**Python Algorithms**

Data Structure

Tables: numbers of value might be fixed so difficult to append etc..

Single-linked list: elements locations are relative to the previous elements to reach an element, th système has to go through the chain of element until it reached the location of the element we are looking for.

Dictionnaries: accessible with keys.

Binary Tree:

Parent can only have up to 2 children.

Sorting list:

Bubble Sort algorithm: Compare elementsby pair an invert the order if needed At the end, the algorithm starts over the sorting process excluding the last element each time. After each round the algorithm will have 1 less element to sort and it finish running after the last comparison between the first 2 elements.

Algorithm complexity:

Time:

Constant: regardless of the problem the algorithm will take the same amount of time to solve/sort

Linear: any extra variable or complexity will increase the duration of the algorithm by the same amount of time.

Exponential: Any extra variable or complexity will increase the duration of the algorithm exponentially.

Space:

There is also a space complexity with the algorithm.

This is a reason different algorithm have to be used. Memory is not infinite.