**Time Complexity**

Time complexity means growth rate of time. There are two types of TC. These are –

1. Without loop. < Constant time complexity -> **O(1**) >
2. With loop.

There three types of with loop.These are-

1. Single loop . <TC: O(n) >
2. Nested loop . <Minimum TC: O(n^2) >
3. Divide & conquere <TC: O(logN) >

In TC, ignore small value and constant value

**Space Complexity**

There are two types of SC

1. Without array. <SC: O(1)>
2. With array <SC: i> 1D:O(n), 2D:O(n^2), 3D:O(n^3) >

->Constant: O(1)

-> Linear: O(n)

-> Time complexity depends on loop

-> Space complexity depends on data structure

**Resources:**

* <https://monirul-islam.hashnode.dev/complexity-in-data-structure-and-algorithm?fbclid=IwAR2aGBp9-fpvDUX6cgVBqBGKsyC82zoxe1dGOdKdNiSmEiYT2VWl1ULLcQc#heading-time-complexity>
* <https://medium.com/@leemon174/understanding-time-and-space-complexity-fc0042833e9>