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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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 * warranty, and with no claim as to its suitability for any purpose.
 */
#include <future>
#include <mutex>
#include <iostream>
#include <string>

std::mutex printMutex; // enable synchronized output with print()

void print (const std::string& s)
{
    std::lock_guard<std::mutex> l(printMutex);
    for (char c : s) {
        std::cout.put(c);
    }
    std::cout << std::endl;
}

int main()
{
    auto f1 = std::async (std::launch::async,
                          print, "Hello from a first thread");
    auto f2 = std::async (std::launch::async,
                          print, "Hello from a second thread");
    print("Hello from the main thread");
}

```