```cpp
/*****************************************************************************
 * AUTHOR           : Nick Reardon
 * Extra Credit #1  : Extendable Array
 * CLASS            : CS1D
 * SECTION          : MW - 2:30p
 * DUE DATE         : 02 / 12 / 20
 *****************************************************************************/
#include "main.h"

using std::cout; using std::endl;


int main()
{

    /*
     * HEADER OUTPUT
     */
    PrintHeader(cout, "Prompt.txt");

    /*****************************************************************/

    cout << "Initializing int ExtendableArray vector with capacity of 4" << endl
      << endl;
    ExtendableArray<int> arr(4);
    try
    {
        cout << endl << "Calling print method to show the vector is empty" <<
          endl;

        arr.PrintRealArray("Current vector", cout);
    }
    catch (Except err)
    {
        err.outputError(cout);
    }


    //---------------------------------------------------------------


    cout << endl << "Inserting 14, 5, 4, 1 into vector using insertBack()" <<
      endl;

    arr.insertBack(14);
    arr.PrintRealArray("Current vector", cout);
    arr.oneLinePrintAdjusted(cout, "Useable order: ");
    arr.insertBack(5);
    arr.PrintRealArray("Current vector", cout);
    arr.oneLinePrintAdjusted(cout, "Useable order: ");

    arr.insertBack(4);
```

```
50      arr.PrintRealArray("Current vector", cout);
51      arr.oneLinePrintAdjusted(cout, "Useable order: ");
52
53      arr.insertBack(1);
54      arr.PrintRealArray("Current vector", cout);
55      arr.oneLinePrintAdjusted(cout, "Useable order: ");
56
57
58      //-----------------------------------------------------------------
59
60
61      cout << endl << endl << "Inserting 21 into vector using insertBack()" <<
          endl;
62      cout << endl << "Insertion would exceed capacity, so protected expand() " <<
          endl
63          << "method is called to double the vector's capacity " << endl;
64
65      arr.insertBack(21);
66      arr.PrintRealArray("Current vector", cout);
67      arr.oneLinePrintAdjusted(cout, "Useable order: ");
68
69      cout << endl << "Inserting 33, 12, 8 intop vector using insertBack()" <<
          endl;
70      arr.oneLinePrintAdjusted(cout, "Useable order: ");
71
72      arr.insertBack(33);
73      arr.PrintRealArray("Current vector", cout);
74      arr.oneLinePrintAdjusted(cout, "Useable order: ");
75
76      arr.insertBack(12);
77      arr.PrintRealArray("Current vector", cout);
78      arr.oneLinePrintAdjusted(cout, "Useable order: ");
79
80      arr.insertBack(8);
81      arr.PrintRealArray("Current vector", cout);
82      arr.oneLinePrintAdjusted(cout, "Useable order: ");
83
84
85      //-----------------------------------------------------------------
86
87      cout << endl << endl << "removing 14, using eraseFront()" << endl;
88      arr.eraseFront();
89      arr.PrintRealArray("Current vector", cout);
90      arr.oneLinePrintAdjusted(cout, "Useable order: ");
91
92      //-----------------------------------------------------------------
93
94
95      cout << endl << endl << "removing 1, using eraseAt()" << endl;
96      arr.eraseAt(2);
97      arr.PrintRealArray("Current vector", cout);
98      arr.oneLinePrintAdjusted(cout, "Useable order: ");
```

```
 99
100     //-----------------------------------------------------------------
101
102     //arr.insertFront(9);
103
104     //-----------------------------------------------------------------
105
106
107     cout << endl << endl << "Inserting 7 after 33 into vector using insertAt()"
          << endl;
108     arr.insertAt(5, 7);
109     arr.PrintRealArray("Current vector", cout);
110     arr.oneLinePrintAdjusted(cout, "Useable order: ");
111
112     //-----------------------------------------------------------------
113
114     cout << endl << endl << "Inserting 44 into vector using insertBack()" <<
          endl;
115     arr.insertBack(44);
116     arr.PrintRealArray("Current vector", cout);
117     arr.oneLinePrintAdjusted(cout, "Useable order: ");
118
119
120
121     system("pause");
122     return 0;
123 }
124
```