

This program is provided by David Chiu, Feb.24, 2004
as an example to use the requested classes and functions

```
1 #include <iostream>
2 #include <string>
3 #include <fstream>
4 #include <vector>
5 #include <algorithm>
6
7 using namespace std;
8
9 bool greater(int s1, int s2) { return s1 > s2; }
10 bool greater2(string ss1, string ss2) { return ss1 > ss2; }
11
12 int main()
13 {
14     ios::sync_with_stdio();
15     #if 0
16         cout << "Hello world!" << endl;
17
18         string name("");
19         cout << "What is your name?" << endl;
20         cin >> name;
21         cout << "Hi " << name << "!" << endl;
22
23         string fname("");
24         cout << "Enter the file name:" <<endl;
25         cin >> fname;
26         ifstream fp;
27         fp.open(fname.c_str());
28         string lstring("");
29         while ( !fp.eof() ) {
30             getline(fp,lstring);
31             cout << lstring <<endl;
32         }
33         fp.close();
34     #endif
35
36     vector<int> num;
37     for (int i = 0; i < 10; i++)
38         num.push_back(9 - i);
39     cout << "Items: " << num.size() << endl;
40     for (int j = 0; j < 10; j++)
41         cout << num[j] << " " << endl;
42
43     cout << "to find the number '3'" << endl;
44     cout << "The location is " << find(num.begin(), num.end(), 3) -
num.begin() << endl;
45
46     cout << "sorting..." << endl;
47     sort(num.begin(), num.end());
48     for (j = 0; j < 10; j++)
49         cout << num[j] << " " << endl;
50
51     cout << "Second sorting ..." << endl;
52     sort(num.begin(), num.end(), greater);
53     for (j = 0; j < 10; j++)
54         cout << num[j] << " " << endl;
55
56     string ss[6] = {"a", "b", "c", "d", "e"};
57     for (j = 0; j <5; j ++ )
58         cout << ss[j] << " ";
59     cout << "Sorting..." << endl;
60     sort(&ss[0] , &ss[5], greater2 );
61     for (j = 0; j <5; j ++ )
62         cout << ss[j] << " ";
63
64     return 0;
65 }
```