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CSCI 1101

Lab 1 Task

**What will be the outputs of the following programs?**

1-

```
int a = 7;
int b = 17;
int *c = &b;
*c = 7;
cout  << a << "  " << b << endl;
```

***My answer:***

The output would be "7  7"

***My explanation:***

The cout of the variable "a" would output 7 (the one on the left) as the first line of code is that a = 7. As for the 7 on the right, it is also 7 because of how b was initially equal to 17 but after that, *c was initialized to be equal to &b where giving a value to *c affects the value of b. So, since *c became equal to 7, b was then also equal to 7 producing the 7 on the right.

2-

```
int *ptr = 0;
int a = 10;
*ptr = a;
cout << *ptr << endl;
```

***My explanation:***

There would not be an output or it could say "Segmentation Fault" due to *ptr initially being a null pointer (pointing at the value 0) which prevents it from a valid memory location and dereferencing it would also cause undefined behavior.

3-

```
int a = 7;
int *c = &a;
c = c + 1;
cout  << a << "  " << *c << endl;
```

***My answer:***

The output would be "7  0"

***My explanation:***

The cout of the variable “a” would output 7 (the one on the left) as the first line of code is that a = 7. As for the 0, this is because of how *c is pointing to an uninitialized memory location, making it have some undefined behavior as to what it outputs.