An extra day is added to the calendar almost every four years as February 29, and the day is called a leap day. It corrects the calendar for the fact that our planet takes approximately 365.25 days to orbit the sun. A leap year contains a leap day.

In the Gregorian calendar, three conditions are used to identify leap years:

- The year can be evenly divided by 4, is a leap year, unless:
  - The year can be evenly divided by 100, it is NOT a leap year, unless:
    - The year is also evenly divisible by 400. Then it is a leap year.

This means that in the Gregorian calendar, the years 2000 and 2400 are leap years, while 1800, 1900, 2100, 2200, 2300 and 2500 are NOT leap years.
Source

Task

Given a year, determine whether it is a leap year. If it is a leap year, return the Boolean `True`, otherwise return `False`.

Note that the code stub provided reads from STDIN and passes arguments to the `is_leap` function. It is only necessary to complete the `is_leap` function.

Input Format

Read *year*, the year to test.

Constraints

$1900 \leq year \leq 10^5$

Output Format

The function must return a Boolean value (True/False). Output is handled by the provided code stub.

Sample Input 0

```
1990
```

Sample Output 0

```
False
```

Explanation 0

1990 is not a multiple of 4 hence it's not a leap year.

Change Theme Language Python 3

```
def is_leap(y):
    if((y&4==0 and y%100!=0) or (y%400==0)):
        leap=True
    else:
        leap=False
    return leap
year = int(input())
```

Line: 1 Col: 1

Upload Code as File Test against custom input Run Code Submit Code

Test case 0
Test case 1
Test case 2
Test case 3
Test case 4
Test case 5
Hidden Test Case

Compiler Message

Success

Input (stdin) Download

```
2000
```

Expected Output Download

```
True
```