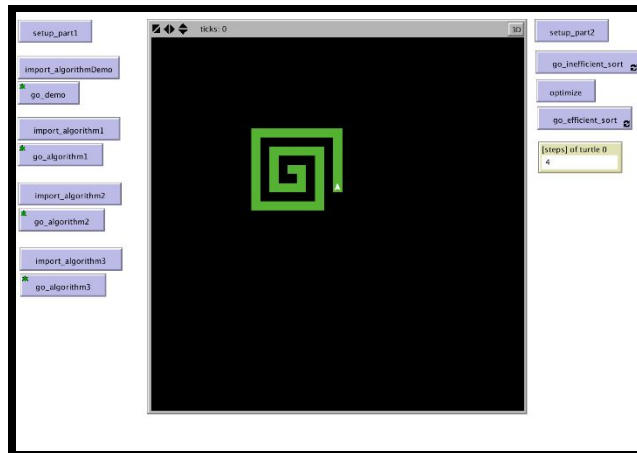




## CS108L Computer Science for All Module 6 (Part 1) Intro & Guide Algorithms Part 1



### Part 1 Patch Destroyer Model Overview:

For part 1, you will need to get your turtle to destroy the green patches as efficiently as possible. You will download the base model and some image files. The image files create different patterns of green patches in the model. You need to create procedures that move your turtle around the NetLogo world **one patch at a time** destroying the green patches (turning them black) as it goes. The object of the assignment is to do so in the fewest steps possible, while still following the rules listed below.

NOTE: You must download the images and base program separately. The base program provides the outline for the assignment. The images must be in the same folder as your program for it to work (they must be side-by-side on your computer).

### Patch Destroyer Rules:

1. The turtle must start at the center of the NetLogo world and be facing up and be a fixed color that is NOT green or black.
2. Your turtle can only move 1 patch at a time. You cannot use a different command (such as setxy) to move the turtle.
3. You must count the total number of steps that your turtle takes to destroy patches. Be careful about loops and calls to other procedures; count every step your turtle takes!
4. You must create a **monitor** to report the number of steps your turtle takes.
5. You must create a **go procedure** for each of the imported images you solve:



- a. Each solution must include a repeat or while loop to make it more efficient.
- b. Minimize the steps your turtle takes to munch the patches!

Module 6 Part 1: Algorithms Grading Rubric (20 Points Total)		
Done	Points	Task
	1	A: <ul style="list-style-type: none"><li>• Submit a NetLogo source code with the file name: M6P1.<i>firstname.lastname</i>.nlogo.</li><li>• The first few lines of your program are comments including your name, the date, your school, and the assignment title.</li></ul>
	2	B: <ul style="list-style-type: none"><li>• The code in the Code tab of your program is appropriately documented with “in-line” comments.</li></ul>
	3	C: <ul style="list-style-type: none"><li>• The Info tab of your code contains a description of your program.</li></ul>
	4	D: <ul style="list-style-type: none"><li>• Your turtle destroys all the green patches according to the rules outlined in the assignment when go_algorithm1 is clicked.</li></ul>
	4	E: <ul style="list-style-type: none"><li>• Your turtle destroys all the green patches according to the rules outlined in the assignment when go_algorithm2 is clicked.</li></ul>
	4	F: <ul style="list-style-type: none"><li>• Your turtle destroys all the green patches according to the rules outlined in the assignment when go_algorithm3 is clicked.</li></ul>
	2	G: <ul style="list-style-type: none"><li>• Your monitor accurately reports how many steps your turtle takes.</li></ul>