```cpp
 1  //  Attached:    HW_2a, HW_2b, HW_2c, HW_2d
 2  //
 3  // ==========================================================
 4  //  File:    HW_2a
 5  // ==========================================================
 6  //    Programmer:    Stephen Moye
 7  //    Class:         CMPR 121 Tuesday
 8  //    Instructor:    Dennis Rainey
 9  //
10  //    Description:
11  //    This function prompts the user to enter
12  //    5 test scores. The user then chooses between
13  //    two display options, average, or display all scores.
14  // ==========================================================
15
16  #include <iostream>
17  #include <iomanip>
18
19  using namespace std;
20
21  void getScores(double[]);
22  void showMenu();
23  char getChoice();
24  void displayResult(char, double[]);
25
26  const int SIZE = 5;
27
28  // ================================================================================
29  // main
30  // ================================================================================
31  int main()
32  {
33      double testScores[SIZE];
34      char choice;
35
36      getScores(testScores);
37      showMenu();
38      choice = getChoice();
39      displayResult(choice, testScores);
40
41      return 0;
42  }
43  // ================================================================================
44  // end of main
45  // ================================================================================
46
47
48
49  //  ================================================================================
50  //  getScores
51  //  ================================================================================
52  //  This function prompts the user to enter 5 test scores3 temperatures
```

```cpp
53  //
54  //  Input:
55  //      testScores, an array with a size of 5 per SIZE const variable
56  //  Output:
57  //      the user's 5 test scores are read and assigned to the testScores array
58  //  ============================================================================
59  void getScores(double testScores[SIZE])
60  {
61      cout << "Enter 5 test scores: " << endl;
62      for (int i = 0; i < SIZE; i++)
63      {
64          cin >> testScores[i];
65      }
66      system("cls"); // clear screen
67  }
68  //  ============================================================================
69  //  end of getScores
70  //  ============================================================================
71
72
73
74  //  ============================================================================
75  //  showMenu
76  //  ============================================================================
77  //  This function shows the user the score choices menu
78  //
79  //  Input:
80  //      none
81  //  Output:
82  //      a and b choices to the screen
83  //  ============================================================================
84  void showMenu()
85  {
86      cout << "A.)  Calculate the average of the test scores." << endl
87           << "B.)  Display all test scores" << endl;
88  }
89  //  ============================================================================
90  //  end of showMenu
91  //  ============================================================================
92
93
94
95  //  ============================================================================
96  //  getChoice
97  //  ============================================================================
98  //  This function receives the user's choice input
99  //
100 //  Input:
101 //      none
102 //  Output:
103 //      return the user's choice to main(), as an uppercase char
104 //  ============================================================================
```

```cpp
105  char getChoice()
106  {
107      char choice;
108      cout << "Enter your choice: ";
109      cin >> choice;
110
111      return toupper(choice);
112  }
113  //  ================================================================================
114  //  end of getChoice
115  //  ================================================================================
116
117
118
119  //  ================================================================================
120  //  displayResult
121  //  ================================================================================
122  //  This function receives the user's choice input and outputs the result
123  //  based on the user choice
124  //
125  //  Input:
126  //      choice of the user for which menu option to execute
127  //      the testScores array filled with user's score data
128  //  Output:
129  //      if A, calculate the average and output it
130  //      if B, list each score in the testScores array
131  //      if other, output error
132  //  ================================================================================
133  void displayResult(char choice, double testScores[])
134  {
135
136      if (choice == 'A')
137      {
138          double sum = 0;
139          double average;
140
141          for (int i = 0; i < SIZE; i++) {
142              sum += testScores[i];
143              average = sum / SIZE;
144          }
145
146          system("cls");
147
148          cout << "The average is " << average << endl;
149      }
150      else if (choice == 'B')
151      {
152          for (int i = 0; i < SIZE; i++) {
153              cout << testScores[i] << endl;
154          }
155      }
156      else
```

```cpp
157      {
158          cout << "Invalid entry!";
159      }
160  }
161  //  ============================================================================
162  //  end of displayResult
163  //  ============================================================================
164
165
166  /*  ============================== Output ===================================
167  *
168  * Enter 5 test scores:
169  95
170  96
171  97
172  98
173  99
174
175  // Clear screen
176
177  A.)  Calculate the average of the test scores.
178  B.)  Display all test scores
179  Enter your choice: a
180
181  // Clear screen
182
183  The average is 97
184
185
186  ////////
187  ///OR///
188  ////////
189
190  A.)  Calculate the average of the test scores.
191  B.)  Display all test scores
192  Enter your choice: B
193
194  95
195  96
196  97
197  98
198  99
199
200  C:\Users\Steve\Desktop\School\Computer Science\CMPR121\Homework\HW_2\New folder  ⮡
         \HW_2a\Debug\HW_2a.exe (process 28144) exited with code 0.
201  To automatically close the console when debugging stops, enable Tools->Options-  ⮡
         >Debugging->Automatically close the console when debugging stops.
202  Press any key to close this window . . .
203
204
205     ================================================================================  ⮡
           */
```