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CS 2401 Fall 2021

**Lab 3: Dynamic Memory Answer Sheet**

**Due: Friday 9/17 at 11:59 PM**

Type your answers on this sheet making sure to list the question numbers.

Question 7: (Output below)

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Question 10: (Output below)

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Question 11:

* When “static” was added to the function variable declaration, the program allocated that memory for the duration of the main program’s runtime. Meaning that instead of redeclaring that data variable and its contents every time the function is called, the variable is declared once, and reused every function iteration. The variable is not reset to zero, therefore increasing the output by one for every function iteration.

Question 12:

* Removing the term “static” causes the program to redeclare “int x = 0” every function iteration. The memory is overwritten each function call, erasing whatever value was in the memory to begin with. Causing the output to only print one “\*” each time the function is run due to the fact that “x” is always zero to begin with.

Question 16:

* Output: 0xff1848
* Printing the address stored in a pointer can be done simply by passing “ptr” to cout.
* “cout << ptr”.

Question17:

* Output: 0x61febc
* Printing the address of the pointer itself can be done by passing ptr with the “&’ operator preceding it.
* “cout << &ptr”

Question 20:

* First Output Line: 2402 Is stored at: 0x7c1848
* Last Output Line: 2411 Is stored at: 0x7c1848

Question 22:

* 2nd to last Output line: 0 Is stored at: 0xe9186c
* Last Output Line: 0 Is stored at: 0xe91870