

## core::rb\_tree

`template <class Key, class Value, class KeyOfValue, class KeyCompare = less<Key>, class Allocator = allocator<T> > class rb_tree;`

### Member types

member type	definition	notes
<code>key_type</code>	The first template parameter (Key)	
<code>value_type</code>	The second template parameter (Value)	
<code>key_compare</code>	The fourth template parameter (KeyCompare)	defaults to: <code>less&lt;Key&gt;</code>
<code>allocator_type</code>	The fifth template parameter (Allocator)	defaults to: <code>allocator&lt;Value&gt;</code>
<code>reference</code>	<code>value_type&amp;</code>	
<code>const_reference</code>	<code>const value_type&amp;</code>	
<code>pointer</code>	<code>value_type*</code>	
<code>const_pointer</code>	<code>const value_type*</code>	
<code>iterator</code>	a bidirectional iterator to <code>value_type</code>	convertible to: <code>const_iterator</code>
<code>const_iterator</code>	a bidirectional iterator to <code>const value_type</code>	
<code>reverse_iterator</code>	a bidirectional reverse iterator to <code>value_type</code>	
<code>const_reverse_iterator</code>	a bidirectional reverse iterator to <code>const value_type</code>	
<code>primitive_iterator</code>	a bidirectional primitive iterator to <code>value_type</code>	convertible to: <code>const_primitive_iterator</code>
<code>const_primitive_iterator</code>	a bidirectional primitive iterator to <code>const value_type</code>	
<code>reverse_primitive_iterator</code>	a bidirectional reverse primitive iterator to <code>value_type</code>	

<code>const_reverse_primitive_iterator</code>	a bidirectional reverse primitive iterator to <code>const value_type</code>	
<code>size_type</code>	an unsigned integral type that can represent any non-negative value of <code>difference_type</code>	usually the same as <code>size_t</code>
<code>difference_type</code>	a signed integral type	usually the same as <code>ptrdiff_t</code>

## Member functions

<code>(constructor)</code>	Construct red-black tree ( <code>public member function</code> )
<code>(destructor)</code>	Red-black destructor ( <code>public member function</code> )
<code>operator=</code>	Assign content ( <code>public member function</code> )

## Iterators:

<code>begin</code>	Return iterator to beginning ( <code>public member function</code> )
<code>end</code>	Return iterator to end ( <code>public member function</code> )
<code>rbegin</code>	Return <code>reverse_iterator</code> to reverse beginning ( <code>public member function</code> )
<code>rend</code>	Return <code>reverse_iterator</code> to reverse end ( <code>public member function</code> )
<code>cbegin</code>	Return <code>const_iterator</code> to beginning ( <code>public member function</code> )
<code>cend</code>	Return <code>const_iterator</code> to end ( <code>public member function</code> )
<code>crbegin</code>	Return <code>const_reverse_iterator</code> to reverse beginning ( <code>public member function</code> )
<code>crend</code>	Return <code>const_reverse_iterator</code> to reverse end ( <code>public member function</code> )
<code>pbegin</code>	Return <code>primitive_iterator</code> to beginning ( <code>public member function</code> )
<code>pend</code>	Return <code>primitive_iterator</code> to end ( <code>public member function</code> )
<code>rpbegin</code>	Return <code>reverse_primitive_iterator</code> to reverse beginning ( <code>public member function</code> )
<code>rend</code>	Return <code>reverse_primitive_iterator</code> to reverse end ( <code>public member function</code> )
<code>cpbegin</code>	Return <code>const_primitive_iterator</code> to beginning ( <code>public member function</code> )
<code>cpend</code>	Return <code>const_primitive_iterator</code> to end ( <code>public member function</code> )

<a href="#">crpbegin</a>	Return const_reverse_primitive_iterator to reverse beginning (public member function)
<a href="#">crpend</a>	Return const_reverse_primitive_iterator to reverse end (public member function)

### Capacity:

<a href="#">empty</a>	Test whether container is empty (public member function)
<a href="#">size</a>	Return size (public member function)
<a href="#">max_size</a>	Return maximum size (public member function)

### Modifiers:

<a href="#">emplace_equal</a>	Construct and insert a repeatable element (public member function)
<a href="#">insert_equal</a>	Insert repeatable elements (public member function)
<a href="#">emplace_unique</a>	Construct and insert a unique element (public member function)
<a href="#">insert_unique</a>	Insert unique elements (public member function)
<a href="#">erase</a>	Erase elements (public member function)
<a href="#">swap</a>	Swap content (public member function)
<a href="#">clear</a>	Clear content (public member function)

### Operations:

<a href="#">find</a>	Get iterator to element (public member function)
<a href="#">lower_bound</a>	Return iterator to lower bound (public member function)
<a href="#">upper_bound</a>	Return iterator to upper bound (public member function)

### Observers:

<a href="#">key_comp</a>	Return key comparison object (public member function)
<a href="#">get_allocator</a>	Get allocator (public member function)