**Power of 2: -**

Basic Accuracy: 32.58% Submissions: 282K+ Points: 1

Given a non-negative integer **N**. The task is to check if N is a power of **2**. More formally, check if**N**can be expressed as **2x**for some integer **x.**

**Example 1:**

**Input:**N = 8

**Output:**YES

**Explanation:**8 is equal to 2 raised to 3 (23 = 8).

**Example 2:**

**Input:**N = 98

**Output:**NO

**Explanation:**98 cannot be obtained by any power of 2.

**Your Task:**Your task is to complete the function **isPowerofTwo**() which takes **n**as a parameter and returns true or false by checking if the given number can be represented as a power of two or not.

**Expected Time Complexity:**O(log N).  
**Expected Auxiliary Space:**O(1).

**Constraints:**  
0 ≤ N ≤1018

**Code: -**

//{ Driver Code Starts

//Initial Template for C++

#include<bits/stdc++.h>

using namespace std;

// } Driver Code Ends

//User function Template for C++

class Solution{

public:

// Function to check if given number n is a power of two.

bool isPowerofTwo(long long n){

// using BITS CONCEPT

for(int i=0; i < sizeof(long long) \* 8; ++i){

if(n == ((long long)1 << i))

return true;

}

return false;

}

};

//{ Driver Code Starts.

// Driver code

int main()

{ int t;

cin>>t;//testcases

for(int i=0;i<t;i++)

{

long long n; //input a number n

cin>>n;

Solution ob;

if(ob.isPowerofTwo(n))//Now, if log2 produces an integer not decimal then we are sure raising 2 to this value

cout<<"YES"<<endl;

else

cout<<"NO"<<endl;

}

return 0;

}

// } Driver Code Ends

**T.C: - O(1), using BITS concept**

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