

# CS108L Computer Science for All

## Module 7: Computer Science Concepts

**Algorithm:** A set of instructions that can be used repeatedly to solve a problem or complete a task.

**Counted Loops:** Set of commands that are repeated a fixed number of times

**Conditional Loops:** Set of commands that are repeated while a certain conditional statement is true.

**Agentsets:** Set of agents (turtles (or breeds), patches or links)

**List:** An ORDERED collection of values. A list is not necessarily sorted. Order is important ( $\{1,2,3\}$  does not equal  $\{3,2,1\}$ ) and items CAN be repeated.

**Sets (Agentsets):** An UNORDERED collection of values . Order is NOT significant ( $\{1,2,3\}$  DOES equal  $\{3,2,1\}$ ) AND items CANNOT be repeated

**Sorting:** Arranging a group of things (set) according to some criteria (size, value, color, ...)

**Big O Notation:** Used in computer science when analyzing algorithms. A measure of how an algorithm runs as you increase the input size dramatically. Incorporates changes in processing time and memory used. Also, another way to classify algorithms.