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function

std::hex

<ios> <iostream>

```
ios_base& hex (ios_base& str);
```

Use hexadecimal base

Sets the basefield format flag for the *str* stream to hex.

When basefield is set to hex, integer values inserted into the stream are expressed in hexadecimal base (i.e., radix 16). For input streams, extracted values are also expected to be expressed in hexadecimal base when this flag is set.

The basefield format flag can take any of the following values (each with its own manipulator):

flag value	effect when set
dec	read/write integer values using decimal base format.
hex	read/write integer values using hexadecimal base format.
oct	read/write integer values using octal base format.

Notice that the basefield flag only affects the insertion/extraction of integer values (floating-point values are always interpreted in decimal base).

Notice also that no base prefix is implicitly prepended to the number unless the `showbase` format flag is set.

For standard streams, the basefield flag is set to `dec` on initialization.

Parameters

str

Stream object whose basefield *format flag* is affected.
Because this function is a manipulator, it is designed to be used alone with no arguments in conjunction with the *insertion* (<<) and *extraction* (>>) operations on streams (see example below).

Return Value

Argument *str*.

Example

```
1 // modify basefield
2 #include <iostream>      // std::cout, std::dec, std::hex, std::oct
3
4 int main () {
5     int n = 70;
6     std::cout << std::dec << n << '\n';
7     std::cout << std::hex << n << '\n';
8     std::cout << std::oct << n << '\n';
9     return 0;
10 }
```

Output:

70
46
106

Data races

Modifies *str*. Concurrent access to the same stream object may cause data races.

Exception safety

Basic guarantee:

if an exception is thrown, *str* is in a valid state.

See also

dec	Use decimal base (function)
oct	Use octal base (function)
ios_base::flags	Get/set format flags (public member function)

http://www.cplusplus.com/reference/ios/hex/

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	<code>ios_base::setf</code>	Set specific format flags (public member function)
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