

Loops

for and while loops

Assignment 1: Two smallest numbers

Write a program that reads a list of integers, and outputs the two smallest integers in the list, in ascending order. The input begins with an integer indicating the number of integers that follow.

Example: If the input is: 5 10 5 3 21 2 => the output is: 2 and 3

You can assume that the list of integers will have at least 2 values.

To achieve the above, first read the integers into a vector.

Note: You can use either array or vector in this assignment. Whichever you prefer.

Hint: Make sure to initialize the second smallest and smallest integers properly.

main.cpp

```
1 #include <iostream>
2 #include <vector>
3 using namespace std;
4
5 int main() {
6
7     /* Type your code here. */
8
9     return 0;
10 }
11
```

Assignment 1 Tests

Apply and report the results of all 4 different input examples 12 points.

1. Compare output (4 points)

When input is

5
10 5 3 21 2

Standard output exactly matches

2 and 3

2. Compare output (3 points)

When input is

4
1 2 31 15

Standard output exactly matches

1 and 2

3. Compare output (3 points)

When input is

5
1 8 91 23 7

Standard output exactly matches

1 and 7

Assignment 2: Shift right

Write a program that reads a list of integers from input into a vector and modifies the vector by shifting each element to the right one position and by shifting the last element to the first position. The input begins with an integer indicating the number of values that follow. Output the modified vector and end with a newline.

Example: If the input is: 6 2 4 6 8 10 12 => the output is: 12 2 4 6 8 10

For coding simplicity, follow every output value by a space, including the last one.

main.cpp

```
1 #include <iostream>
2 #include <vector>
3 using namespace std;
4
5 int main() {
6     vector<int> userValues(20);
7
8     /* Type your code here. */
9
10    return 0;
11 }
12
```

Assignment 2 Tests

1. Compare output (4 points)

When input is

6
2 4 6 8 10 12

Standard output exactly matches

12 2 4 6 8 10

2. Compare output (4 points)

When input is

3
99 100 101

Standard output exactly matches

101 99 100

3. Compare output (2 points)

When input is

2
234 19

Standard output exactly matches

19 234

Submissions

Note: Do not forget to submit all two assignments and corresponding test outputs to receive full credit.

- 1 - Name your C++ files FirstName_Lastname_TwoSmallestIntegers.cpp, FirstName_Lastname_ShiftRight.cpp.
- 2 - Prepare your report in docx or pdf format and name it Firstname_Lastname.docx or Firstname_Lastname.pdf. Put both your assignments and corresponding tests in ONE report file.
- 3 - Add the screenshot of your code to the report. All tests should be performed and the result screenshot be included in the report.

Note: Make sure to have your report containing both explanatnations and screenshots.