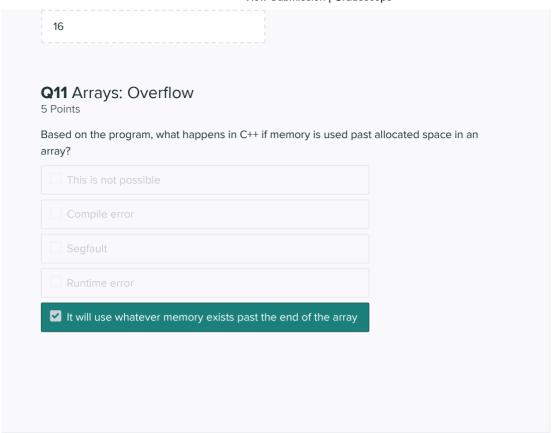
0 Points	
https://github.umn.edu/umn-csci-3	081-F22/public-lab03
Q2 Type Sizes: Pointers	3
How many bytes of memory are ne	eded to store a pointer?
8 bytes	
Therefore, the lab machines are the 32-bit • 64-bit	ese types of systems:
Q3 Type Sizes: Shorts 5 Points	
Based on the results, how many po are 2^{32} possible integers. (Calculate	essible short values are there? Hint: 8 bits in 1 byte and there e a number)
65536	
How many possible "unsigned shor	rt" values are there? (Calculate a number)
65536	
What do you think would be the difabout this)	ference between an unsigned short and a short? (think
5 Points Assuming that references take up t	by Value vs. Reference the same memory as a pointer, which are better in terms of
5 Points Assuming that references take up t	•
5 Points Assuming that references take up t minimizing memory copy? Passing DVec3 by value	•
Assuming that references take up t minimizing memory copy? Passing DVec3 by value Passing IVec3 by value	•
Assuming that references take up to minimizing memory copy? Passing DVec3 by value Passing IVec3 by value Passing dvecArray by value	•
5 Points Assuming that references take up t minimizing memory copy? Passing DVec3 by value Passing IVec3 by value	•

True or false, in terms of saving memory, it is always best to pass by reference. False If the only reason to pass by reference was to save space, what types might you want to consider passing by value? char ✓ short ✓ int long **d**ouble unsigned char unsigned short unsigned int **Q5** Type Sizes: Member Variable Ordering True or False, the ordering of variables in a class or struct does not change the amount of memory needed to store the variable data for a type. False **Q6** Type Sizes: Array Sizes Based on the information in the program, how would you calculate 384 bytes for dvecArray without running sizeof(...)? 0.16*6*4 \odot 3 * 8 * 16 06*8*803 * 8 * 12O 2 * 12 * 16

Q7 F 5 Point	Private Variables	
Use th	e "Private Variables" section of the program output to answer the following question:	
Which	of the following are true about the security of private member variables:	
☑ v	le can read private member variables outside of public class methods.	
✓ We can edit private member variables outside of public class methods.		
	rivate variables cannot be represented as other types (doubles cannot be viewed as stegers).	
Q8 E 5 Poin	Byte Arrays: Int to byte array	
	asting an int to a byte array we got 44 1 0 0. We can say $300 = 44a + 1b + 0 + 0$. are a and b ?	
	Consider that $127=7 imes10^0+2 imes10^1+1 imes10^2$. Remember that for bytes, the yould be 256 instead of 10.	
a =		
1		
b =		
256		
5 Poin		
Decod	e this message stored as an integer: 1701013838	
	irst change the number into a byte array (perhaps use the code) and then look up each the ASCII table.	
Record	l your answer here:	
Nice		
Q10 5 Point	Arrays: Array Size	
How m	nany floats are in array ?	
4		



ab 03 Part A - C++ Memory and Debugging	• GRADE
TUDENT	
uijun Ni	
DTAL POINTS	
0 / 50 pts	
UESTION 1	
ab 03 Github Link	0 / 0 pts
UESTION 2	
ype Sizes: Pointers	5 / 5 pt
UESTION 3	
ype Sizes: Shorts	5 / 5 pt
UESTION 4	
ype Sizes: Passing by Value vs. Reference	R 5 / 5 pt
UESTION 5	
ype Sizes: Member Variable Ordering	5 / 5 pt
UESTION 6	
ype Sizes: Array Sizes	5 / 5 pt
UESTION 7	
rivate Variables	5 / 5 pt
UESTION 8	
yte Arrays: Int to byte array	5 / 5 pt

Byte Arrays: Decode a message	5 / 5 pts
QUESTION 10 Arrays: Array Size	5 / 5 pts
QUESTION 11 Arrays: Overflow	5 / 5 pts