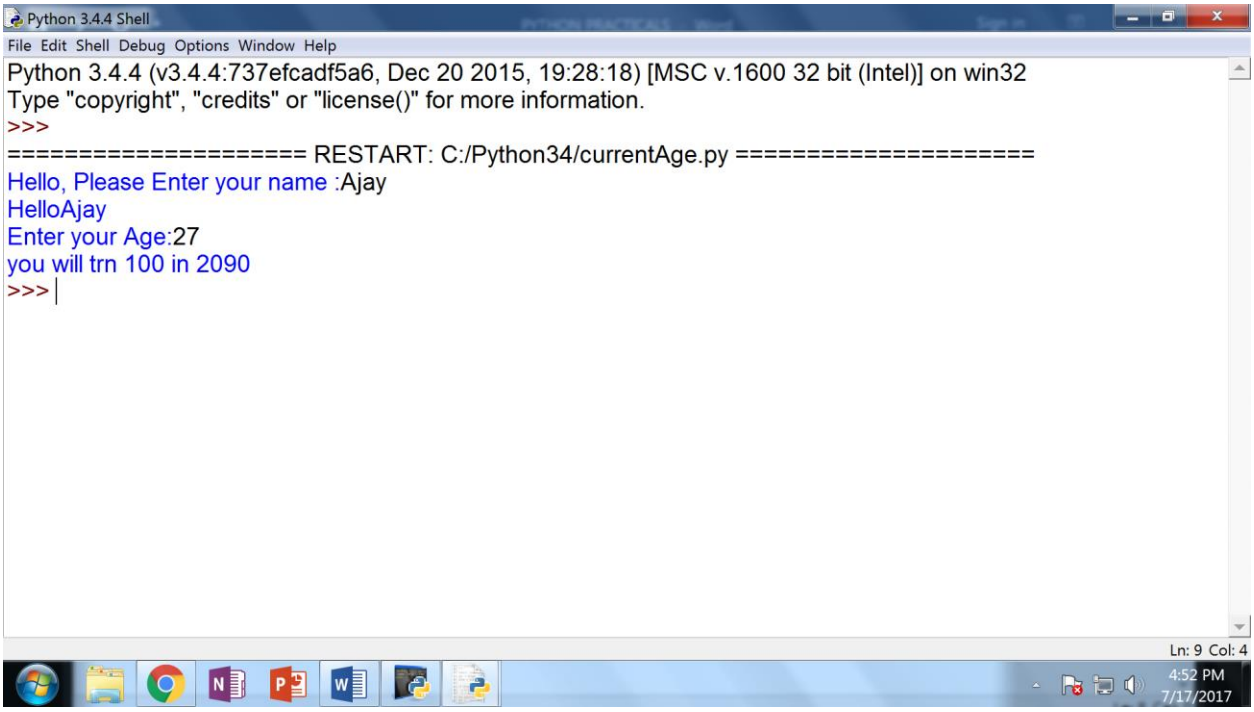
PRACTICAL NO 01

A) Create a Program that asks the user to enter their name and their age .Print out a message addressed to them that tells them the year that they will turn 100 year old

```
import datetime

name=input("Hello, Please Enter your name :")

print("Hello" +name)

age=int(input("Enter your Age:"))

year_now=datetime.datetime.now()

print("you will turn 100 in " + str(int(100-age)  + int(year_now.year)))
```

OUTPUT :



B)Enter The number from the user and depending on whether number is even or odd , print out the appropriate message to the user .

```
 # python program to check if the input number is odd or even

#a number is even if division by 2 give a remainder of 0

# if remainder is 1,it is odd number.

num=int(input("enter a number:"))

if (num%2)==0:

    print("{0} is even".format(num))
```

```
else:
    print("{0} is odd".format(num))
```

OUTPUT:

enter a number:120

120 is even

C) Write a program to generate the Fibonacci series.

```
#program to display the fibonacci sequuence up to n-th term where n is provided by the user
# change this value for for a different result
nterms=10
#uncomment to take input from the user
#nterms =int(input("how many terms?"))

#first two terms
n1=0
n2=1
count=2
#check if the number of terms is valid
if nterms<=0:
   print("please enter a positive integer")
elif nterms==1:
    print("fibonacci seqence upto",nterms,":")
    print(n1)
else:
    print("fibonacci sequence upto",nterms,":")
    print(n1,",",n2,end=',')
    while count<nterms:
        nth =n1+n2
        print(nth,end=',')
```

```
        # update values
        n1=n2
        n2=nth
        count+=1
        output:
```

```
================== RESTART: C:/Python34/fibonacci sequence.py =
================
fibonacci sequence upto 10 :
0 , 1,1,2,3,5,8,13,21,34,
>>>
```

D) write a function that reverse the user defined value.

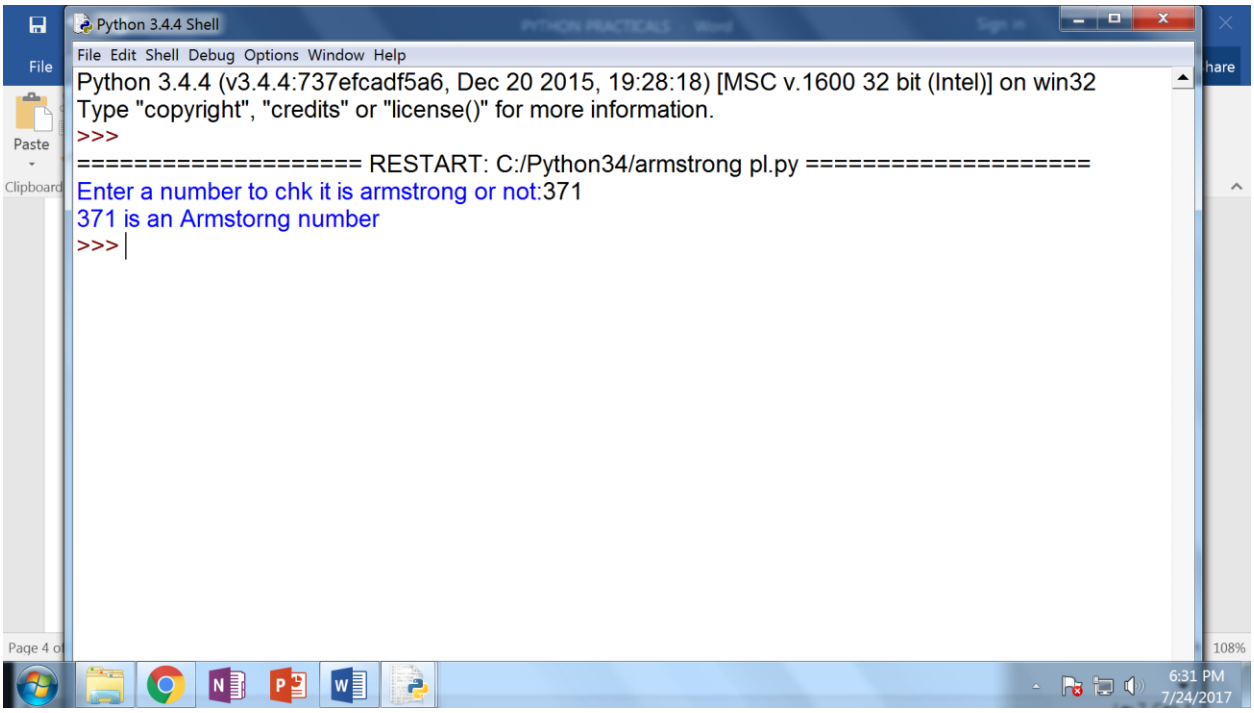
```
#python program to reverse a number using while loop by using function
def reverse_number(number):
    reverse=0
    while(number>0):
        reminder=number%10
        reverse=(reverse*10)+reminder
        number=number//10
    print("reverse number is",reverse)
reverse_number(1546)
```

E) Write a function to check the input value is Armstrong or not.

```
#python program to check if the number provided by the user is an Armstrong number or
not
def armstrong(num):
    sum=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 Armstorng number")
    else:
            print(num,"is not an Armstrong number")


num=int(input("Enter a number to chk it is armstrong or not:"))
armstrong(num)
```

OUTPUT:



E) 2) Write a function to check the input value is palindrome

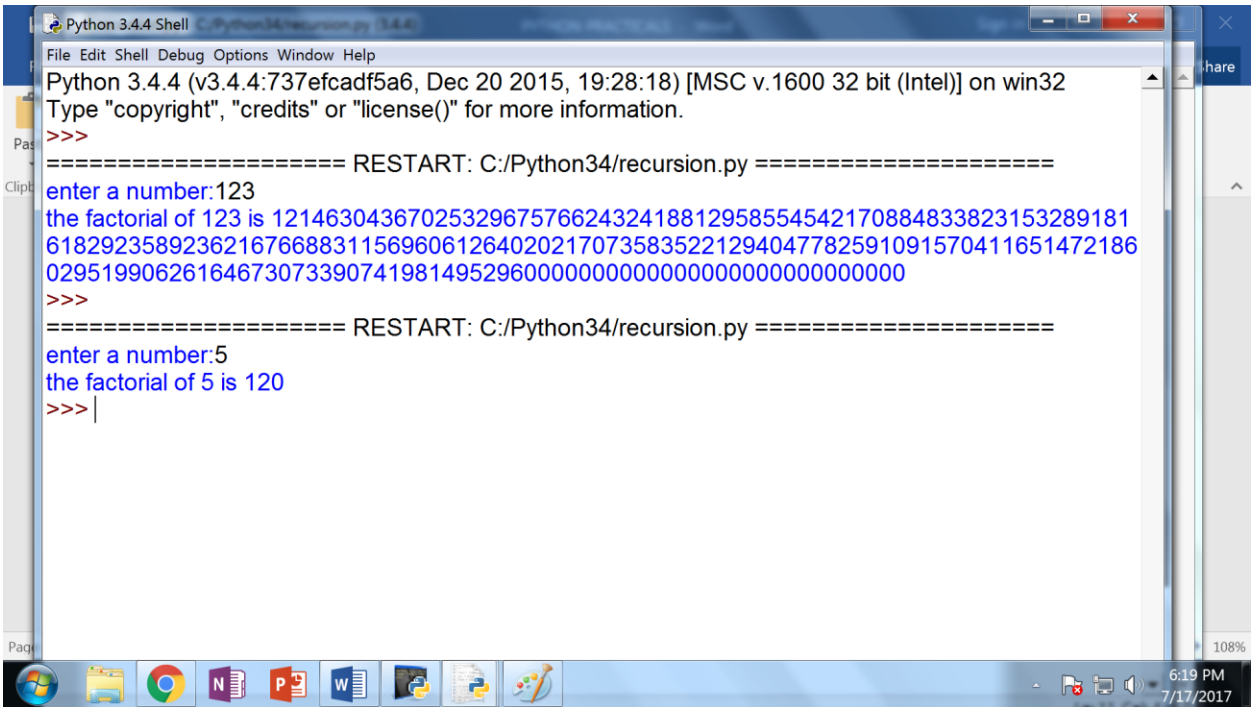
```
n=int(input("Enter number:"))
temp=n
rev=0
while(n>0):
    dig=n%10
    rev=rev*10+dig
    n=n//10
if(temp==rev):
    print("The number is a palindrome!")
else:
    print("The number isn't a palindrome!")
```

OUTPUT:

F) write python program to find the factorial of a number using recursion

```
# python program to find the factorial of a number using recursion

def recur_factorial(n):
    """function to return the factorial of a number using recursion"""
    if n==1:
        return n
    else:
        return n*recur_factorial(n-1)
#take input from the user
num=int(input("enter a number:"))

#check is the number is negative
if num<0:
    print("sorry,factorial does not exist for negative numbers")
elif num==0:
        print("the factorial of 0 is 1")
else:
        print("the factorial of",num,"is",recur_factorial(num))
```

output:


Python 3.4.4 Shell
File Edit Shell Debug Options Window Help
Python 3.4.4 (v3.4.4:737efcadf5a6, Dec 20 2015, 19:28:18) [MSC v.1600 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: C:/Python34/recursion.py ==========
enter a number:123
the factorial of 123 is 121463043670253296757662432418812958554542170884833823153289181
618292358923621676688311569606126402021707358352212940477825910915704116514721860
295199062616467307339074198149529600000000000000000000000000000
>>>
========== RESTART: C:/Python34/recursion.py ==========
enter a number:5
the factorial of 5 is 120
>>>
6:19 PM
7/17/2017