

Time and Space Complexity

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TIME AND SPACE COMPLEXITY

Time complexity: relation between input size and running time/operations

no. of operations directly proportional to the input size.

the more input size of code the running will increase the run time. relation can be of any type like linear: if we increase input size by 2 then the run time will increase vise versa, cubic: if we increase input size by 3 then run time can be 9, quadratic, square root, and so on.

apla code tevdach changla asel jevdha apla relation kami(small) asel, jitne kam tezi se operation badh rahe honge hamrare input size ke saath.

waya to find time complexity:

1. Base case: $\Omega(1)$
2. Avg. case: $\Theta(n+2)/n$
3. Worst case: $O(n)$

we always take the worst case condition to find time complexity

Space complexity: the space complexity depends upon in how many memory space the code has taken, it depends on how many variables the code has stored if input size increase the memory storage for code increases