public member function

# std::stringstream::stringstream

<sstream>

C++98 C++11

```
default (1)          explicit stringstream (ios_base::openmode which = ios_base::in | ios_base::out);
initialization (2)   explicit stringstream (const string& str,
                                            ios_base::openmode which = ios_base::in | ios_base::out);
```

**Construct object**

Constructs a `stringstream` object:

***(1) empty constructor (default constructor)***

Constructs a `stringstream` object with an empty sequence as content.
Internally, its `iostream` base constructor is passed a pointer to a `stringbuf` object constructed with *which* as argument.

***(2) initialization constructor***

Constructs a `stringstream` object with a copy of *str* as content.
Internally, its `iostream` base constructor is passed a pointer to a `stringbuf` object constructed with *str* and *which* as arguments.

***(3) copy constructor (deleted)***

Deleted (no copy constructor).

***(4) move constructor***

Acquires the contents of *x*.
First, the function move-constructs both its base `iostream` class from *x* and a `stringbuf` object from *x*'s internal `streambuf` object, and then associates them by calling member `set_rdbuf`.
*x* is left in an unspecified but valid state.
It is unspecified whether the sequence controlled by the internal `stringbuf` object is the one in *x* before the call, or a copy of it. In any case, both objects have internal *string buffers* that use independent sequences after the call.

The internal `stringbuf` object has at least the same duration as the `stringstream` object.

## Parameters

`str`
A `string` object, whose content is copied.

`x`
A `stringstream` object, whose value is moved.

`which`
Open mode: Access given by the internal `stringbuf` object to its internal sequence of characters. It is an object of member type `openmode` for which any combination of the following member values is significant:

C++98 C++11

| member constant | stands for | access |
|---|---|---|
| `ios_base::in` | **in**put | The sequence supports input operations. |
| `ios_base::out` | **out**put | The sequence supports output operations. |

Other values of type `ios_base::openmode` may also be specified, although whether they have an effect on `stringstream` objects depends on the library implementation.

## Example

```
// swapping ostringstream objects
#include <string>       // std::string
#include <iostream>     // std::cout
#include <sstream>      // std::stringstream

int main () {

  std::stringstream ss;

  ss << 100 << ' ' << 200;

  int foo,bar;
  ss >> foo >> bar;

  std::cout << "foo: " << foo << '\n';
  std::cout << "bar: " << bar << '\n';

  return 0;
}
```

Output:

```
foo: 100
bar: 200
```

## Data races

The *move constructor (4)* modifies *x*.

## Exception safety

**Strong guarantee:** if an exception is thrown, there are no side effects.

## See also

| | |
|---|---|
| **stringstream::str** | Get/set content (public member function ) |