**Take Home Program #8 – Due on or before Tuesday 4/30, 2019 –**

**Objectives:** Single Dimensional Array

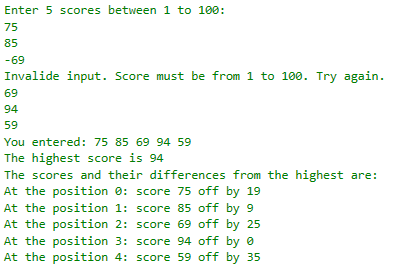
Your name:

|  |
| --- |
| **Important instructions:**   * *All programs must include comments at the top of your program: your name,* the class name (CSIT 575)*, program name and* ***the program description (purpose of the program).*** * *Copy and paste your* ***program code*** *and* ***output*** *in Part B of each program. Note: Use snipping tool to* ***snip the output****.* * *Once it is done, save and submit this word file via Canvas.* |

**FindLargestScore.cpp**

Write a program that reads in 5 scores and only accepts score in the range from 1 to 100. Once all is valid; display all scores, find the highest score and shows how much each score differs from the highest score.

**Sample run:**



**Part B: Copy and paste your program (source) code and the outputs after this line**

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FindLargestScore.cpp

Reads in 5 scores inputted by the user and only accepts score in the range from 1 to 100. Once all is valid;

display all scores, find the highest score and shows how much each score differs from the highest score.\*/

#include <iostream>

#include <string>

using namespace std;

int main()

{

const int FIVE = 5;

int scores[FIVE];

cout << "Enter 5 scores between 1 to 100" << endl;

//Input and checks if the score is valid

for (int i = 0; i <= FIVE - 1; i++)

{

cin >> scores[i];

if (scores[i] < 0 || scores[i] > 100)

{

cout << "Invalid input. Score must be from 1 to 100. Try again." << endl;

i = i - 1; //Since the score is invalid, it'll reset i by one to be able to give the user another chance to enter a correct number.

}

}

//Finds the biggest number

cout << "You entered: " << scores[0] << " " << scores[1] << " " << scores[2] << " " << scores[3] << " " << scores[4] << endl;

for (int z = 1; z < FIVE - 1; ++z)

{

if (scores[0] < scores[z])

scores[0] = scores[z];

}

//Output

cout << "The highest score is " << scores[0] << endl;

cout << "The Scores and their differences from the highest are:" << endl;

for (int x = 0; x <= FIVE - 1; x++)

{

cout << "At the position " << x << ": score " << scores[x] << " off by " << 100 - scores[x] << endl;

}

system("pause");

return 0;

}

OUTPUT:

Enter 5 scores between 1 to 100

567

Invalid input. Score must be from 1 to 100. Try again.

45

24

34

56

345

Invalid input. Score must be from 1 to 100. Try again.

34

You entered: 45 24 34 56 34

The highest score is 56

The Scores and their differences from the highest are:

At the position 0: score 56 off by 44

At the position 1: score 24 off by 76

At the position 2: score 34 off by 66

At the position 3: score 56 off by 44

At the position 4: score 34 off by 66

Press any key to continue . . .

OUTPUT 2: Enter 5 scores between 1 to 100

99

345

Invalid input. Score must be from 1 to 100. Try again.

765

Invalid input. Score must be from 1 to 100. Try again.

123

Invalid input. Score must be from 1 to 100. Try again.

5432

Invalid input. Score must be from 1 to 100. Try again.

45

23

88

11

You entered: 99 45 23 88 11

The highest score is 99

The Scores and their differences from the highest are:

At the position 0: score 99 off by 1

At the position 1: score 45 off by 55

At the position 2: score 23 off by 77

At the position 3: score 88 off by 12

At the position 4: score 11 off by 89

Press any key to continue . . .