

```

/* 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 <regex>
#include <iostream>
using namespace std;

void out (bool b)
{
    cout << ( b ? "found" : "not found") << endl;
}

int main()
{
    // find XML/HTML-tagged value (using default syntax):
    regex reg1("<.*>.*/.*>");
    bool found = regex_match ("<tag>value</tag>", // data
                              reg1);              // regular expression
    out(found);

    // find XML/HTML-tagged value (tags before and after the value must match):
    regex reg2("<(.*)>.*/\\1>");
    found = regex_match ("<tag>value</tag>", // data
                          reg2);              // regular expression
    out(found);

    // find XML/HTML-tagged value (using grep syntax):
    regex reg3("<\\(.*\\)>.*/\\1>", regex_constants::grep);
    found = regex_match ("<tag>value</tag>", // data
                          reg3);              // regular expression
    out(found);

    // use C-string as regular expression (needs explicit cast to regex):
    found = regex_match ("<tag>value</tag>", // data
                          regex("<(.*)>.*/\\1>")); // regular expression
    out(found);
    cout << endl;

    // regex_match() versus regex_search():
    found = regex_match ("XML tag: <tag>value</tag>",
                          regex("<(.*)>.*/\\1>")); // fails to match
    out(found);
    found = regex_match ("XML tag: <tag>value</tag>",
                          regex(".*<(.*)>.*/\\1>.*")); // matches
    out(found);
    found = regex_search ("XML tag: <tag>value</tag>",
                           regex("<(.*)>.*/\\1>")); // matches
    out(found);
    found = regex_search ("XML tag: <tag>value</tag>",

```

```
    out(found);    regex(".*<(.*)>.*</\\1>.*");    // matches
}
```