

Lab 2 – Implementing Algorithms



C
Language

All work must be uploaded on Webcourses at the end of the class.

1. Document the pseudo code/flowchart for the *tree-drawing algorithm* derived in Friday's class (described in the following images) in a WORD document:

Line		Spaces	Asterisks
1	*	3	1
2	***	2	3
3	*****	1	5
4	*****	0	7
5	*	3	1
		size - line	2 * line - 1

Line		Spaces	Asterisks
1	*	2	1
2	***	1	3
3	*****	0	5
4	*	2	1
		size - line	2 * line - 1

Trunk spacing is always size - 1

2. Implement the tree-drawing algorithm in C.
3. Document the pseudo code/flowchart for the game – *Rock, Paper, Scissors*, started in the class on Friday in a WORD document. Outline the rules involved in the game.
4. Using the Scratch project provided (**RockPaperScissors(start of).sb**), implement your algorithm in Scratch.
5. Play the following game – *Towers of Hanoi*:
<http://www.mathsisfun.com/games/towerofhanoi.html>
6. Complete the quiz in the *Week 3 Lab* folder. This is only available during class (until 12.30).

Finally

Put the following documents in a folder, zip the folder, and upload it in Webcourses in the submission icon provided:

- a. A **word** document with the pseudo code/flowchart from Q1 & Q3.
- b. C program from Q2.
- c. Scratch program from Q4.

**** All of this lab will go towards your final CA mark. Ensure this is your own work, as if there is evidence of copying you will receive 0.**