

Data Structures and Algorithms

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1 Algorithm Analysis

What is Algorithm?

As per Donald Knuth

Algorithm

A definite, effective and finite process that receives input and produces an output

Definite : steps are clear, concise and unambiguous

Effective : you can perform each operation precisely

Finite : finite number of steps

Analysis

When two programs solve the same problem, Analysis is finding answer to the question which one is **better**?

Better on ?

- Readability :

Better on ?

- Readability : changes with programming language

Better on ?

- Readability : changes with programming language
- Number of Lines :

Better on ?

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- Amount of computing resources :

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- Amount of computing resources : changes with programming language
- Running time :

Better on ?

- Readability : changes with programming language
- Number of Lines : changes with programming language
- Amount of computing resources : changes with programming language
- Running time : changes with processor speed and language

Better on ?

- Readability : changes with programming language
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