What is an Algorithm?

The step by-step process to solve a problem is called an algorithm. Here we will concentrate on design part, but no the implementation part.

If the problem is having more than one solution or algorithm then the best one is decided by the analysis based on two factors.

1. CPU Time ([Time Complexity](https://www.geeksforgeeks.org/understanding-time-complexity-simple-examples/))
2. Main memory space ([Space Complexity](https://www.geeksforgeeks.org/g-fact-86/))

Time complexity of an algorithm can be calculated by using two methods:

1. Posteriori Analysis
2. Priori Analysis

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| Priori Analysis | Posteriori Analysis |
| * This analysis is done by using the algorithm of the program | * This analysis is done by using the program itself. |
| * It is independent on language , compiler and type of hardware | * it is dependent on language , compiler and type of hardware |
| * Time complexity is measured using asymptotic notations   Eg: BigO , Omega , Theta notation | * Time complexity is not measured in asymptotic notations. |
| * It is done before the execution of a program | * It is done after the execution of the program |