```
 1: // date and time sample code
 2: // Copyright (C) 2015 Fred Martin, fredm@cs.uml.edu for 91.204 Computing IV
 3: // Tue Apr 21 17:37:46 2015
 4:
 5: // compile with
 6: // g++ datetime.cpp -lboost_date_time
 7:
 8: // http://www.boost.org/doc/libs/1_58_0/doc/html/date_time/gregorian.html
 9: // http://www.boost.org/doc/libs/1_58_0/doc/html/date_time/posix_time.html
10:
11: #include <iostream>
12: #include <string>
13: #include "boost/date_time/gregorian/gregorian.hpp"
14: #include "boost/date_time/posix_time/posix_time.hpp"
15:
16: using std::cout;
17: using std::cin;
18: using std::endl;
19: using std::string;
20:
21: using boost::gregorian::date;
22: using boost::gregorian::from_simple_string;
23: using boost::gregorian::date_period;
24: using boost::gregorian::date_duration;
25:
26: using boost::posix_time::ptime;
27: using boost::posix_time::time_duration;
28:
29: int main() {
30:   // Gregorian date stuff
31:   string s("2015-01-01");
32:   date d1(from_simple_string(s));
33:   date d2(2015, boost::gregorian::Apr, 21);
34:
35:   date_period dp(d1, d2);  // d2 minus d1
36:
37:   date_duration dd = dp.length();
38:
39:   cout << "duration in days " << dd.days() << endl;
40:
41:   // Posix date stuff
42:   ptime t1(d1, time_duration(0, 0, 0, 0));  // hours, min, secs, nanosecs
43:   ptime t2(d2, time_duration(0, 0, 0, 0));
44:
45:   time_duration td = t2 - t1;
46:
47:   cout << "duration in hours " << td.hours() << endl;
48:   cout << "duration in ms " << td.total_milliseconds() << endl;
49:
50: }
```