

<https://course.acciojob.com/idle?question=e8e1db33-4ec3-4226-bb3b-4238f58663c5>

● EASY

● Max Score: 30 Points

Number Is Sparse Or Not

Given a number N . The task is to check whether it is sparse or not. A number is said to be a sparse number if no two or more consecutive bits are set in the binary representation.

Input Format

First line contains a single integer N .

Output Format

Print **YES** if number is sparse else Print **NO**

Example 1

Input

2

Output

YES

Explanation

Binary Representation of 2 is 10, which is not having consecutive set bits. So, it is sparse number.

Example 2

Input

3

Output

NO

Explanation

Binary Representation of 3 is 11, which is having consecutive set bits in it. So, it is not a sparse number.

Constraints

$1 \leq N \leq 10^9$

Topic Tags

- Basics

My code

```
// n java
import java.util.*;
import java.lang.*;
import java.io.*;

public class Main
{
    public static void main (String[] args) throws
java.lang.Exception
    {
        //your code here
    }
}
```

```
Scanner s=new Scanner(System.in);
int n=s.nextInt();
int prev=-1;
while(n>0)
{
    int r=n%2;
    if(r==1 && prev==1) {System.out.print("NO");return;}
    n/=2;
    prev=r;
}
System.out.print("YES");
```

```
    }
}
```