

COSC 480 – Lab #1

*This lab may be worked on in pairs.

1.) Each of the following pieces of C code have some kind of issue.

a.) /* Creates an integer pointer, sets the value to which it points to 3, adds 2 to this value, and prints said value */

```
void test1(){
    int *a = 3;
    *a = *a + 2;
    printf("%d", *a);
}
```

b.) /* Creates two integer pointers and sets the value to which they point to 2 and 3, respectively. /

```
void test2(){
    int* a,b;
    a = (int*) malloc(sizeof(int));
    b = (int*) malloc(sizeof(int));

    if(!(a && b)){
        printf("Out of memory!");
        exit(-1);
    }
    *a = 2;
    *b = 3;
}
```

c.) /* Creates a 3 x 100 two-dimensional array, and sets element (1,1) to 5 */

```
void test3(){
    int **a = (int**) malloc(3*sizeof(int*));
    a[1][1] = 5;
}
```

d.) /*Sets the value pointed to by a to an input, checks if the value pointed to by a is 0, and prints a message if it is*/

```
void test5(){
    int a = (int*) malloc(sizeof(int));
    scanf("%d", a);
    if (!a)
        printf("Value is 0\n");
}
```

2.) Fix the above code and test on an AWS instance. In the comments for each function, you must identify the issue or issues with each of the snippets in #1. Instructions for creating and running your own AWS instance can be found on the course site (<http://ripark.github.io/f15/cosc480/>)

3.) Submit your solution (only one submission per pair), sufficiently commented, to Blackboard. Due 9/9 at 11:59pm.

Credit: CalTech's GPU Programming Course (<http://courses.cms.caltech.edu/cs101gpu/>)