```
 1: /*
 2:   Copyright 2015 Fred Martin, fredm@cs.uml.edu
 3:   Wed Apr  1 09:43:12 2015
 4:   test file for GuitarString class
 5:
 6:   compile with
 7:   g++ -c GStest.cpp -lboost_unit_test_framework
 8:   g++ GStest.o GuitarString.o RingBuffer.o -o GStest -lboost_unit_test_frame
work
 9: */
10:
11: #define BOOST_TEST_DYN_LINK
12: #define BOOST_TEST_MODULE Main
13: #include <boost/test/unit_test.hpp>
14:
15: #include <vector>
16: #include <exception>
17: #include <stdexcept>
18:
19: #include "GuitarString.hpp"
20:
21: BOOST_AUTO_TEST_CASE(GS) {
22:   vector<sf::Int16> v;
23:
24:   v.push_back(0);
25:   v.push_back(2000);
26:   v.push_back(4000);
27:   v.push_back(-10000);
28:
29:   BOOST_REQUIRE_NO_THROW(GuitarString gs = GuitarString(v));
30:
31:   GuitarString gs = GuitarString(v);
32:
33:   // GS is 0 2000 4000 -10000
34:   BOOST_REQUIRE(gs.sample() == 0);
35:
36:   gs.tic();
37:   // it's now 2000 4000 -10000 996
38:   BOOST_REQUIRE(gs.sample() == 2000);
39:
40:   gs.tic();
41:   // it's now 4000 -10000 996 2988
42:   BOOST_REQUIRE(gs.sample() == 4000);
43:
44:   gs.tic();
45:   // it's now -10000 996 2988 -2988
46:   BOOST_REQUIRE(gs.sample() == -10000);
47:
48:   gs.tic();
49:   // it's now 996 2988 -2988 -4483
50:   BOOST_REQUIRE(gs.sample() == 996);
51:
52:   gs.tic();
53:   // it's now 2988 -2988 -4483 1984
54:   BOOST_REQUIRE(gs.sample() == 2988);
55:
56:   gs.tic();
57:   // it's now -2988 -4483 1984 0
58:   BOOST_REQUIRE(gs.sample() == -2988);
59:
60:   // a few more times
```

```
61:   gs.tic();
62:   BOOST_REQUIRE(gs.sample() == -4483);
63:   gs.tic();
64:   BOOST_REQUIRE(gs.sample() == 1984);
65:   gs.tic();
66:   BOOST_REQUIRE(gs.sample() == 0);
67: }
```