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Analysis computer Algorithms

1) Let us understand the difference b/w two o and Θ for only given function s(n) we donate Θs((n)) as follows

$\Theta(s(n)) = \{f(n): \exists$ positive constant c_1, c_2

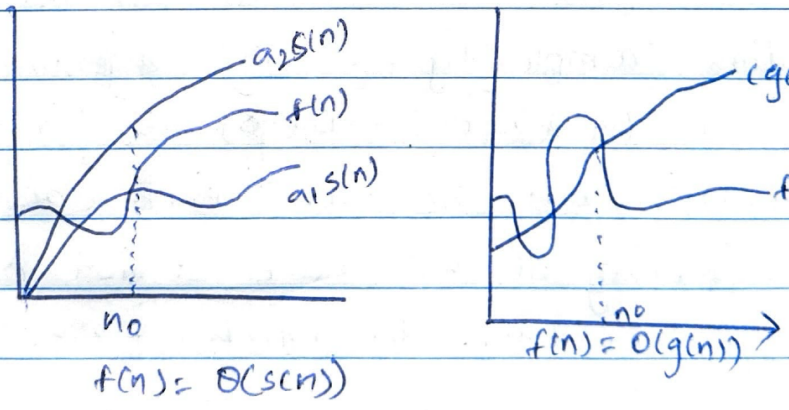
$0 \le a_1 s(n) \le f(n) \le a_2 s(n)$ for all $n \ge n$

And Θ is basically considered as the ave case and its tight band on the other hand O is asymptotic upper band and defined as

$O(g(n)) = \{f(n): \exists$ positive constant c&n

$0 \le f(n) \le (g(n) \forall n \ge n_0$

It is considered as worst case notation



* Now John comes up with $\Theta(n^2 \log(n))$ and Bill has a time complexity of $O(n^2 \log(n))$

Johns time is average case and bills ti