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1 // Fig. 23.5: fig23_05.cpp
2 // Using regex_replace algorithm.
3 #include <iostream>
4 #include <string>
5 // #include <regex> // removed by JMH
6 #include <boost/regex.hpp> // added by JMH
7
6 using namespace std ;
7 using namespace boost ; // added by JMH
8
7
8 int main()
9 {
10 // create the test strings
11 string testString1 = "This sentence ends in 5 stars *****";
12 string testString2 = "1, 2, 3, 4, 5, 6, 7, 8";
13 string output;
14
15 cout << "Original string: " << testString1 << endl;
16
17 // replace every * with a ^
18 testString1 =
19     regex_replace( testString1, regex( "\\*" ), string( "^" ) );
20 cout << "^ substituted for *: " << testString1 << endl;
21
22 // replace "stars" with "carets"
23 testString1 =
24     regex_replace( testString1, regex( "stars" ), string( "carets" ) );
25 cout << "\"carets\" substituted for \"stars\": "
26     << testString1 << endl;
27
28 // replace every word with "word"
29 testString1 =
30     regex_replace( testString1, regex( "\\w+" ), string( "word" ) );
31 cout << "Every word replaced by \"word\": " << testString1 << endl;
32
33 // replace the first three digits with "digit"
34 cout << "\nOriginal string: " << testString2 << endl;
35 string testString2Copy = testString2;
36
37 for ( int i = 0; i < 3; ++i ) // loop three times
38 {
39     testString2Copy = regex_replace( testString2Copy, regex( "\\d" ),
40         string( "digit" ), regex_constants::format_first_only );
41 } // end for
42
43 cout << "Replace first 3 digits by \"digit\": "
44     << testString2Copy << endl;
45
46 // split the string at the commas
47 cout << "string split at commas [";
48
49 regex splitter( ",\\s" ); // regex to split a string at commas
50 sregex_token_iterator tokenIterator( testString2.begin(),
51     testString2.end(), splitter, -1 ); // token iterator
52 sregex_token_iterator end; // empty iterator
53
54 while ( tokenIterator != end ) // tokenIterator isn't empty
55 {
56     output += "\"" + (*tokenIterator).str() + "\", ";
57     ++tokenIterator; // advance the iterator
58 } // end while
59
60 // delete the ", " at the end of output string
61 cout << output.substr( 0, output.length() - 2 ) << "]" << endl;
62 } // end of function main
```

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63
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