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/* The following code example is taken from the book
 * "The C++ Standard Library – A Tutorial and Reference, 2nd Edition"
 * by Nicolai M. Josuttis, Addison-Wesley, 2012
 *
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 */
#include <streambuf>
#include <locale>
#include <cstdio>

class outbuf : public std::streambuf
{
protected:
    // central output function
    // - print characters in uppercase mode
    virtual int_type overflow (int_type c) {
        if (c != EOF) {
            // convert lowercase to uppercase
            c = std::toupper(c, getloc());

            // and write the character to the standard output
            if (std::putchar(c) == EOF) {
                return EOF;
            }
        }
        return c;
    }
};

```