

```

/* 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
 *
 * (C) Copyright Nicolai M. Josuttis 2012.
 * Permission to copy, use, modify, sell and distribute this software
 * is granted provided this copyright notice appears in all copies.
 * This software is provided "as is" without express or implied
 * warranty, and with no claim as to its suitability for any purpose.
 */
#include <iostream>
#include <fstream>
#include <memory>
using namespace std;

void redirect(ostream&);

int main()
{
    cout << "the first row" << endl;

    redirect(cout);

    cout << "the last row" << endl;
}

void redirect (ostream& strm)
{
    // save output buffer of the stream
    // - use unique pointer with deleter that ensures to restore
    //   the original output buffer at the end of the function
    auto del = [&](streambuf* p) {
        strm.rdbuf(p);
    };
    unique_ptr<streambuf, decltype(del)> origBuffer(strm.rdbuf(), del);

    // redirect output into the file redirect.txt
    ofstream file("redirect.txt");
    strm.rdbuf (file.rdbuf());

    file << "one row for the file" << endl;
    strm << "one row for the stream" << endl;
} // closes file AND its buffer automatically

```