

CSEC 466
Simple Algorithms**Name:** Smayan Daruka**Date:** 11/27/18**Requirements:**

- Lab IDB files

Challenges:

Use IDA to open up the two IDB files you've been provided with. For each IDB file, you are required to manually decompile the algorithm, provide pseudocode representative of the algorithm, and state what the magic number would be.

Once you have the IDB file loaded in IDA, hit CTRL+M and click on the start bookmark. I entered this to help get you started on where to start your analysis!

Simple Algorithm:

1. Decompile the algorithm and write out pseudocode below in C that *most accurately* represents the way it was written.

```
#include <stdio.h>
int main(){
    int x = 0;
    while(x < 4)
        x++;
    x += 2;
    x += 10;
    printf("The secret number is %d", x);
    return 0;
}
```

2. What is the secret number?

The secret number is 16.

Simple Algorithm with Pointers:

1. Decompile the algorithm and write out pseudocode below in C that *most accurately* represents the way it was written.

```
#include <stdio.h>
int main(){
    int x = 5;
    int y = 1;
    int z = 0;
    while(y <= 10)
        z = x&2147483649;
        if(z > 0){
            z--;
            z = z|4294967294;
            z++;
        }
        if(z == 0)
            x++;
        else
            x--;
        y++;
    }
    printf("The secret number is %d", x);
    return 0;
}
```

2. What is the secret number?

The secret number is 5.