```
 1: // Copyright 2022 Anson Cheang
 2: #define BOOST_TEST_DYN_LINK
 3: #define BOOST_TEST_MODULE Main
 4:
 5: #include "RandWriter.h"
 6:
 7: #include <iostream>
 8: #include <sstream>
 9: #include <string>
10: #include <boost/test/unit_test.hpp>
11:
12: BOOST_AUTO_TEST_CASE(order0) {
13:   BOOST_REQUIRE_NO_THROW(RandWriter("gagggagaggcgagaaa", 0));
14:
15:   RandWriter mm("gagggagaggcgagaaa", 0);
16:
17:   BOOST_REQUIRE(mm.orderK() == 0);
18:   BOOST_REQUIRE(mm.freq("") == 17);
19:   BOOST_REQUIRE_THROW(mm.freq("t"), std::runtime_error);
20:
21:   BOOST_REQUIRE(mm.freq("", 'g') == 9);
22:   BOOST_REQUIRE(mm.freq("", 'a') == 7);
23:   BOOST_REQUIRE(mm.freq("", 'c') == 1);
24:   BOOST_REQUIRE(mm.freq("", 'x') == 0);
25: }
26:
27: BOOST_AUTO_TEST_CASE(order1) {
28:   RandWriter mm("gagggagaggcgagaaa", 1);
29:
30:   BOOST_REQUIRE_THROW(mm.freq(""), std::runtime_error);
31:
32:   BOOST_REQUIRE(mm.freq("a") == 7);
33:   BOOST_REQUIRE(mm.freq("g") == 9);
34:   BOOST_REQUIRE(mm.freq("c") == 1);
35:
36:   BOOST_REQUIRE(mm.freq("a", 'a') == 2);
37:   BOOST_REQUIRE(mm.freq("a", 'c') == 0);
38:   BOOST_REQUIRE(mm.freq("a", 'g') == 5);
39:
40:   BOOST_REQUIRE_NO_THROW(mm.kRand("a"));
41:
42:   BOOST_REQUIRE_THROW(mm.kRand("t"), std::runtime_error);
43:
44:   BOOST_REQUIRE_THROW(mm.kRand("tt"), std::runtime_error);
45: }
46:
47: BOOST_AUTO_TEST_CASE(order2) {
48:   RandWriter mm("gagggagaggcgagaaa", 2);
49:
50:   BOOST_REQUIRE_NO_THROW(mm.freq("aa"));
51:   BOOST_REQUIRE_THROW(mm.freq("", 'g'), std::runtime_error);
52:
53:   BOOST_REQUIRE(mm.freq("aa") == 2);
54:   BOOST_REQUIRE(mm.freq("aa", 'a') == 1);
55: }
```