10th Feb

10 February 2022 21:00

Prime No.'s

2, 3, 5, 7, 11, 13, 17, 19, 23, 29 .....

isPrime(19)

(1) – 2 to n-1 => do(n%i == 0) = not Prime

9871325 => 9871323 ✗ = n-2 = O(n)

(2) – n = 20

2	11
3	12
4	13
5	14
6	15
7	16
8	17
9	18
10	19
	20

$\frac{20}{2} = 10$

$\frac{20}{10} = 2$

$\frac{20}{10} = 2$

100 = 48

$\left(\frac{n}{2}\right) - 2$

T.C = O(n)

for eg: $\frac{n^2}{2} + n$ = $O(n^2)$

(i=2 to (n/2)-1) => do(n%i == 0) = !Prime

(3) n = 20

$\sqrt{n} = 4.\_\_$

(i=2 to $\sqrt{n}$) = (n%i == 0) = !Prime

TC = $O(\log_2(n))$

$3^2 = 9$

$\sqrt{9} = 3$

n = 3

$n^2 = 3^2 = 9$

n = 9

$\log_2(9) = 3$

$k^x = n$

$\log_x(n) = k$

$3^3 = 27$

$\log_3(27) = 3$

AL => Dynamic Array

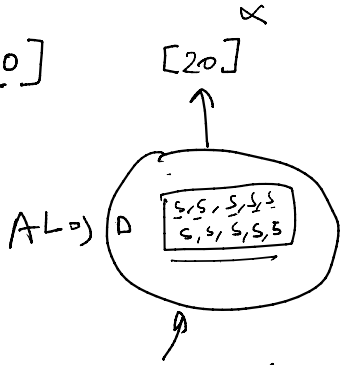
int[] a = new int[1000];

AL

↳ Array => new int[10]

↓

Size = 0



add(5), add(6)

get(0), get(1) ...

2 | $\sqrt{n}$

Size ! = 0 ✗ 10

PRIME

2
3
~~4~~
5
~~6~~
7

$\sqrt{n}$

$\sqrt{50} = 7. \ldots$

SOE :- https://www.geeksforgeeks.org/sieve-of-eratosthenes/