator's referenced object
	<a href="#">weakly_incrementable</a>	specifies that a <a href="#">semiregular</a> type can be incremented with pre- and post-increment operators
	<a href="#">incrementable</a>	specifies that the increment operation on a <a href="#">weakly_incrementable</a> type is equality-preserving and that the type is <a href="#">equality_comparable</a>
	<a href="#">input_or_output_iterator</a>	specifies that objects of a type can be incremented and dereferenced
	<a href="#">sentinel_for</a>	specifies a type is a sentinel for an <a href="#">input_or_output_iterator</a> type
	<a href="#">sized_sentinel_for</a>	specifies that the - operator can be applied to an iterator and a sentinel to calculate their difference in constant time
	<a href="#">input_iterator</a>	specifies that a type is an input iterator, that is, its referenced values can be read and it can be both pre- and post-incremented
	<a href="#">output_iterator</a>	specifies that a type is an output iterator for a given value type, that is, values of that type can be written to it and it can be both pre- and post-incremented
	<a href="#">forward_iterator</a>	specifies that an <a href="#">input_iterator</a> is a forward iterator, supporting equality comparison and multi-pass
	<a href="#">bidirectional_iterator</a>	specifies that a <a href="#">forward_iterator</a> is a bidirectional iterator, supporting movement backwards
	<a href="#">random_access_iterator</a>	specifies that a <a href="#">bidirectional_iterator</a> is a random-access iterator, supporting advancement in constant time and subscripting
	<a href="#">contiguous_iterator</a>	specifies that a <a href="#">random_access_iterator</a> is a contiguous iterator, referring to elements that are contiguous in memory
	<a href="#">indirectly_readable</a>	specifies that a type is indirectly readable by applying operator *
	<a href="#">indirectly_writable</a>	specifies that a value can be written to an iterator's referenced object
	<a href="#">weakly_incrementable</a>	specifies that a <a href="#">semiregular</a> type can be incremented with pre- and post-increment operators
	<a href="#">incrementable</a>	specifies that the increment operation on a <a href="#">weakly_incrementable</a> type is equality-preserving and that the type is <a href="#">equality_comparable</a>
	<a href="#">input_or_output_iterator</a>	specifies that objects of a type can be incremented and dereferenced

# Iterator Adaptors

<a href="#"><u>reverse_iterator</u></a>	iterator adaptor for reverse-order traversal (class template)
<a href="#"><u>make_reverse_iterator</u></a>	creates a <code>std::reverse_iterator</code> of type inferred from the argument (function template)
<a href="#"><u>move_iterator</u></a>	iterator adaptor which dereferences to an rvalue reference (class template)
<a href="#"><u>move_sentinel</u></a>	sentinel adaptor for use with <code>std::move_iterator</code> (class template)
<a href="#"><u>make_move_iterator</u></a>	creates a <code>std::move_iterator</code> of type inferred from the argument (function template)
<a href="#"><u>common_iterator</u></a>	adapts an iterator type and its sentinel into a common iterator type (class template)
<a href="#"><u>default_sentinel_t</u></a>	default sentinel for use with iterators that know the bound of their range (class)
<a href="#"><u>counted_iterator</u></a>	iterator adaptor that tracks the distance to the end of the range (class template)
<a href="#"><u>unreachable_sentinel_t</u></a>	sentinel that always compares unequal to any <code>weakly_incrementable</code> type (class)
<a href="#"><u>back_insert_iterator</u></a>	iterator adaptor for insertion at the end of a container (class template)
<a href="#"><u>back_inserter</u></a>	creates a <code>std::back_insert_iterator</code> of type inferred from the argument (function template)
<a href="#"><u>front_insert_iterator</u></a>	iterator adaptor for insertion at the front of a container (class template)
<a href="#"><u>front_inserter</u></a>	creates a <code>std::front_insert_iterator</code> of type inferred from the argument (function template)
<a href="#"><u>insert_iterator</u></a>	iterator adaptor for insertion into a container (class template)
<a href="#"><u>inserter</u></a>	creates a <code>std::insert_iterator</code> of type inferred from the argument (function template)

## Stream Iterators

	<a href="#">istream_iterator</a>	input iterator that reads from <code>std::basic_istream</code> (class template)
	<a href="#">ostream_iterator</a>	output iterator that writes to <code>std::basic_ostream</code> (class template)
	<a href="#">istreambuf_iterator</a>	input iterator that reads from <code>std::basic_streambuf</code> (class template)
	<a href="#">ostreambuf_iterator</a>	output iterator that writes to <code>std::basic_streambuf</code> (class template)
	<a href="#">istream_iterator</a>	input iterator that reads from <code>std::basic_istream</code> (class template)

## Iterator Operations

Note: A *niebloid* is a function object that disables Koenig lookup (*aka* Argument Dependent Lookup).

	<a href="#">advance</a>	advances an iterator by given distance (function template)
	<a href="#">distance</a>	returns the distance between two iterators (function template)
	<a href="#">next</a>	increment an iterator (function template)
	<a href="#">prev</a>	decrement an iterator (function template)
	<a href="#">ranges::advance</a>	advances an iterator by given distance or to a given bound (niebloid)
	<a href="#">ranges::distance</a>	returns the distance between an iterator and a sentinel, or between the beginning and end of a range (niebloid)
	<a href="#">ranges::next</a>	increment an iterator by a given distance or to a bound (niebloid)
	<a href="#">ranges::prev</a>	decrement an iterator by a given distance or to a bound (niebloid)

## Non-member functions that provide generic interface for containers

Prefer these wherever possible.

<a href="#"><u>beginbegin</u></a>	returns an iterator to the beginning of a container or array (function template)
<a href="#"><u>endcend</u></a>	returns an iterator to the end of a container or array (function template)
<a href="#"><u>rbeginrbegin</u></a>	returns a reverse iterator to a container or array (function template)
<a href="#"><u>rendrend</u></a>	returns a reverse end iterator for a container or array (function template)
<a href="#"><u>sizessize</u></a>	returns the size of a container or array (function template)
<a href="#"><u>empty</u></a>	checks whether the container is empty (function template)
<a href="#"><u>data</u></a>	obtains the pointer to the underlying array (function template)