Data Structures & Algorithms Davis 10/12/22

Algorithm Analysis

General Ordering: $O(1) < O(\log n) < O(n) < O(n \log n) < O(n^2)$ $O(n^3) < O(c^n) < O(n!)$

Big O - worst case

Big Omega - best case

Big theta worst ≈ best

$O(1)$ constant

$O(\log n)$ Logarithmic

$O(n)$ Linear

$O(n^2)$ Quadritic

$O(2^n)$ Exponential

Each function will give different results. ~~but~~