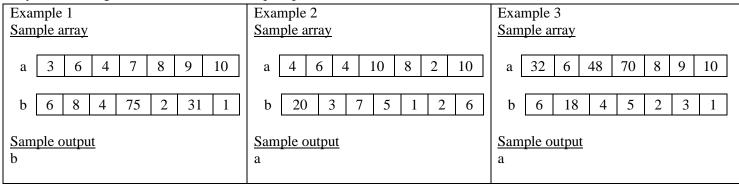
Name

Directions: The midterm will be posted at the beginning of class on Moodle (9:30am). You will have the entire class time to complete the exam. You must submit your midterm before class ends (10:45am). Everyone must take the exam at the same time, no exceptions. The exam is a total of 20 points. I will be online, and you can join the class link at any time if you have questions.

Important note: Be sure that you do not upload a blank copy of your exam! You will not receive credit for a blank exam. Check that you have properly saved the contents of your new file. As a precaution, consider also uploading a word document with your answers.

Question 1 [10 points] Choose a programming problem from the list. For each problem, do not hardcode your answers. Your code should work if I change the values of any of the items that are indicated in **bold, orange** font.

[1] Create 2 int arrays, a and b, each of length 7. Calculate the sum of the values in each array. Print the name of the array with the largest sum. If the sums are equal, print a.



[2] Create a **string**, **myString** and print *Same* if the first 2 chars in the string also appear at the end of the string. If the first 2 chars in the string do not appear at the end of the string, print *different*.

Example 1	Example 2
Sample string	Sample string
edited	course
Sample output	Sample output
Same	Different

[3] Create an int array of length 5. Determine if the first or last element in the array is larger and set all the other elements to be that value. Print the updated array.

Example 1 Sample array	Example 2 Sample array
4 18 3 71 8	3 1 35 17 2
Sample output 8 8 8 8 8	Sample output 3 3 3 3 3

• Write out the code in the space provided below. Be sure to indicate the problem that you chose. Rubric:

Excellent	Good	Below Average	Poor
Demonstrates excellent understanding of programming: 100% of requirements met no syntax errors no logic errors	Demonstrates good understanding of programming: 79-60% of requirements met 1-2 syntax errors 1-2 logic errors	Demonstrates <u>fair</u> understanding of programming: 59-30% of requirements met 3-4 syntax errors J-4 logic errors	Demonstrates poor understanding of programming: < 30% of requirements met > 5 syntax errors > 5 logic errors
10 points	9 – 7 points	6 - 4 points	3 - 0 points

Question 2 [10 points] Write a one-page analysis of your program in the space provided below. See Question 2. Do not exceed one page. Be sure that the analysis is thought provoking and intellectual. You should speak as a computer scientist. Include the following:

- o Describe your algorithm. How does your code work? Why did you choose this approach?
- o Give direct examples (at least 2) of similarities in your past lab assignments in this course.
- o Bonus (+5): Discuss a real-world application of how your program can be used.

Rubric:

Excellent	Good	Below Average	Poor
Demonstrates excellent understanding of programming: 100% of requirements met Very informative and well- organized Virtually no spelling, punctuation or grammatical errors	Demonstrates good understanding of programming: 79-60% of requirements met Somewhat informative and organized Few spelling and punctuation errors, minor grammatical errors	Demonstrates fair understanding of programming: 59-30% of requirements met Gives good information but poorly organized A number of spelling, punctuation or grammatical errors	Demonstrates poor understanding of programming: < 30% of requirements met Gives no information and very poorly organized So many spelling, punctuation and grammatical errors that it interferes with the meaning
10 points	9 – 7 points	6 - 4 points	3 - 0 points

Question 1 [10 points]	Problem #	#

Question 2 [10 points]