

```

1  #include <iostream>
2  #include <time.h>
3
4  using namespace std;
5
6
7  int main(int argc, char** argv) {
8
9      // seconds represents the seconds the market is in seconds
10     // Market hours: 9:30a.m. - 4:00p.m.
11
12
13     int hour = 9;
14     int min = 30;
15     int second = 0;
16
17     int counter = 0;
18
19     float stockPrice=0;
20     float limitOrderPrice = 0;
21
22     bool isMarketOpen = true;
23
24
25
26     //seed the random number generator
27     srand( (unsigned)time( NULL ) );
28
29
30     stockPrice = 8 + ((float) rand()/RAND_MAX) * 0.1;
31
32
33
34     cout << "Current price of FORD stock is: "
35           << stockPrice
36           << endl;
37
38     cout << "Please enter the LIMIT ORDER price you wish to sell the stock at today:"
39           << endl;
40
41     cin >> limitOrderPrice;
42
43
44     if(limitOrderPrice <= stockPrice){
45         cout << "\n\n"
46               << "You sold your FORD stock for :"
47               << stockPrice
48               << " at time: "
49               << hour
50               << ":"
51               << min
52               << ":"
53               << second;
54         goto finished;
55     }
56
57
58     while(isMarketOpen){
59
60         if(limitOrderPrice <= stockPrice){

```

```

61         cout << "\n\n"
62             << "You sold your FORD stock for :"
63             << stockPrice
64             << " at time: "
65             << hour
66             << ":"
67             << min
68             << ":"
69             << second;
70         goto finished;
71     }
72
73     // checking the second
74     if(second == 59){
75         second=0;
76         ++min;
77
78         if(min == 60){
79             min = 0;
80             hour++;
81         }
82
83     } else {
84         ++second;
85     } //end else
86
87
88
89
90     //get a new random stock price
91     stockPrice = 8 + ((float) rand()/RAND_MAX) * 0.1;
92
93
94
95
96     if(hour == 16 && min == 0 && second == 0 ){
97         cout << "Time:"
98             << hour
99             << ":"
100            << min
101            << ":"
102            << second;
103
104         cout << " Stock price is: "
105             << stockPrice
106             << endl;
107         isMarketOpen = false;
108
109     } else {
110         cout << "Time:"
111             << hour
112             << ":"
113             << min
114             << ":"
115             << second;
116
117         cout << " Stock price is: "
118             << stockPrice
119             << endl;
120     }

```

```
121
122
123         if(counter > 234100)
124             goto finished;
125
126     }//end while
127
128     finished:
129
130
131     return (EXIT_SUCCESS);
132 }
133
134
135
```