**342. Power of Four: -**

Easy Accepted: 556.4K Submissions: 1.2M Acceptance Rate: 47.3%

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:**

* -231 <= n <= 231 - 1

**Follow up:** Could you solve it without loops/recursion?

**Code: -**

class Solution {

public:

    int mask;

    Solution(){

        mask = 0;

        for(int i=2; i<32; i+=2)

            mask = mask | (1 << i);

    }

    bool isPowerOfFour(int n) {

        if(n == 1)  return true;

        if(n>0 and !(n & (n-1)) and (mask & n) == n)

            return true;

        return false;

    }

};

**T.C: - O(1)**

**S.C: - O(1)**