

Finding the Square Root of an Integer

Solution steps

- We will take two variable $start = 1$ and $end = N$.
- We will find the middle element(mid) and apply binary search.
- We just need another variable $square-root$ to take care of the case when the given integer is not a perfect square. Then, we will output the floor of the square root.
- In case of perfect square, middle element(mid) will be our answer and in the other case our answer is $square-root$.

Time Complexity:

$O(\text{Log}n)$ n is the number we want the square root.

Space Complexity :

We don't use extra data-structure so it is $O(1)$.