**Time Complexity Using Big O notation**

Time complexity of any program is defined as the time required for its execution. Big O notation is used for the time complexity analysis of a program whenever it requires maximum time for execution.

f(n)<=c.g(n)

n>=n0 =>O(g(n))

where c>0,n0>=1

n should be greater than or equal to n0

n0 always greater than or equal to 1

worst case complexity O(n)

worst case: maximum time required for program execution

Input Size

n0

f(n)

c.g(n)-> upper bound

Time