Assignment 0.1

CSE 102 – Introduction to Computer Science

Due date: March 31 (It will be collected at the beginning of the class). Submit in class.

Your assignment should be handwritten ONLY.

Algorithm & Analysis Assignment

Given a number N and let's try an algorithm for 3-6-9 game.

3-6-9 game: From 1 to given N, your algorithm will not show the numbers involving '3' '6' and '9'. Instead, you are replacing with * for each appearance. For example, 35 should be * and 36 should be **.

Examples:

  [input] 10

  >> [output]: 1 2 * 4 5 * 7 8 * 10

  [input] 33

  >> [output]: 1 2 * 4 5 * 7 8 * 10 11 12 * 14 15 * 17 18 * 20 21 22 * 24 25 * 27 28 * * * * **

*Question 1 a) Write a pseudocode for your algorithm (little less like programming). But be concise and clear.

*Question 1 b) Rewrite your pseudocode to more like programming code (any language you prefer, python may be nicer). Your syntax does NOT need to be correct 100% (running code is not required, however, it should be presentable). Again, remember that your algorithm does NOT have to compile at this time. Only if you want, try to run it.

*Question 1 c) If you can, please briefly analyze the time complexity of your algorithm above. No need for complicated analysis, be very very brief (perhaps in term of big O notation and justify why).

*Question 1 d) Write one paragraph explaining any difficulty and experience you had (a couple of sentences are fine).

NOTE:

    1. I will select a few good ones and mention them. We will discuss more.

SUBMISSION:

    1. Handwritten only. Submit in class. Solutions to Question 1 a), b), c), d)

Do your best. Even if you can't do the whole assignment, submit as much as you can (with explanation why you can't do this). And to make sure that you do your own assignment.