Ex. No. : 4.7 **Date: 13.04.24**

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

Sum of Series

Write a program to find the sum of the series 1 +11 + 111 + 1111 + . . . + n terms (n will be given as input from the user and sum will be the output)

Sample Test Cases

Test Case 1

Input

4

Output

1234

Explanation:

as input is 4, have to take 4 terms.

1 + 11 + 111 + 1111

Test Case 2

Input

6

Output

123456

For example:

Input	Result
3	123

Program:

```
a=int(input())
t=1
s=0
for i in range(a)
    s+=t
    t=t*10+1
print(s)
```

	Input	Expected	Got	
✔	4	1234	1234	✔
✔	6	123456	123456	✔

Ex. No. : 4.8 **Date: 13.04.24**

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

Prime Checking

Write a program that finds whether the given number N is Prime or not. If the number is prime, the program should return 2 else it must return 1.

Assumption: 2 <= N <=5000, where N is the given number.

Example1: if the given number N is 7, the method must return 2

Example2: if the given number N is 10, the method must return 1

For example:

Input	Result
7	2
10	1

Program:

```
a=int(input())
c=0
for i in range(2,a):
if(a%i==0):
c=1
if(c==1):
print("1")
elif(c==0): print("2”)
```


	Input	Expected	Got	
✔	7	2	2	✔
✔	10	1	1	✔

Ex. No. : 4.9 **Date: 13.04.24**

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

Disarium Number

A Number is said to be Disarium number when the sum of its digit raised to the power of their respective positions becomes equal to the number itself. Write a program to print number is Disarium or not.

Input Format:

Single Integer Input from stdin.

Output Format:

Yes or No.

Example Input:

175

Output:

Yes

Explanation

1^1 + 7^2 +5^3 = 175

Example Input:

123

Output:

No

For example:

Input	**Result**
175	Yes
123	No

Program:

```
a=input()
n=len(a)
r=0
for i,d in enumerate(a):
    r+=int(d)**(i+1)
    if r==int(a):
       print("Yes")
   else:
        print("No")
```

	Input	Expected	Got	
✔	175	Yes	Yes	✔
✔	123	No	No	✔

Ex. No. : 4.10 **Date: 13.04.24**

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

Perfect Square After adding One

Given an integer N, check whether N the given number can be made a perfect square after adding 1 to it.

Input Format:

Single integer input.

Output Format:

Yes or No.

Example Input:

24

Output:

Yes

Example Input:

26

Output:

No

For example:

Input	Result
24	Yes

Program:

```
import math

a=int(input())

b=a+1

c=math.sqrt(b)

if(c==int(c)):

    print("Yes")

else:

   print("No")
```

	Input	Expected	Got	
✔	24	Yes	Yes	✔
✔	26	No	No	✔

05 - Strings in Python

Ex. No. : 5.1 **Date: 17.04.24**

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

String characters balance Test

Write a program to check if two strings are balanced. For example, strings s1 and s2 are balanced if all the characters in the s1 are present in s2. The character's position doesn't matter. If balanced display as "true" ,otherwise "false".

Input	Result
Yn PYnative	True

For example:

Program:

```
a=input()
b=input()
if a in b or b in a:
    print("True")
else:
    print("False")
```

	Input	Expected	Got	
✔	Yn PYnative	True	True	✔
✔	Ynf PYnative	False	False	✔

Ex. No. : 5.2 **Date: 17.04.24**

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

Decompress the String

Assume that the given string has enough memory. Don't use any extra space(IN-PLACE)
Sample Input 1
a2b4c6

Sample Output 1
aabbbbccccc

Program:

```
s=input()
r=""
i=0
while i< len(s):
    char=s[i]
    i+=1
    num=""
    while i<len(s) and s[i].isdigit():
        num+=s[i]
        i+=1
    r+=char*int(num)
print(r)
```

	Input	Expected	Got	
✔	a2b4c6	aabbbbccccc	aabbbbccccc	✔
✔	a12b3d4	aaaaaaaaaaabbbdddd	aaaaaaaaaaabbbdddd	✔

Ex. No. : 5.3 **Date: 17.04.24**

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

First N Common Chars

Two string values S1, S2 are passed as the input. The program must print first N characters present in S1 which are also present in S2.
Input Format:

The first line contains S1.
The second line contains S2.
The third line contains N.

Output Format:

The first line contains the N characters present in S1 which are also present in S2.

Boundary Conditions:

2 <= N <= 10
2 <= Length of S1, S2 <= 1000

Example Input/Output 1:

Input:

abcbde
cdefghbb
3

Output:

bcd

Note:

b occurs twice in common but must be printed only once.

Program:

```
a=input()
b=input()
n=int(input())
bset=set(b)
cc=[]
c=0
for i in a:
    if i in bset and i not in cc:
        cc.append(i)
        c=c+1
        if(c==n):
            break
s=''.join(cc)
print(s)
```

	Input	Expected	Got	
✔	abcbde cdefghbb 3	bcd	bcd	✔

Ex. No. : 5.4 **Date: 17.04.24**

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

Username Domain Extension

Given a string S which is of the format USERNAME@DOMAIN.EXTENSION, the program must print the EXTENSION, DOMAIN, USERNAME in the reverse order.

Input Format:
The first line contains S.

Output Format:
The first line contains EXTENSION.
The second line contains DOMAIN.
The third line contains USERNAME.

Boundary Condition:
1 <= Length of S <= 100

Example Input/Output 1:
Input:
vijayakumar.r@rajalakshmi.edu.in
Output:
edu.in
rajalakshmi
vijayakumar.r

Program:

```
s=input()
at=s.index('@')
dot=s.index('.')
username=s[:at]
domain=s[at+1:dot]
exten=s[dot+1:]
print(exten)
print(domain)
print(username)
```


	Input	Expected	Got	
✔	abcd@gmail.com	com gmail abcd	com gmail abcd	✔