function

std::setprecision

<iomanip>

```
/*unspecified*/ setprecision (int n);
```

Set decimal precision

Sets the *decimal precision* to be used to format floating-point values on output operations.

Behaves as if member `precision` were called with *n* as argument on the stream on which it is inserted/extracted as a manipulator (it can be inserted/extracted on *input streams* or *output streams*).

This manipulator is declared in header `<iomanip>`.

Parameters

n

New value for the *decimal precision*.

Return Value

Unspecified. This function should only be used as a stream manipulator (see example).

Example

```
1  // setprecision example
2  #include <iostream>     // std::cout, std::fixed
3  #include <iomanip>      // std::setprecision
4
5  int main () {
6    double f =3.14159;
7    std::cout << std::setprecision(5) << f << '\n';
8    std::cout << std::setprecision(9) << f << '\n';
9    std::cout << std::fixed;
10   std::cout << std::setprecision(5) << f << '\n';
11   std::cout << std::setprecision(9) << f << '\n';
12   return 0;
13 }
```

Output:

```
3.1416
3.14159
3.14159
3.141590000
```

Data races

The stream object on which it is inserted/extracted is modified.
Concurrent access to the same stream object may introduce data races.

Exception safety

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

See also

ios_base::precision	Get/Set floating-point decimal precision (public member function)
fixed	Use fixed floating-point notation (function)
scientific	Use scientific floating-point notation (function)