In [2]:
```
# finding the given number is a armstrong number or not
num = int(input())
total_sum = 0
digit_count = 0
temp = num
while(num != 0):
    digit_count += 1
    num = num // 10
digit = 0
num = temp
while (num != 0):
    rem = num % 10
    total_sum += (rem ** digit_count)
    num = num // 10
if total_sum == temp:
    print("Armstrong")
else:
    print("Not An Armstrong")
```

```
153
Armstrong
```

In [5]:
```
# reversing a string using slicing operation in strings
str = input()
str1 = str[: : -1]
print(str1)
```

```
sathvik
kivhtas
```

In [6]:
```
# Swapping two numbers without using third variable
str1 = input()
str2 = input()
str1, str2 = str2, str1
print("After Swapping \n{0}\n{1}".format(str1,str2))
```

```
sathvik
ias
After Swapping
ias
sathvik
```

In [7]:
```
# Swapping two strings using third variable
str1 = input()
str2 = input()
temp = str1
str1 = str2
str2 = temp
print("After Swapping \n{0}\n{1}".format(str1,str2))
```

```
sathvik
ias
After Swapping
ias
sathvik
```

In [4]:
```
# program to find whether given number is prime or not
num = int(input())
fact = 0
for i in range (1,num+1):
    if (num % i == 0):
        fact += 1
if (fact == 2):
    print("Prime")
else:
    print("Not Prime")
```

```
13
Prime
```

In [8]:
```
# program to find the string is a pallindrome or not
str = input()
str1 = str[: : -1]
if (str == str1):
    print(str,"is a Pallindrome")
else:
    print(str,"is not a Pallindrome")
```

```
sathvik
sathvik is not a Pallindrome
```

In [21]:
```
# finding the fibbonacci series using recursion and functions
def fibbonacci(num):
    if (num <= 0):
        return 0
    elif (num == 1):
        return 1
    else:
        return fibbonacci(num - 1) + fibbonacci(num - 2)

num = int(input())
for i in range(0, num):
    print(fibbonacci(i))
```

```
5
0
1
1
2
3
```

In [1]:
```
# program for printing duplicates in a string
str = input()
new_str = ""
for char in str:
    if char not in new_str:
        new_str += char
for char in str:
    if (str.count(char) > 1):
        print(char)
```

```
 kannada
a
n
n
a
a
```

In [30]:
```
#program to get user input in a list
list1 = []
nums = int(input("Enter the No. of Elements in the Array  "))
for i in range(1, nums + 1):
    ele = int(input())
    list1.append(ele)
print(list1)
```

```
Enter the No. of Elements in the Array  10
23
44
11
76
88
90
44
11
10
9
[23, 44, 11, 76, 88, 90, 44, 11, 10, 9]
```

In [29]:
```
#program to get second largest element in an array
list1 = []
nums = int(input("Enter the No. of Elements in the Array  "))
for i in range(1, nums + 1):
    ele = int(input())
    list1.append(ele)
large_number = max(list1)
list1.remove(large_number)
second_large_number = max(list1)
print("the second largest number is:")
print(second_large_number)
```

```
Enter the No. of Elements in the Array  5
12
45
65
76
11
the second largest number is:
65
```

In [28]:
```
# program to find the reverse of a number using string slicing operator
num = int(input("enter the number  "))
str1 = str(num)
str2 = str1[: : -1]
num1 = int(str2)
print("the reverse of the given number {0} is".format(num))
print(num1)
```

```
enter the number  9874
the reverse of the given number 9874 is
4789
```

In [27]:
```
# program to find the reverse of a number using Arthemetic operations
num = int(input("enter the number  "))
temp = num
rev = 0
while (num != 0):
    rem = num % 10
    rev = rem + rev * 10
    num = num // 10
print(rev)
```

```
enter the number  153
351
```

In [4]:
```
# program to find the Binary Equivalent for the given decimal Number
dec_num = int(input("Enter the decimal Number  "))
bin_num = bin(dec_num)
print(bin_num.replace("0b",""))
```

```
Enter the decimal Number  20
10100
```

In [26]:
```
# program to display floyd Triangle
integer = int(input("Enter the Integer  "))
value = 1
for i in range (1, integer + 1):
    for j in range (1, i + 1):
        print(value,end =" ")
        value += 1
    print()
```

```
Enter the Integer  5
1
2 3
4 5 6
7 8 9 10
11 12 13 14 15
```

In [25]:
```
# program to display the pattern of diamond
integer = int(input("enter the Integer value  "))
for i in range (1, integer + 1):
    for sp in range (1,integer - i + 1):
        print(end=" ")
    for j in range (1, 2 * i):
        print("*",end="")
    print()
for i in range (integer - 1, 0, -1):
    for sp in range (1,integer - i + 1):
        print(end=" ")
    for j in range (1, 2 * i):
        print("*",end="")
    print()
```

```
enter the Integer value  5
    *
   ***
  *****
 *******
*********
 *******
  *****
   ***
    *
```

In [24]:
```
# program to display integer values in diamond shape
integer = int(input("enter the Integer value  "))
for i in range (1, integer + 1):
    for sp in range (1,integer - i + 1):
        print(end=" ")
    for j in range (1, 2 * i):
        print(i,end="")
    print()
for i in range (integer - 1, 0, -1):
    for sp in range (1,integer - i + 1):
        print(end=" ")
    for j in range (1, 2 * i):
        print(i,end="")
    print()
```

```
enter the Integer value  5
    1
   222
  33333
 4444444
555555555
 4444444
  33333
   222
    1
```

In [23]:
```
# program to print the series of incremental subtraction 20 19 17 14 10 5…..
integer = int(input("Enter the value  "))
value = 20
for num in range (1, integer+1):
    print(value,end=" ")
    value = value - num
```

```
Enter the value  9
20 19 17 14 10 5 -1 -8 -16
```

In [22]:
```
# program to print the series of muliplicable series 12 32 72 152 312…..
integer = int(input("Enter the Value  "))
value = 20
intial = 12
for i in range (1, integer+1):
    print (intial,end=" ")
    intial = intial + value
    value =  value * 2
```

```
Enter the Value  7
12 32 72 152 312 632 1272
```

In [21]:
```
# program to print the series of places sequence 0 2 8 14 24 34…..
integer = int(input("Enter the value  "))
sum_range = 0
for i in range (1, integer+1):
    if (i % 2 == 1):
        sum_range = i * i - 1
    else:
        sum_range = i * i - 2
    print(sum_range,end=" ")
```

```
Enter the value  9
0 2 8 14 24 34 48 62 80
```