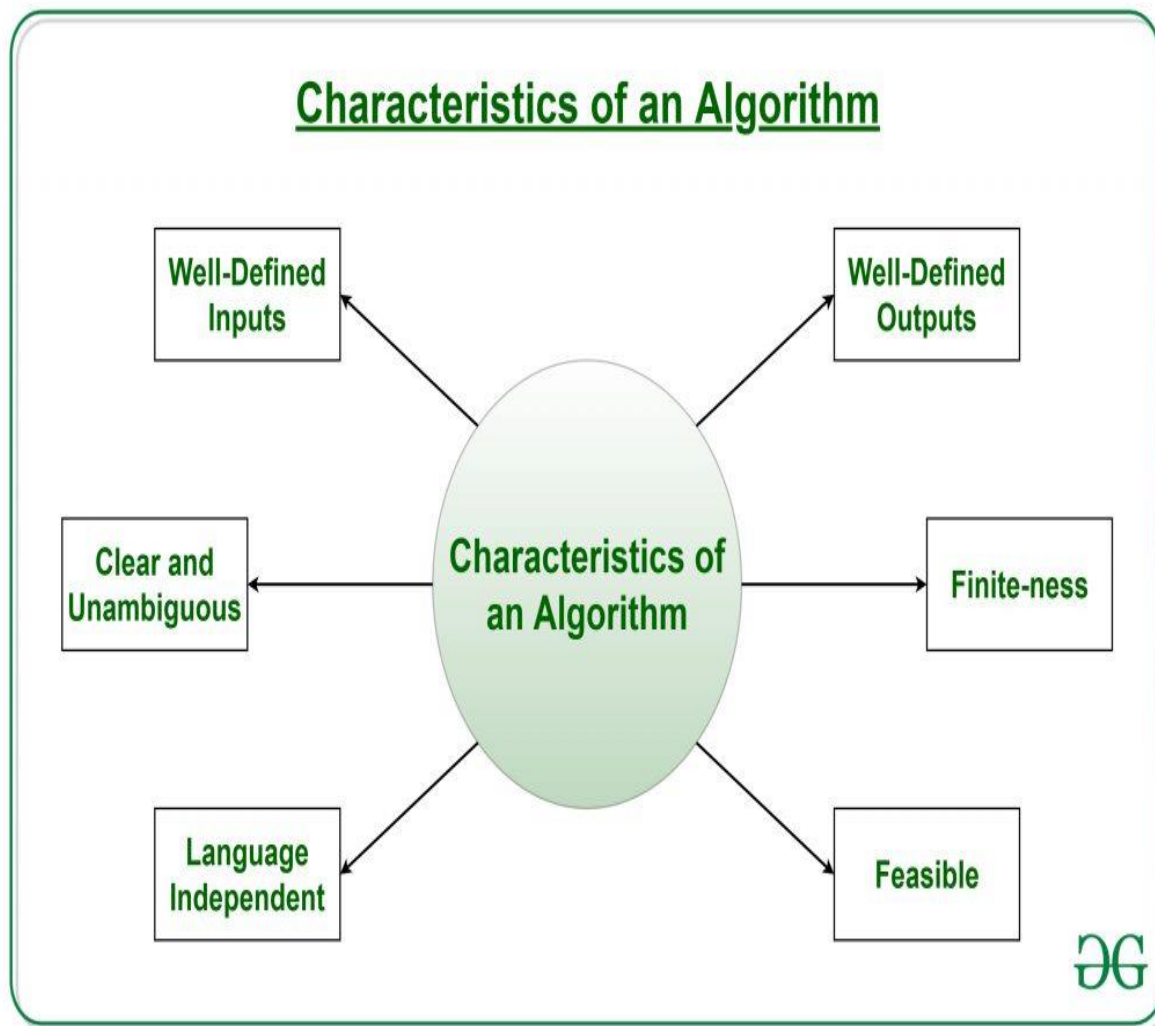


By kumari priyadarshani

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Bca 1st year

What are the Characteristics of an Algorithm?



As one would not follow any written instructions to cook the recipe, but only the standard one. Similarly, not all written instructions for programming is an algorithm. In order for some instructions to be an algorithm, it must have the following characteristics:

A) Clear and Unambiguous:

Algorithm should be clear and unambiguous. Each of its steps should be clear in all aspects and must lead to only one meaning.

B) Well-Defined Inputs: If an algorithm says to take inputs, it should be well-defined inputs.

C) Well-Defined Outputs: The algorithm must clearly define what output will be yielded and it should be well-defined as well.

D) Finite-ness: The algorithm must be finite, i.e. it should not end up in an infinite loops or similar.

E) Feasible: The algorithm must be simple, generic and practical, such that it can be

executed upon will the available resources. It must not contain some future technology, or anything.

F) Language Independent: The Algorithm designed must be language-independent, i.e. it must be just plain instructions that can be implemented in any language, and yet the output will be same, as expected.

How to Design an Algorithm?

Inorder to write an algorithm, following things are needed as a pre-requisite:

1) The problem that is to be solved by this algorithm.

2) The constraints of the problem that must be considered while solving the problem.

3) The input to be taken to solve the problem.

4) The output to be expected when the problem is solved.

5) The solution to this problem, in the given constraints.

Then the algorithm is written with the help of above parameters such that it solves the problem.

Thank you😊