
PROGRAMMING ADVICES
LEARN THE RIGHT WAY
26+ Years of Expericace
Mohammed Abu-Hadhoud
MBA, PMOC, PgMP®, PMP®, PMI-RMP®, CSE, ITILF, MCPD, MCSD
لا تنسى الاشتراك في قناتنا على اليوتيوب ومشاركة القناة مع اصدقائك
لتعم الفائدة للجميع وانقاذ الاف الناس من التشتت وجزاكم الله خيرا
لا تنسونا من دعائكم وادعو لوالدي بالرحمة
www.ProgrammingAdvices.com


مهم جداً
هذا الملف للمراجعة السريعة واخذ الملاحظات عليه فقط ،لانه يحتوي
على اقل من 20٪ مما يتم شرحه في الفيديوهات
الاستعجال والاعتماد عليه فقط سوف يجعلك تخسر كميه معلومات
وخبرات كثيره
يجب عليك مشاهدة فيديو الدرس كاملا
لاتنسى عمل لايك ومشاركة القناة لتعم الفائدة للجميع
لا تنسونا من دعائكم
ProgrammingAdvices.com
Mohammed Abu-Hadhoud
STOP
PROGRAMMING
ADVICES
LEARN THE
RIGHT WAY

Data Structures

Level 1

Time & Space Complexity

Big O Notation

ProgrammingAdvices.com

PROGRAMMING ADVICES LEARN THE RIGHT WAY

Mohammed Abu-Hadhoud

MBA, PMOC, PgMP®, PMP®, PMI-RMP®, CM, ITILF, MCPD, MCSD

Data Structures

Level 1

Things Affects Your Program Speed and Efficiency?

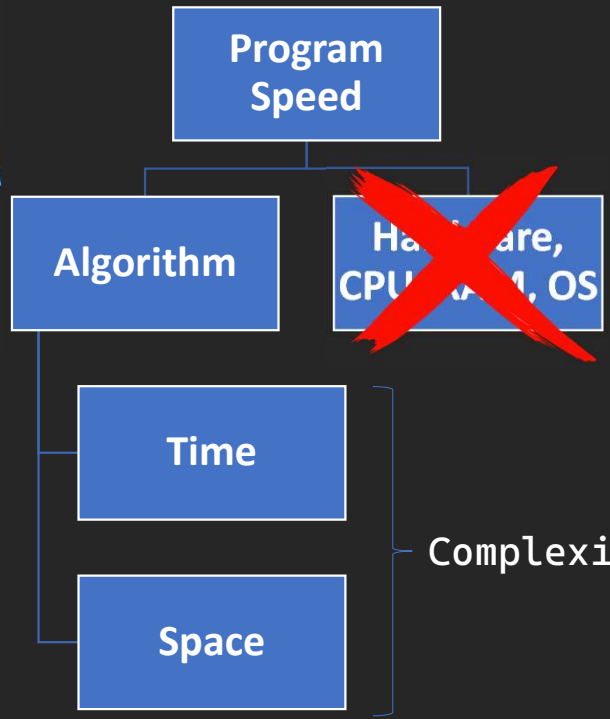
ProgrammingAdvices.com

PROGRAMMING ADVICES LEARN THE RIGHT WAY

Mohammed Abu-Hadhoud

MBA, PMOC, PgMP®, PMP®, PMI-RMP®, CM, ITILF, MCPD, MCSD

Things Affect Program Speed



Performance

Function (Input Size)

Complexity

Time vs Input

Space vs Input

O(n)

Input Size

Printing Array[10] Items

Is faster than

Printing Array[1000] Items

PROGRAMMING ADVICES LEARN THE RIGHT WAY

Copyright© 2022
ProgrammingAdivces.com

Mohammed Abu-Hadhoud
MBA, PMOC, PgMP®, PMP®, PMI-RMP®, CM, ITILF, MCPD, MCSD
26+ years of experience

Data Structures

Level 1

Big O

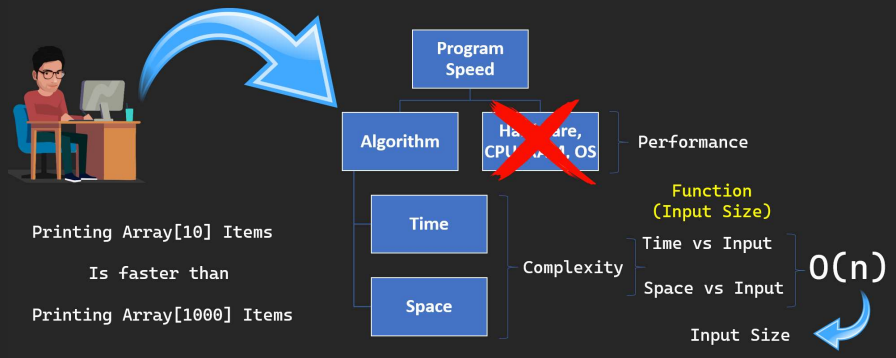
ProgrammingAdvices.com

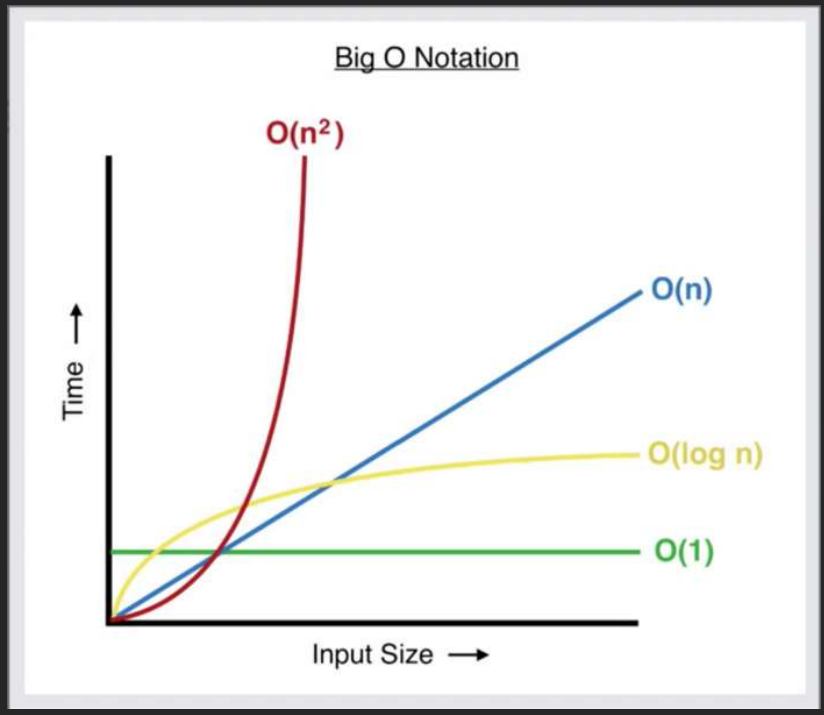
PROGRAMMING ADVICES LEARN THE RIGHT WAY

Mohammed Abu-Hadhoud

MBA, PMOC, PgMP®, PMP®, PMI-RMP®, CM, ITILF, MCPD, MCSD

What is Big O?





Copyright© 2022
ProgrammingAdivces.com

Mohammed Abu-Hadhoud
MBA, PMOC, PgMP®, PMP®, PMI-RMP®, CM, ITILF, MCPD, MCSD
26+ years of experience

Data Structures

Level 1

What Big O is NOT?

ProgrammingAdvices.com

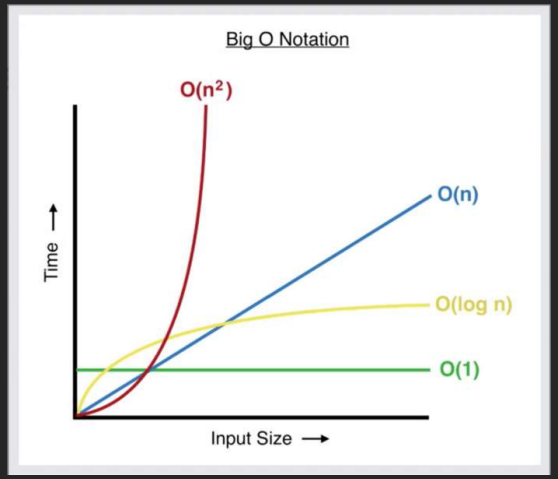
PROGRAMMING ADVICES LEARN THE RIGHT WAY

Mohammed Abu-Hadhoud

MBA, PMOC, PgMP®, PMP®, PMI-RMP®, CM, ITILF, MCPD, MCSD

What Big O is NOT?

- Big O is not going to give you an exact answer on how long a piece of code will take to run.
- Does not consider the performance of hardware.



Copyright© 2022
ProgrammingAdivces.com

Mohammed Abu-Hadhoud
MBA, PMOC, PgMP®, PMP®, PMI-RMP®, CM, ITILF, MCPD, MCSD
26+ years of experience

Data Structures

Level 1

What is Time and Space Complexity?

ProgrammingAdvices.com

PROGRAMMING ADVICES LEARN THE RIGHT WAY

Mohammed Abu-Hadhoud

MBA, PMOC, PgMP®, PMP®, PMI-RMP®, CM, ITILF, MCPD, MCSD

Time & Space Complexity

An algorithm's time complexity: specifies how long it will take to execute an algorithm as a function of its input size.

Similarly, an algorithm's space complexity: specifies the total amount of space or memory required to execute an algorithm as a function of the size of the input.

PROGRAMMING ADVICES LEARN THE RIGHT WAY

Copyright© 2022
ProgrammingAdivces.com

Mohammed Abu-Hadhoud
MBA, PMOC, PgMP®, PMP®, PMI-RMP®, CM, ITILF, MCPD, MCSD
26+ years of experience

What is Big O Notation?

- The big-O originally stands for “Order Of“.
- Efficiency of Algorithm
- Time Factor of Algorithm
- Space Complexity of Algorithm
- Represented by O(n) where n is the number of Inputs.
- Big O, also known as Big O notation, represents an algorithm's worst-case complexity.
- It uses algebraic terms to describe the complexity of an algorithm.
- Big O defines the runtime required to execute an algorithm, by identifying how the performance of your algorithm will change as the input size grows.
- Relationship between Input Size and Performance.
- But it does not tell you the exact time your algorithm's runtime is.
- Big O notation measures the efficiency and performance of your algorithm using time and space complexity.
- Big O allows us to discuss our code algebraically to get a sense of how quickly it might operate under the strain of large data sets.
- with Big O Notation, we can look at our algorithm and see that it will take O(n) time to run. Big O Notation, written as O(blank), show us how many operations our code will run, and how its runtime grows in comparison to other possible solutions.

Copyright© 2022
ProgrammingAdivces.com

Mohammed Abu-Hadhoud
MBA, PMOC, PgMP®, PMP®, PMI-RMP®, CM, ITILF, MCPD, MCSD
26+ years of experience

What is Big O?

PROGRAMMING ADVICES LEARN THE RIGHT WAY

Copyright© 2022
ProgrammingAdivces.com

Mohammed Abu-Hadhoud
MBA, PMOC, PgMP®, PMP®, PMI-RMP®, CM, ITILF, MCPD, MCSD
26+ years of experience


ProgrammingAdvices.com
Thank You
Mohammmed Abu-Hadhoud
26+ Years of Experience
MBA, PMOC, PgMP®, PMP®, PMI-RMP®, CM, ITILF, MCPD, MCSD
PROGRAMMING ADVICES
LEARN THE RIGHT WAY