Ex. No. : 3.9 **Date: 12.04.24**

Register No.: 231901035 **Name : Nitheesh K K**

Month name to days

The length of a month varies from 28 to 31 days. In this exercise you will create a program that reads the name of a month from the user as a string. Then your program should display the number of days in that month. Display “28 or 29 days” for February so that leap years are addressed.

Sample Input 1

February

Sample Output 1

February has 28 or 29 days in it.

Sample Input 2

March

Sample Output 2

March has 31 days in it.

Sample Input 3

April

Sample Output 3

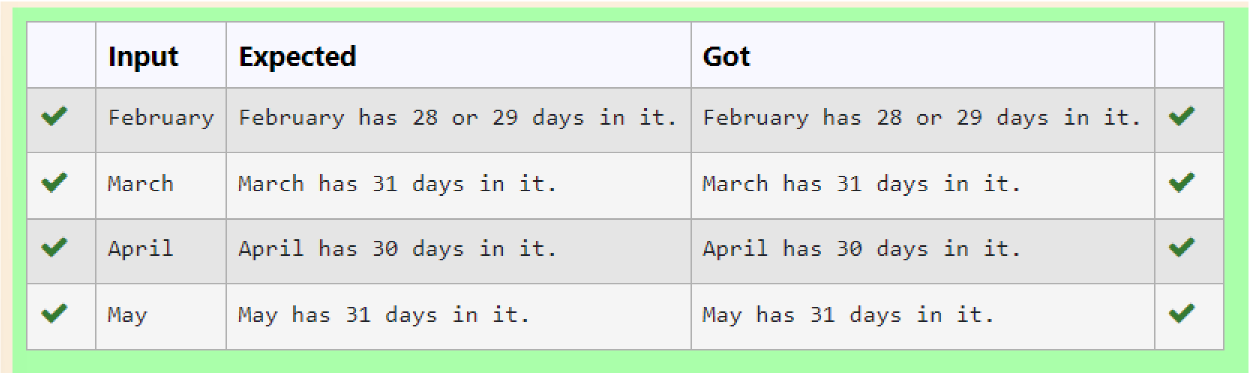
April has 30 days in it.

For example:

Input	Result
February	February has 28 or 29 days in it.

Program:

```
odd=['January','March','May','July','August','October','December']
even=['April','June','September','November']
a=input()
if(a=='February'):
    print("February has 28 or 29 days in it.")
if a in odd:
    print(a,"has 31 days in it.")
if a in even:
    print(a,"has 30 days in it.")
```



	Input	Expected	Got	
✓	February	February has 28 or 29 days in it.	February has 28 or 29 days in it.	✓
✓	March	March has 31 days in it.	March has 31 days in it.	✓
✓	April	April has 30 days in it.	April has 30 days in it.	✓
✓	May	May has 31 days in it.	May has 31 days in it.	✓

Ex. No. : 3.10 **Date: 12.04.24**

Register No.: 231901035 **Name: Nitheesh K K**

Admission Eligibility

Write a program to find the eligibility of admission for a professional course based on the following criteria:

Marks in Maths >= 65

Marks in Physics >= 55

Marks in Chemistry >= 50

Or

Total in all three subjects >= 180

Sample Test Cases

Test Case 1

Input

70

60

80

Output

The candidate is eligible

Test Case 2

Input

50

80

80

Output

The candidate is eligible

Test Case 3

Input

50

60

40

Output

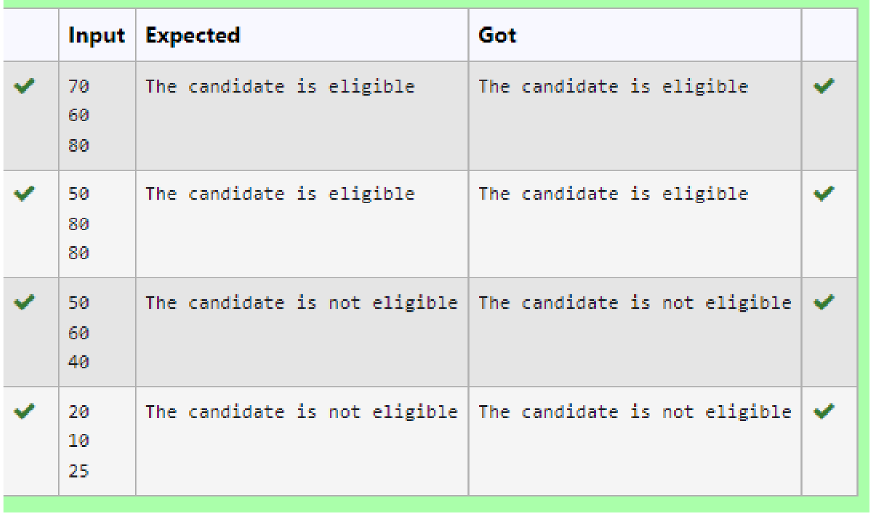
The candidate is not eligible

For example:

Input	Result
50 80 80	The candidate is eligible

Program:

```
a=int(input())
b=int(input())
c=int(input())
if(a>=65 and b>=55 and c>=50):
    print("The candidate is eligible")
elif(a+b+c>=180):
    print("The candidate is eligible")
else:
    print("The candidate is not eligible")
```



	Input	Expected	Got	
✓	70 60 80	The candidate is eligible	The candidate is eligible	✓
✓	50 80 80	The candidate is eligible	The candidate is eligible	✓
✓	50 60 40	The candidate is not eligible	The candidate is not eligible	✓
✓	20 10 25	The candidate is not eligible	The candidate is not eligible	✓

04 - Iteration Control Structures

Ex. No. : 4.1 **Date: 13.04.24**

Register No.: 231901035 **Name: Nitheesh K K**

Nth Fibonacci

Write a program to return the nth number in the fibonacci series. The value of N will be passed to the program as input.

NOTE: Fibonacci series looks like –

0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, . . . and so on.

i.e. Fibonacci series starts with 0 and 1, and continues generating the next number as the sum of the previous two numbers.

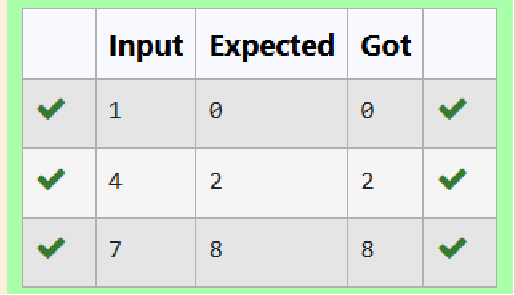
- first Fibonacci number is 0,
- second Fibonacci number is 1,
- third Fibonacci number is 1,
- fourth Fibonacci number is 2,
- fifth Fibonacci number is 3,
- sixth Fibonacci number is 5,
- seventh Fibonacci number is 8, and so on.

For example:

Input	Result
1 4 7	0 2 8

Program:

```
a=int(input())

b=0

c=1

if(a==1):

     print("0")

elif(a==2):

       print("1")

else:

        for i in range (3,a+1):

              d=b+c

               b=c

               c=d

         print(d)
```



	Input	Expected	Got	
✓	1	0	0	✓
✓	4	2	2	✓
✓	7	8	8	✓

Ex. No. : 4.2 **Date: 13.04.24**

Register No.: 231901035 **Name: Nitheesh K K**

Factors of a number

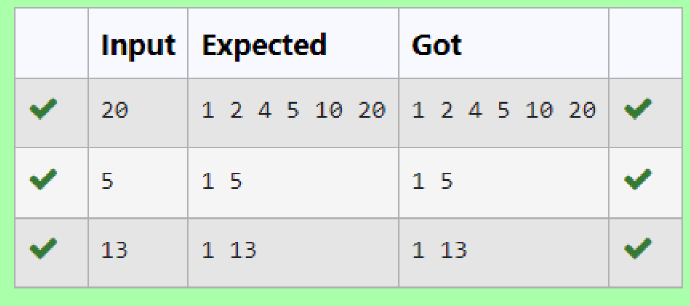
Determine the factors of a number (i.e., all positive integer values that evenly divide into a number).

For example:

Input	Result
20	1 2 4 5 10 20

Program:

```
a=int(input())
for i in range(1,a+1):
   if(a%i==0):
       print(i,end=" ")
```



	Input	Expected	Got	
✓	20	1 2 4 5 10 20	1 2 4 5 10 20	✓
✓	5	1 5	1 5	✓
✓	13	1 13	1 13	✓

Ex. No. : 4.3 **Date: 13.04.24**

Register No.: 231901035 **Name: Nitheesh K K**

Product of single digit

Given a positive integer N, check whether it can be represented as a product of single digit numbers.

Input Format:

Single Integer input.

Output Format:

Output displays Yes if condition satisfies else prints No.

Example Input:

14

Output:

Yes

Example Input:

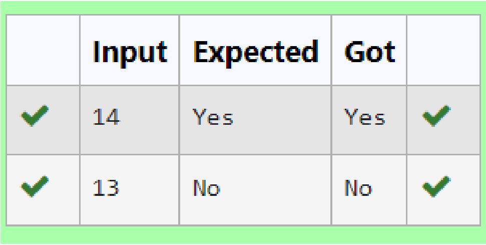
13

Output:

No

Program:

```
a=int(input())

c=0

for i in range(1,10): for j in range(1,10):

if i*j==a:

c=1

if(c==1):

print("Yes")

▾ else:

print("No")
```



	Input	Expected	Got	
✓	14	Yes	Yes	✓
✓	13	No	No	✓

Ex. No. : 4.4 **Date: 13.04.24**

Register No.: 231901035 **Name: Nitheesh K K**

Unique Digit Count

Write a program to find the count of unique digits in a given number N. The number will be passed to the program as an input of type int.

Assumption: The input number will be a positive integer number >= 1 and <= 25000.

For e.g.

If the given number is 292, the program should return 2 because there are only 2 unique digits '2' and '9' in this number

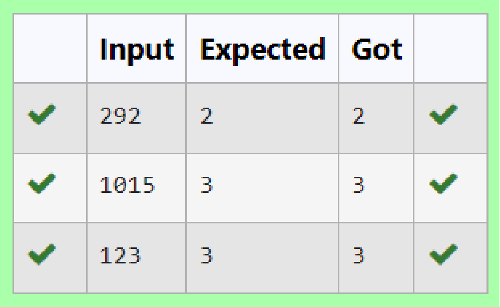
If the given number is 1015, the program should return 3 because there are 3 unique digits in this number, '1', '0', and '5'.

For example:

Input	Result
292	2
1015	3

Program:

```
a=input()

b=len(set(a))

print(b)
```



	Input	Expected	Got	
✓	292	2	2	✓
✓	1015	3	3	✓
✓	123	3	3	✓

Ex. No. : 4.5 **Date: 13.04.24**

Register No.: 231901035 **Name: Nitheesh K K**

Non Repeated Digit Count

Write a program to find the count of non-repeated digits in a given number N. The number will be passed to the program as an input of type int.

Assumption: The input number will be a positive integer number >= 1 and <= 25000.

Some examples are as below.

If the given number is 292, the program should return 1 because there is only 1 non-repeated digit '9' in this number

If the given number is 1015, the program should return 2 because there are 2 non-repeated digits in this number, '0', and '5'.

If the given number is 108, the program should return 3 because there are 3 non-repeated digits in this number, '1', '0', and '8'.

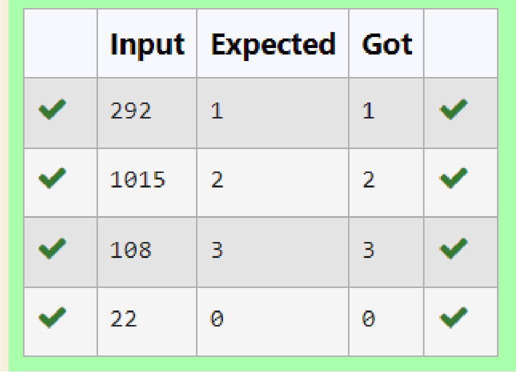
If the given number is 22, the function should return 0 because there are NO non-repeated digits in this number.

For example:

Input	**Result**
292	1
1015	2
108	3
22	0

Program:

```
a={}
for i in input:
   if i in a:a[i]+=1
   else:a[i]=1
print(sum([1 for i in a if a[i]==1]))
```



	Input	Expected	Got	
✓	292	1	1	✓
✓	1015	2	2	✓
✓	108	3	3	✓
✓	22	0	0	✓

Ex. No. : 4.6 **Date: 13.04.24**

Register No.: 231901035 **Name: Nitheesh K K**

Next Perfect Square

Given a number N, find the next perfect square greater than N.

Input Format:

Integer input from stdin.

Output Format:

Perfect square greater than N.

Example Input:

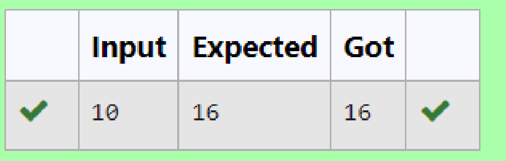
10

Output:

16

Program:

```
import math
a=int(input())
b = a + 1
while b > 0 :
  m=math.sqrt(b)
  if(m==int(m)):
    print(b)
    break
  else:
    b = b + 1
```



	Input	Expected	Got	
✓	10	16	16	✓