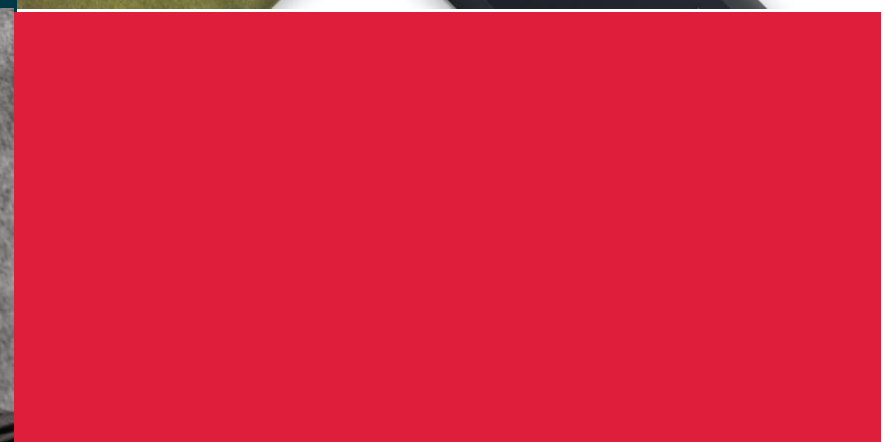
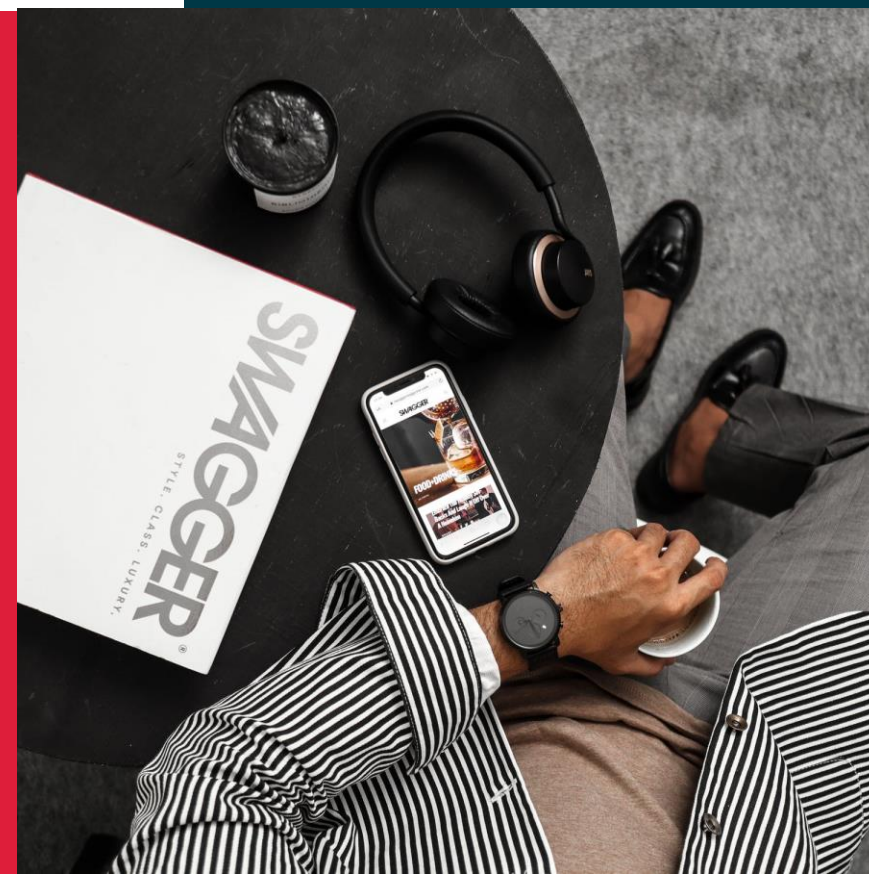




DSA - Algorithms

Number 1



Course Planning

Algorithms	Data Structures	Algorithmic Approaches	Interview Practices
1.Introduction	1.Asymptotic Analysis	1.Search Algorithms	1.In-place Reversal
2.Number 1	2.Dynamic Array	2.Sort Algorithms	2.Two Heaps
3.Number 2	3.LinkedList	3.Dac Algorithms	3.Subsets
4.String 1	4.Stack	4.Recursion	4.Modified BS
5.String 2	5.Queue	5.Sliding Window	5.Bitwise XOR
6.Array 1	6.HashTable	6.Two Pointers	6.Top 'K' Elements
7.Array 2	7.Tree	7.Fast & Slow	7.K-way Merge
8.Matrix	8.Trie	8.Cyclic Sort	8.Knapsack Problem
9.DP 1	9Directed Graph	9.Breadth First Search	9.Topological Sort
10.DP 2	10.Undirected Graph	10.Depth First Search	10.Mock Interview



Asked by Amazon



Explanation

231. Power of Two

Easy



1372



221



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Share

Given an integer `n`, return `true` if it is a power of two. Otherwise, return `false`.

An integer `n` is a power of two, if there exists an integer `x` such that `n == 2x`.

Example 1:

Input: `n = 1`

Output: `true`

Explanation: $2^0 = 1$

Example 2:

Input: `n = 16`

Output: `true`

Explanation: $2^4 = 16$

Example 3:

Input: `n = 3`

Output: `false`

Example 4:

Input: `n = 4`

Output: `true`

Power of Two

LeetCode

Day 18

Explore

Problems

Interview

New

Contest

Discuss

Store

Premium

Sign up or Sign in

Description

Solution

Discuss (999+)

Submissions

231. Power of Two

Easy

1372

221

Add to List

Share

Given an integer `n`, return `true` if it is a power of two. Otherwise, return `false`.

An integer `n` is a power of two, if there exists an integer `x` such that `n == 2x`.

Example 1:

Input: `n = 1`

Output: `true`

Explanation: `20 = 1`

Example 2:

Input: `n = 16`

Output: `true`

Explanation: `24 = 16`

Example 3:

Input: `n = 3`

Output: `false`

Example 4:

Input: `n = 4`

Output: `true`

Java

Autocomplete

1

2

3

4

5

```
class Solution {  
    public boolean isPowerOfTwo(int n) {  
    }  
}
```

<https://leetcode.com/problems/power-of-two/>

First Theory

$$8 \Rightarrow 2 * 2 * 2 = 8 = 2^3$$

5 \Rightarrow can't be represented

First Solution

Success [Details >](#)

Runtime: **1 ms**, faster than **99.97%** of Java online submissions for Power of Two.

Memory Usage: **36 MB**, less than **45.28%** of Java online submissions for Power of Two.

Next challenges:

[Number of 1 Bits](#)

[Power of Three](#)

Show off your acceptance:



```
1 class Solution {  
2     public boolean isPowerOfTwo(int n) {  
3         if(n == 0) return false;  
4  
5         while(n % 2 == 0){  
6             n = n / 2;  
7         }  
8         return n == 1;  
9     }  
10 }
```

Second Theory

8 => 1000

7 => 0111

1000 & 0111 = 0000

5 => 0101

4 => 0100

0101 & 0100 = 0100

Second Solution

Description

Solution

Discuss (999+)

Submissions

Success [Details >](#)

Runtime: **1 ms**, faster than **99.97%** of Java online submissions for Power of Two.

Memory Usage: **36.2 MB**, less than **30.87%** of Java online submissions for Power of Two.

Next challenges:

Number of 1 Bits

Power of Three

Show off your acceptance: [f](#) [t](#) [in](#)

Java

Autocomplete

```
1 class Solution {
2     public boolean isPowerOfTwo(int n) {
3         if(n == 0) return false;
4
5         long x = (long) n;
6         return (x & (x - 1)) == 0;
7     }
8 }
```

Task 1 – Palindrome Number

9. Palindrome Number

Easy  3312  1743  Add to List  Share

Given an integer `x`, return `true` if `x` is palindrome integer.

An integer is a **palindrome** when it reads the same backward as forward. For example, `121` is palindrome while `123` is not.

Example 1:

Input: `x = 121`

Output: `true`

Example 2:

Input: `x = -121`

Output: `false`

Explanation: From left to right, it reads `-121`. From right to left, it becomes `121-`. Therefore it is not a palindrome.

Example 3:

Input: `x = 10`

Output: `false`

Explanation: Reads `01` from right to left. Therefore it is not a palindrome.

Example 4:

Task 2 – Power of Three

326. Power of Three

Easy

👍 190

💬 31

♡ Add to List

🔗 Share

Given an integer `n`, return `true` if it is a power of three. Otherwise, return `false`.

An integer `n` is a power of three, if there exists an integer `x` such that `n == 3x`.

Example 1:

Input: `n = 27`

Output: `true`

Example 2:

Input: `n = 0`

Output: `false`

Example 3:

Input: `n = 9`

Output: `true`

Example 4:

Input: `n = 45`

Output: `false`

Task 3 – Power of Four

342. Power of Four

Easy



880



253



Add to List



Share

Given an integer `n`, return `true` if it is a power of four. Otherwise, return `false`.

An integer `n` is a power of four, if there exists an integer `x` such that `n == 4x`.

Example 1:

Input: `n = 16`

Output: `true`

Example 2:

Input: `n = 5`

Output: `false`

Example 3:

Input: `n = 1`

Output: `true`

Constraints:

- $-2^{31} \leq n \leq 2^{31} - 1$