

# Practice Quiz 4 Solutions

CSCI 136: Spring 2022

Your name: \_\_\_\_\_

This week's quizzes cover readings, handouts, labs, and lecture materials up to and including Monday 2/28. Answer the following questions as practice for your graded quiz on Friday.

1. Create a (very short) recursive method that prints all numbers from  $n$  down to 1. For example, calling `printFromN(3)` should give the output:

```
3
2
1
```

Your method should not use any loops and you do not need any helper methods. You do not need to include any comments or `Assert` calls; just write the main method body.

```
public static void printFromN(int n) {  
  
    if(n > 0) {  
        System.out.println(n);  
        printFromN(n-1);  
    }  
  
}
```

2. Supply at least one precondition for `printFromN`.

Your answer: \_\_\_\_\_ We must have  $n \geq 1$  \_\_\_\_\_

3. How much time does `printFromN` take in the worst case? Use Big- $O$  notation to upper bound the number of operations. Assume that `System.out.println()` takes constant time.

Your answer: The method is invoked  $n$  times, each requiring constant # operations:  $O(n)$