

Engineering Animuthyam

Java DSA – Course. Part - 43

Binary Search

Course Link:

<https://www.youtube.com/playlist?list=PLjzLBp9HHZWWhVXBSPS1VqxXXDoVk07gd9>

Website Link:

<https://www.vigneshreddyjulakanti.in/>

Hello machas, Bagunnara

Binary Search Real World Example

<https://www.youtube.com/watch?v=9LN67KQni0Y>

Find a number in a array

2->3

Examples

Linear Search Time Complexity – $O(n)$

Binary Search Time Complexity – $O(\log n)$

704. Binary Search

<https://leetcode.com/problems/binary-search/description/>

```

1  class Solution {
2      public int search(int[] nums, int target) {
3          int l = 0;
4          int r = nums.length - 1;
5          while(l<=r){
6              int m = (l + r)/2;
7              if(nums[m] == target){
8                  return m;
9              }else if(nums[m] > target){
10                 r = m - 1;
11             }else{
12                 l = m + 1;
13             }
14         }
15         return -1;
16     }
17 }
18 }

```

Integer Overflow

Int m = l + (r-l)/2;