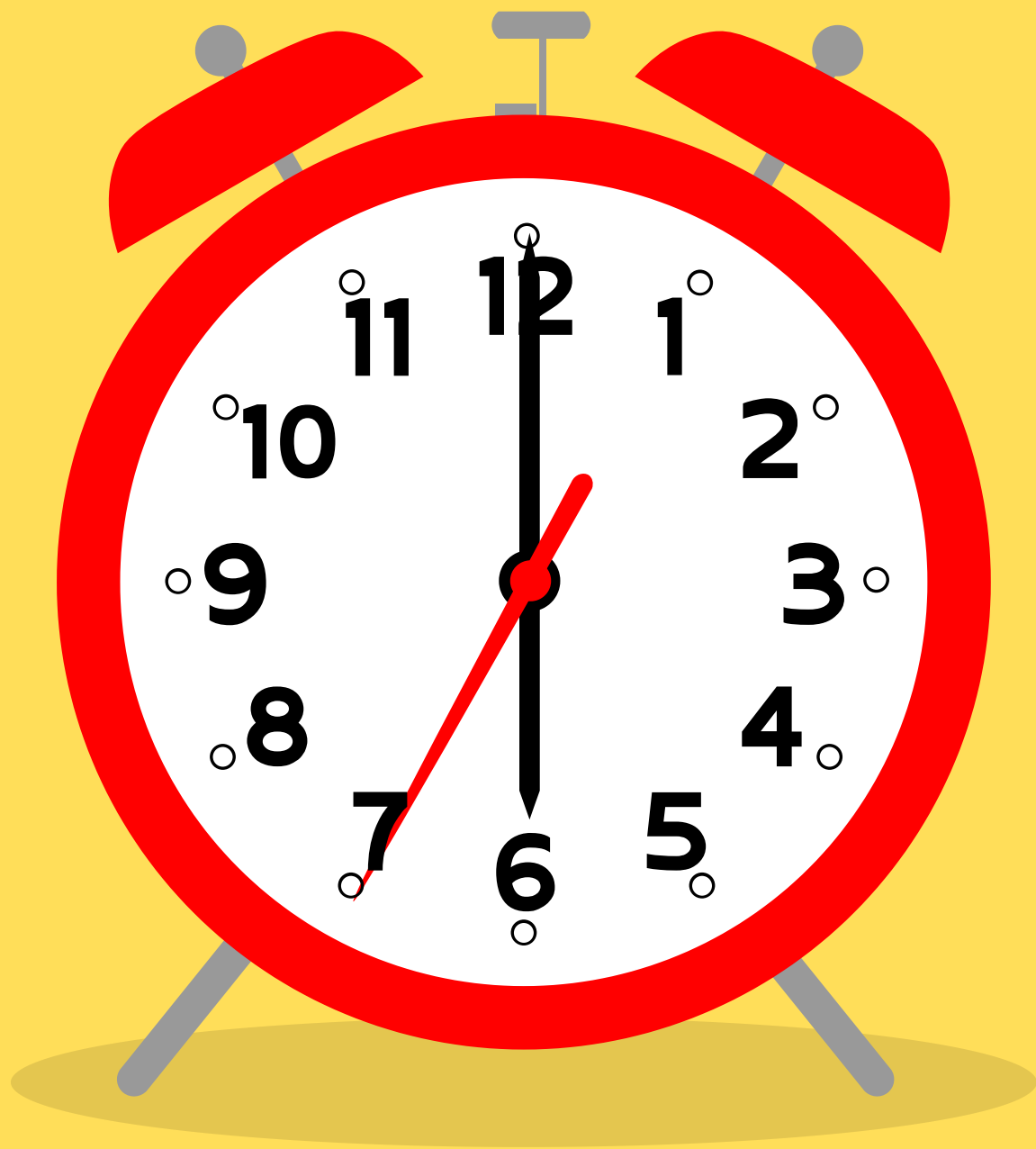
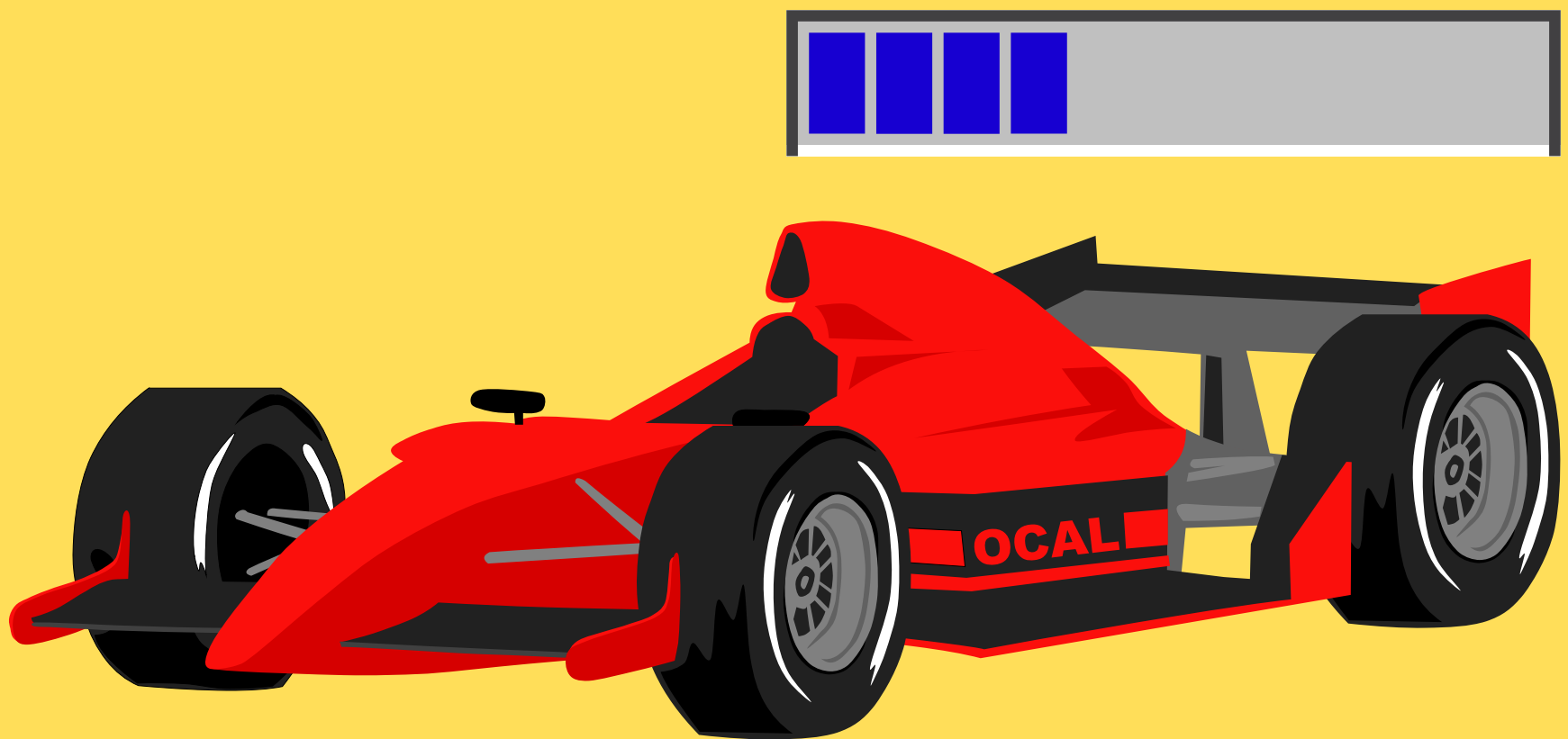


What is Time Complexity ?



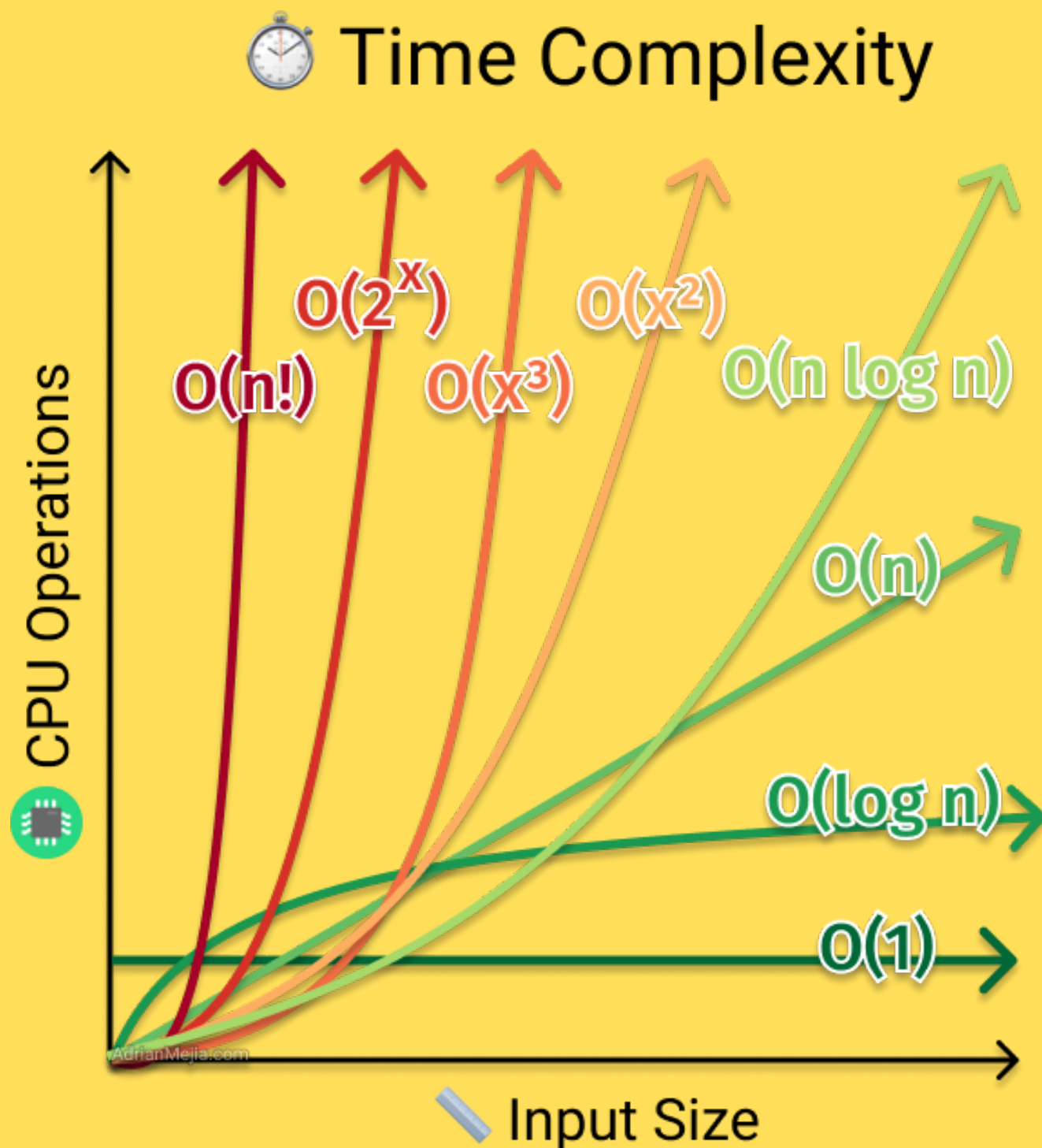
We all use apps on our phone, we love apps that run faster and require less time to start.



So it's important that your code run faster.



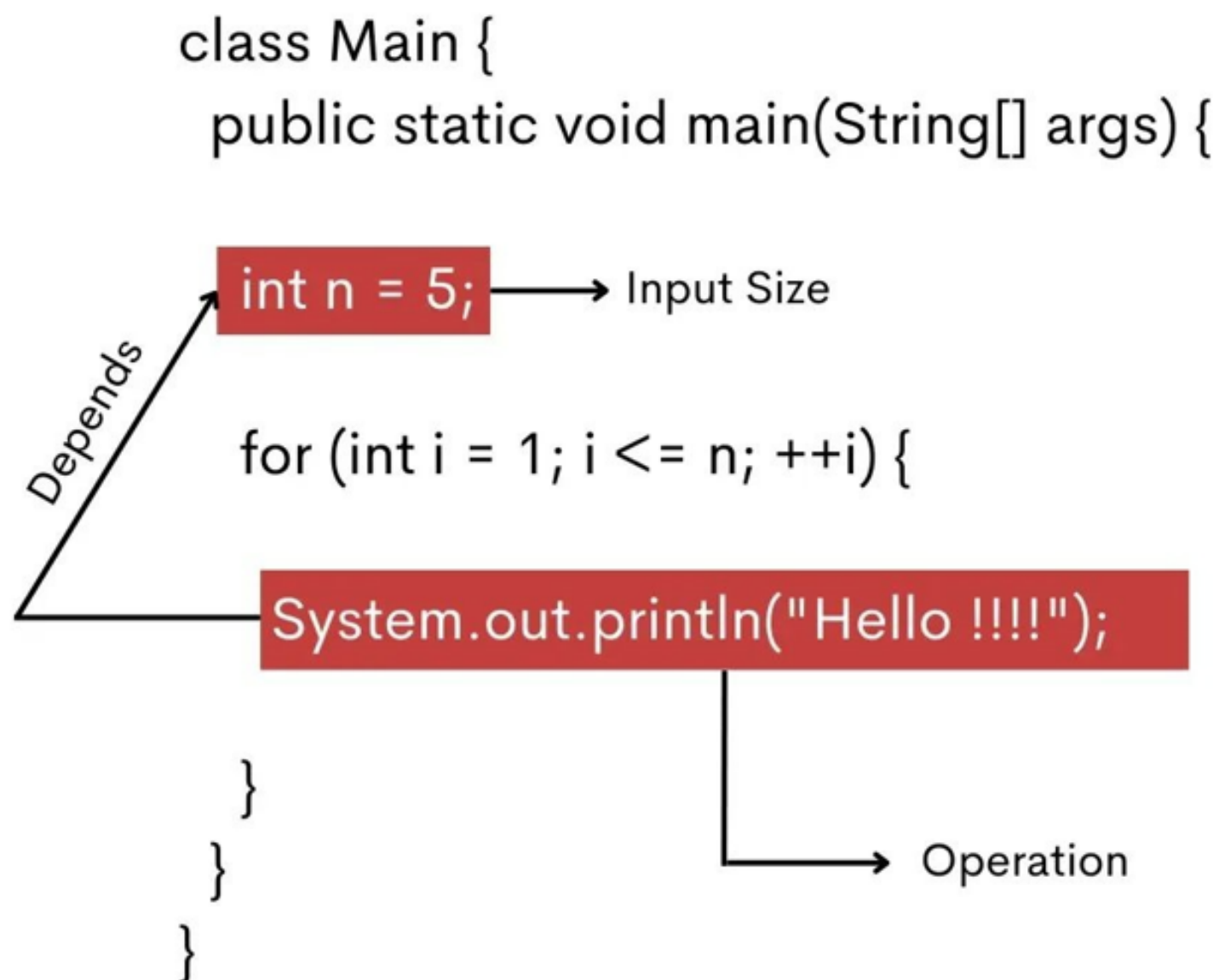
To calculate the time required by the program or algorithm we use the term **Time Complexity**.



Time complexity is nothing but a relation between input size and running time (Operations).



Let's understand this by an Example !!!



Three ways to calculate Time Complexity

Best Case

Average Case

Worst Case



Let's understand this by an Example !!!

Let's say we are searching for 1

[1,2,3,4,5]

Best Case

[2,3,4,1,5]

Average Case

[2,3,5,4,1]

Worst Case



Time Complexities for Sorting Algorithms

Algorithm	Time Complexity		
	Best	Average	Worst
Selection Sort	$\Omega(n^2)$	$\theta(n^2)$	$O(n^2)$
Bubble Sort	$\Omega(n)$	$\theta(n^2)$	$O(n^2)$
Insertion Sort	$\Omega(n)$	$\theta(n^2)$	$O(n^2)$
Heap Sort	$\Omega(n \log(n))$	$\theta(n \log(n))$	$O(n \log(n))$
Quick Sort	$\Omega(n \log(n))$	$\theta(n \log(n))$	$O(n^2)$
Merge Sort	$\Omega(n \log(n))$	$\theta(n \log(n))$	$O(n \log(n))$
Bucket Sort	$\Omega(n+k)$	$\theta(n+k)$	$O(n^2)$
Radix Sort	$\Omega(nk)$	$\theta(nk)$	$O(nk)$



Thanks for reading !

Follow my profile for more
coding related contents

Like



Comment



Share



@Aakash Kanojiya