ABHISHEK SHARMA

CS 2ND YEAR

SECTION : “I”

ROLL NO.: 01

ENROLLMENT NO.: 12019009001127

DATA STRUCTURE AND ALGORITHM LABORATORY

WEEK : 6

ASSIGNMENT : 6

DATE : 18.08.2020

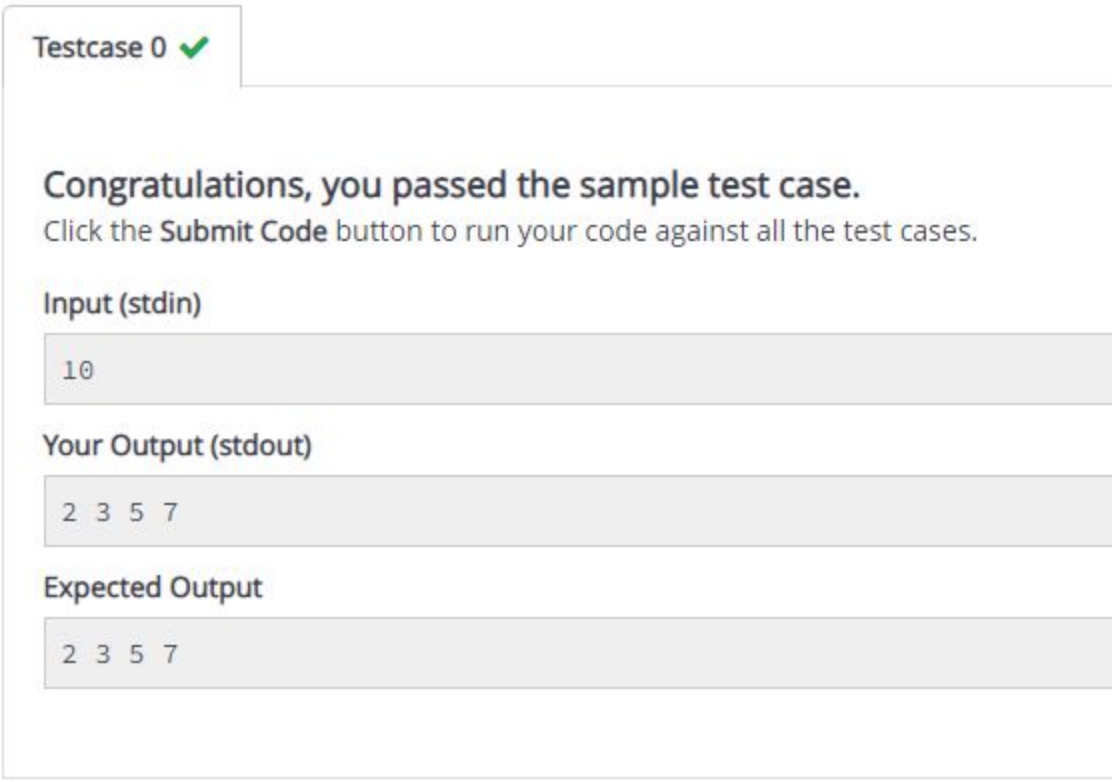
HACKERRANK ID : 12019009001127_I

Q1. Write program to find the prime numbers in a range using function.

CODE :

```
n=int(input())
for num in range(n+1):
   if num > 1:
      for i in range(2, num):
         if (num % i) == 0:
            break
      else:
         print(num,end=" ")
```

OUTPUT :

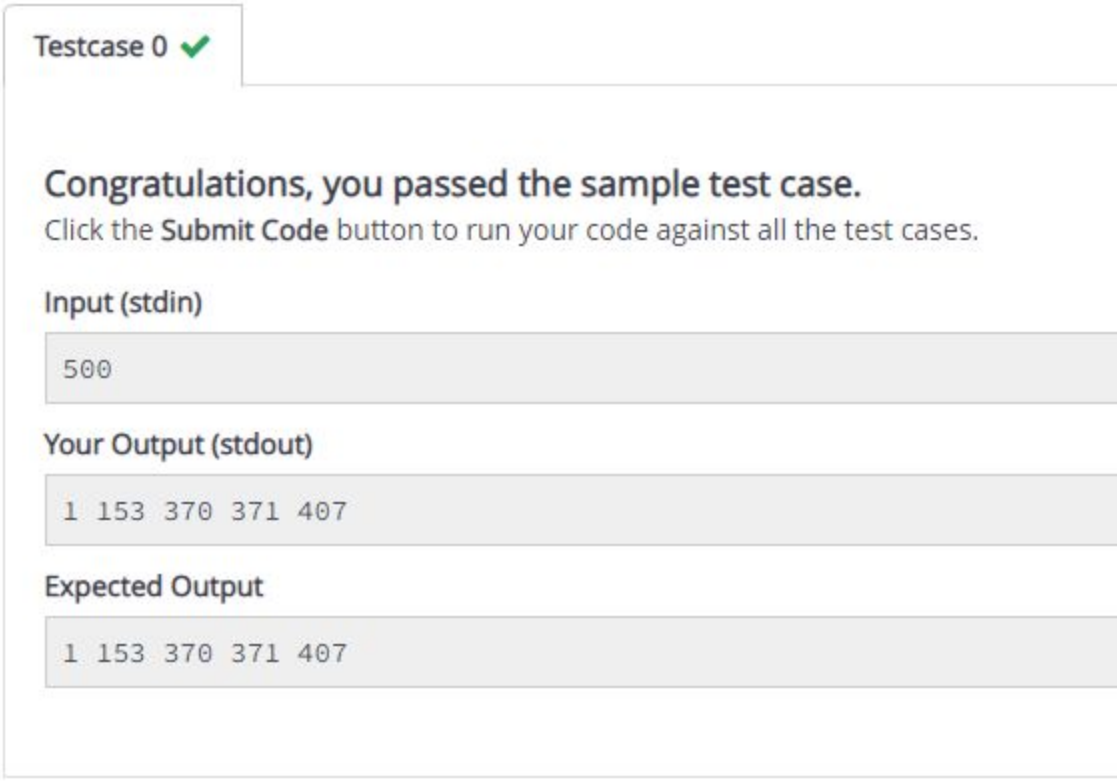


Q2. Take n as input and check which ones are Armstrong number using a function in the range 1 to n.

CODE :

```
n=int(input())
print(1,end=" ")
for num in range(11,n+1):
    order = len(str(num))
    sum = 0
    temp = num
    while temp > 0:
        digit = temp % 10
        sum += digit ** order
        temp //= 10
    if num == sum:
        print(num,end=" ")
```

OUTPUT :

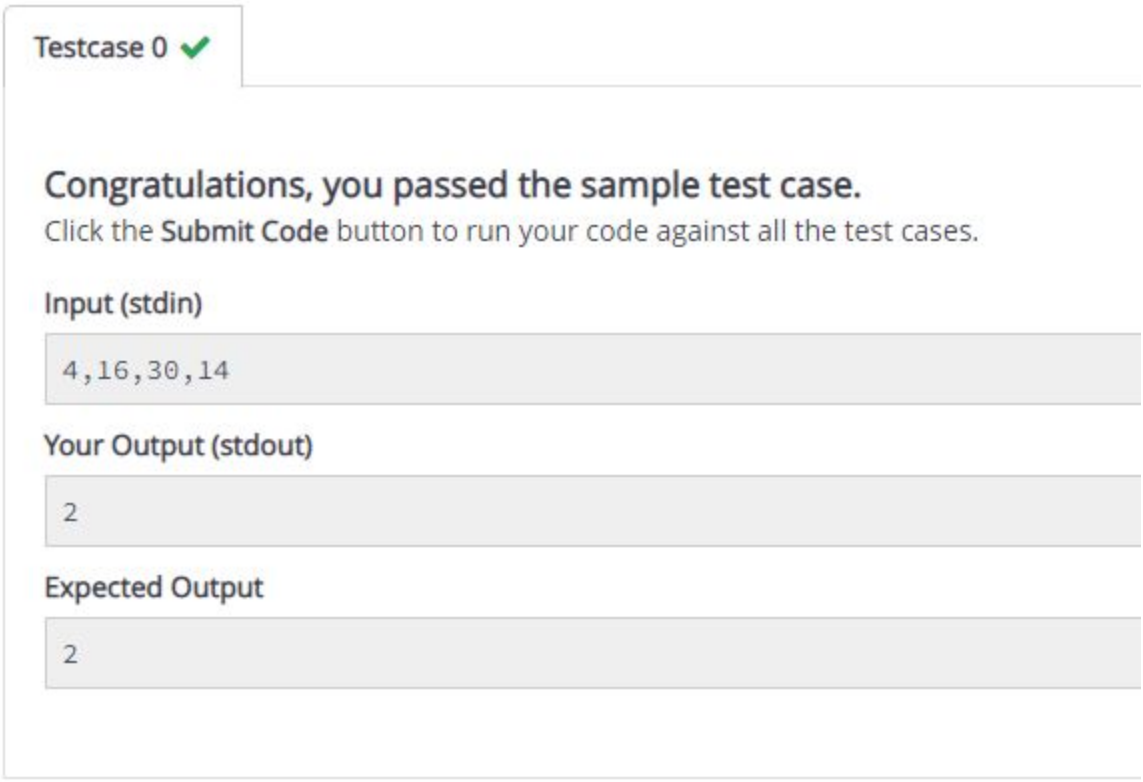


Q3. Write a function to calculate GCD of two numbers and then call the function to get GCD of 4 numbers

CODE :

```
def compute_hcf(x, y):
    if x > y:
        smaller = y
    else:
        smaller = x
    for i in range(1, smaller+1):
        if((x % i == 0) and (y % i == 0)):
            hcf = i
    return hcf
str = input()
s = (str.split(","))
num1 = int(s[0])
num2 = int(s[1])
num3 = int(s[2])
num4 = int(s[3])
a = compute_hcf(num1, num2)
b = compute_hcf(a,num3)
c = compute_hcf(b,num4)
print (c)
```

OUTPUT :



Q4. Take a paragraph as input and then replace all the “the” word with “THE”

CODE :

```
def censor(text, word):
    word_list = text.split()
    count = 0
    index = 0
    for i in word_list:
        if i == word:
            word_list[index] = 'THE'
        index += 1
    result =' '.join(word_list)
    return result

if __name__== '__main__':
    extract = input()
    cen = "the"
    print(censor(extract, cen))
```

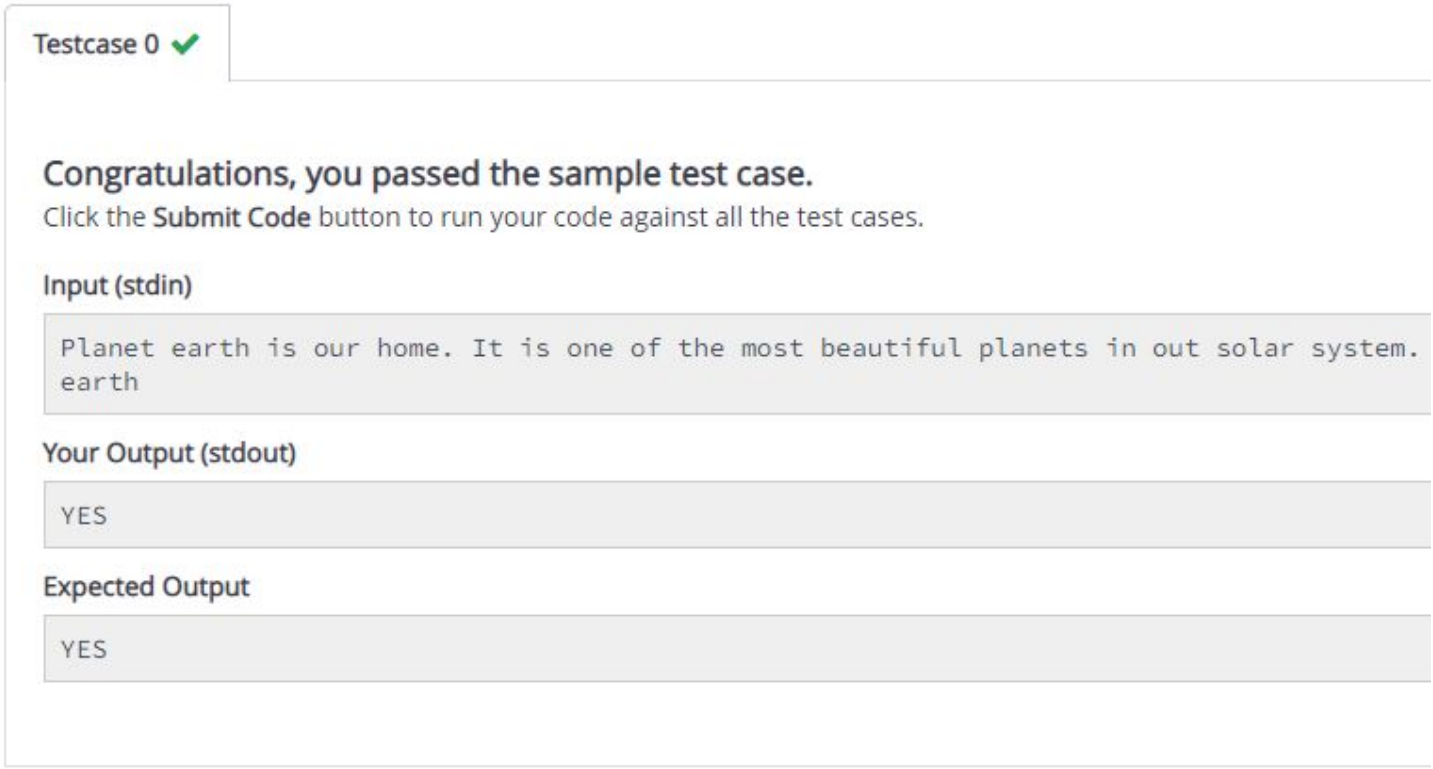
OUTPUT :

Q5. Take a paragraph as input and then check whether a specific word is present in the paragraph or not. the word also should be user input.

CODE :

```
s = input ()
x = input ()
if s.find(x) != -1 :
    print ('YES')
else:
    print ('NO')
```

OUTPUT :

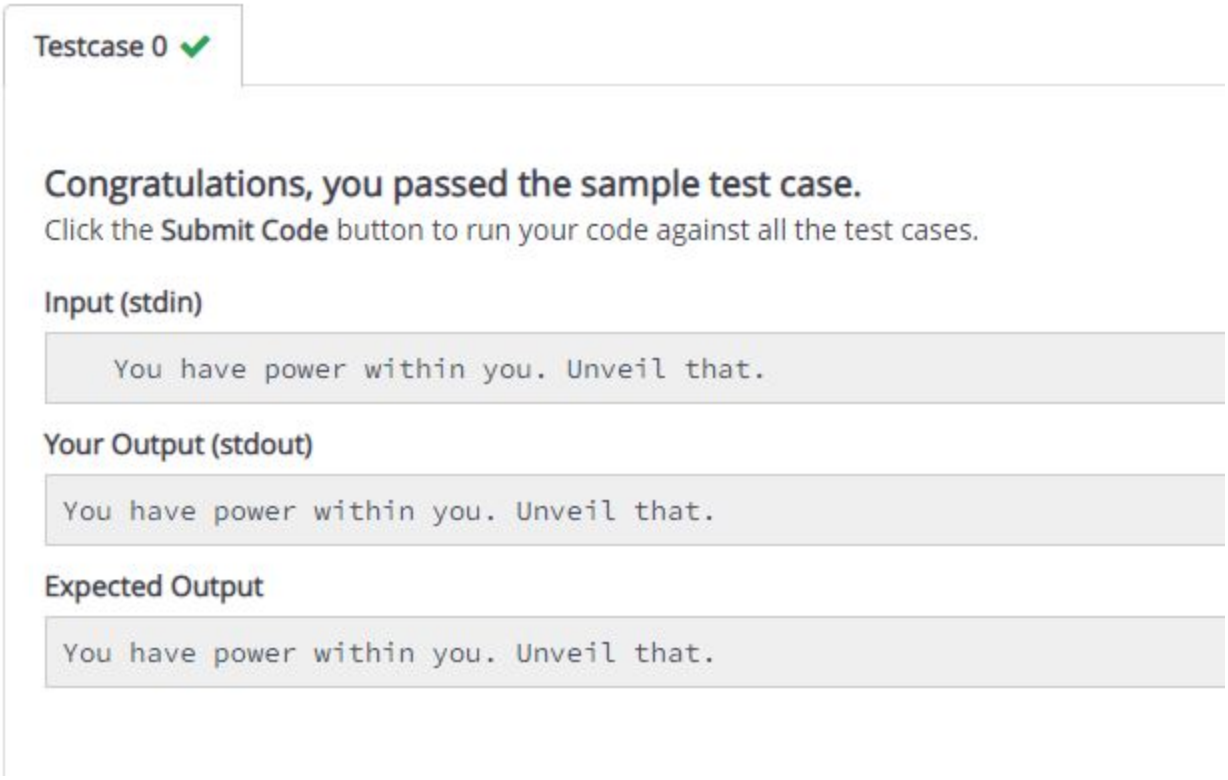


Q6. Take a paragraph as input and then delete all the white spaces at the beginning and the end of the paragraph

CODE :

```
sen = input()
print (sen.strip())
```

OUTPUT :

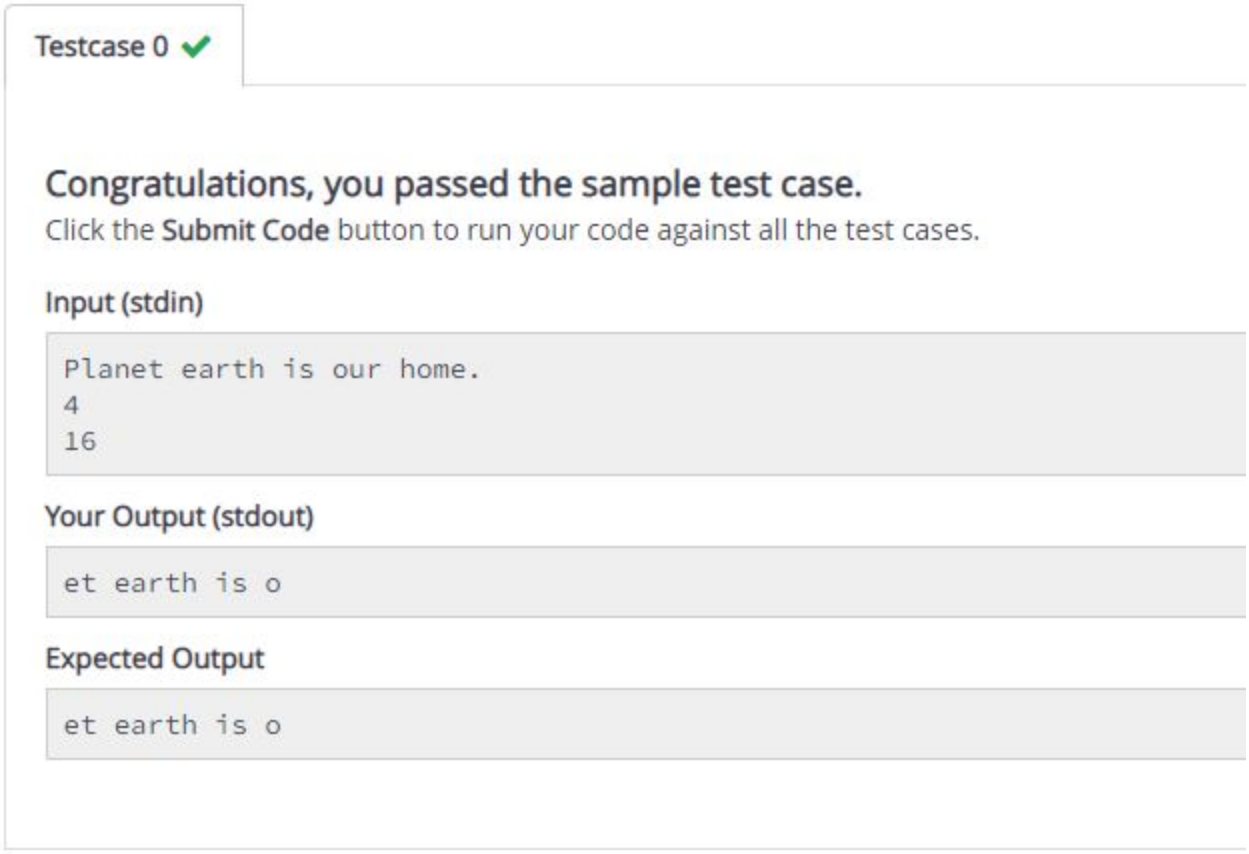


Q7. Take a sentence as input. Take two integer numbers as input. Print the substring starting and ending at the positions same as those numbers

CODE :

```
sen = input()
start = int(input())
end = int(input())
print (sen[start:end+1])
```

OUTPUT :

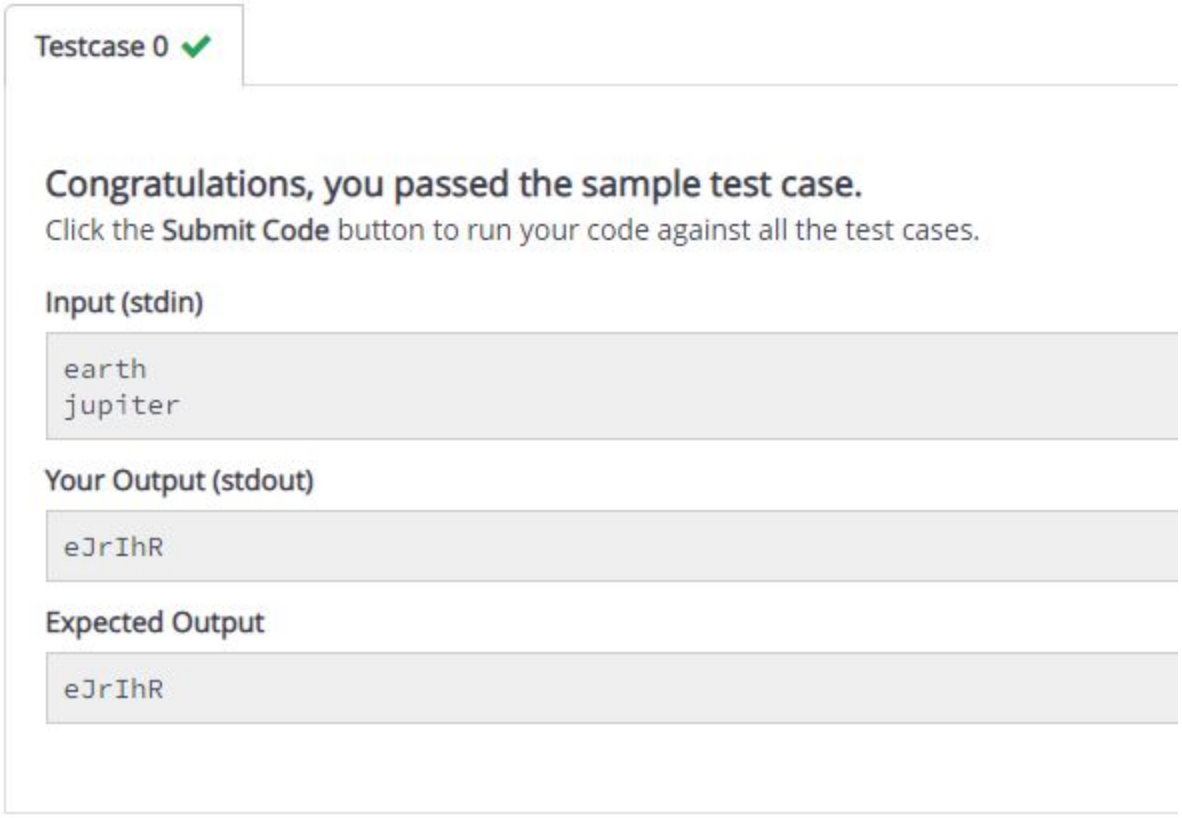


Q8. Given 2 strings, str1, and str2 return a new string made of the first, middle and last char of each of the input strings. characters from the 1st string will be in lowercase and characters from the 2nd string will be in uppercase

CODE :

```
str1 = input()
str2=input()
n = len(str1)
m = len(str2)
a = n//2
b=m//2
str2 = str2.upper()
str3= str1[0]+str2[0]+str1[a]+str2[b]+str1[n-1]+str2[m-1]
print (str3)
```

OUTPUT :



---- O ----