

**Aim:** Write the program for the following: (by using control statements and control structure)

**(E). Write a function to check the input value is Armstrong and also write the function for palindrome.**

**Theory: -**

**Practical Implementation:-**

```
# Python program to check if the number provided by the user is an Armstrong number or not

def armstrong(num):
    num=0
    # find the sum of the cube of each digit
    temp=num
    while temp>0:
        digit=temp%10
        sum+=digit**3
        temp//=10
    # display the result
    if num == sum:
        print(num,"is an armstrong number")
    else:
        print("is not an armstrong number")

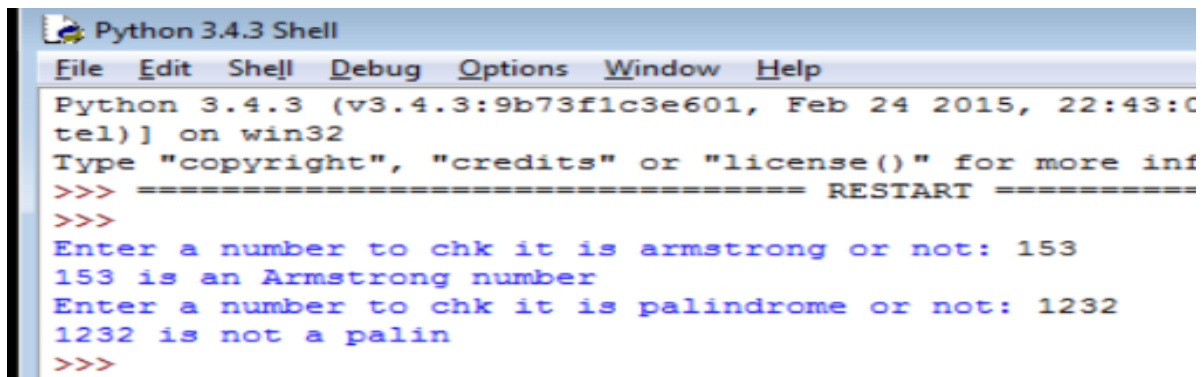
def palindrome(num):
    n=num
    rev=0
    while num !=0:
        rev=rev *10
        rev=rev +int(num%10)
        num=int(num/10)
```

```
        if n== rev:
            print(n,"is pelindrome number")
        else:
            print(n,"is not palin")

# take input from the user
num=int(input("enter a nummber to check it is armstrong or not:"))
armstrong(num)

# take input from the user
num=int(input("enter a number to check it is palindrome or not:"))
palindrome(num)
```

**output: -**



```
Python 3.4.3 Shell
File Edit Shell Debug Options Window Help
Python 3.4.3 (v3.4.3:9b73f1c3e601, Feb 24 2015, 22:43:0
tel)] on win32
Type "copyright", "credits" or "license()" for more inf
>>> ===== RESTART =====
>>>
Enter a number to chk it is armstrong or not: 153
153 is an Armstrong number
Enter a number to chk it is palindrome or not: 1232
1232 is not a palin
>>>
```

**Conclusion:**