

```
1  #include<iostream>
2  #include<fstream>
3  #include<iomanip>
4  #include<vector>
5  #include<algorithm>
6  #include<random>
7
8
9  void printIntegersToFile(const std::vector<int>& integers, std::ofstream& output)
10 {
11     for (int tens = 0; tens < 10; tens++)
12     {
13         for (int ones = 0; ones < 10; ones++)
14         {
15             output << std::setw(4) << integers[tens * 10 + ones];
16         }
17         output << "\n";
18     }
19     output << std::endl;
20 }
21
22
23 int main()
24 {
25     //Open first file for output
26     std::ofstream fout("output1.txt");
27     if (!fout)
28     {
29         std::cout << "Error opening file!" << std::endl;
30         return 0;
31     }
32
33     for (int tens = 0; tens < 10; tens++)
34     {
35         for (int ones = 1; ones <= 10; ones++)
36         {
37             fout << std::setw(4) << tens*10 + ones;
38         }
39
40         fout << "\n";
41     }
42     fout << std::endl;
43
44     std::cout << "1-100 table written to output1.txt 10 times." << std::endl;
45
46     std::vector<int> vv;
47     for (int i = 1; i <= 100; i++)
48     {
49         vv.push_back(i);
50     }
51
52     std::random_device rd;
```

```
53     std::mt19937 gen(rd());
54     std::shuffle(begin(vv), end(vv), gen);
55
56     //Open second file for output
57     std::ofstream vout("output2.txt");
58     if (!vout)
59     {
60         std::cout << "Error opening file!" << std::endl;
61         return 0;
62     }
63
64     printIntegersToFile(vv, vout);
65
66     std::cout << "1-100 table written to output2.txt 10 times." << std::endl;
67
68     return 0;
69 }
```