

CSCI 2170 Homework 7

Name _____

(Due beginning of class on Wednesday, March 2nd)

1. Read chapter 2 on Recursion
2. Trace the execution of the following program as shown in class. Write the final output of the program:

```
#include <iostream>
using namespace std;
void mystery (int n);
```

```
int main()
{
    cout << mystery(5) << endl;
    return 0;
}
```

```
void mystery (int n)
{
    if (n <= 1)
        return n;
    else
    {
        return (mystery(n-1)+mystery(n-2));
    }
}
```

3. Given:
array "values":

2	5	10	15	23	44	47	53	77	86
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Trace the execution of the recursive BinarySearch function when it is called with the following function call:

- (1) BinarySearch(A, 0, 9, 10, found, location)
- (2) BinarySearch(A, 0, 9, 25, found, location)

4. Write a void *recursive* function **WriteBackwards** that has one parameter which is a positive integer. When called, the function writes its argument to the screen backward. That is, if the argument is 1234, it outputs the following to the screen:
4321

```
void WriteBackwards(int number)
{
    ....
}
```