PYTHOM PROGRAMING

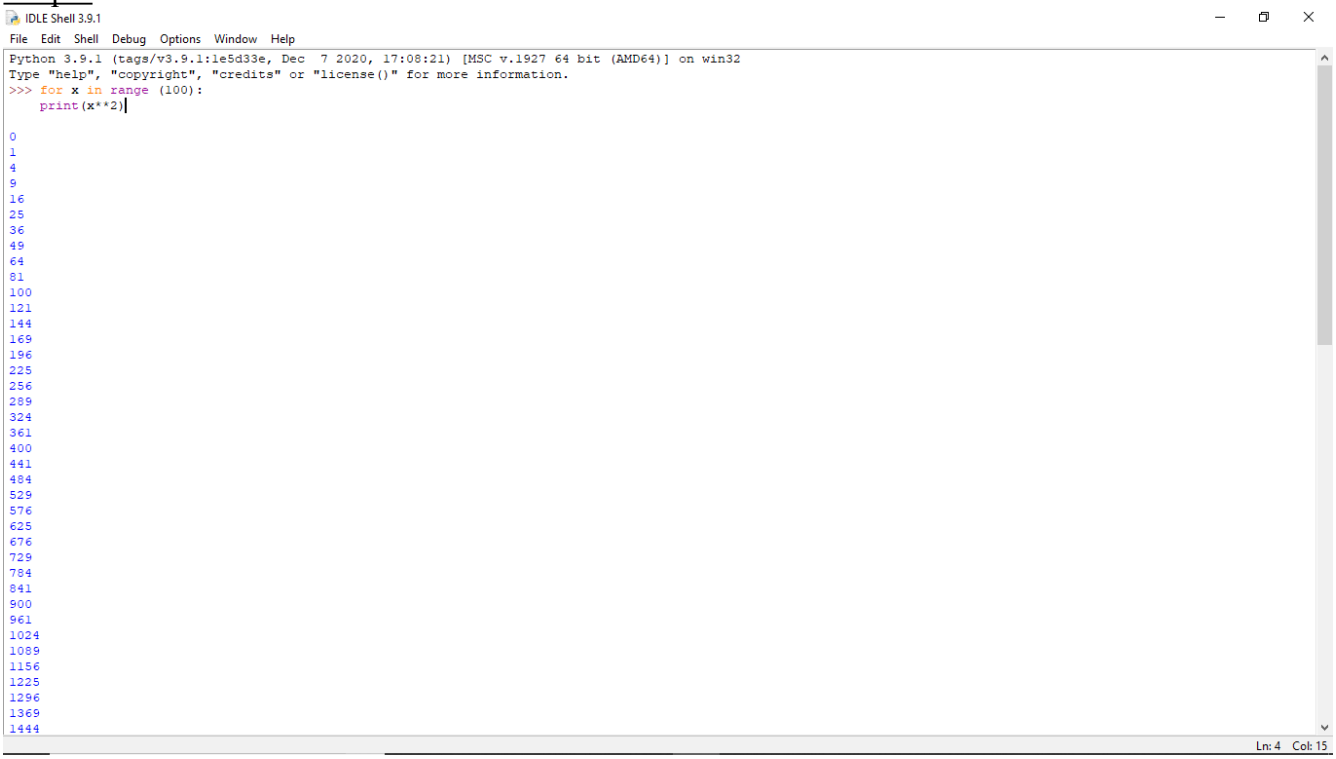
Course Outcome 1(CO1)

3.List comprehensions:
(b) Square of N numbers
(c)Form a list of vowels selected from a given word

Program (b)

```
for x in range (100):
    print(x**2)
```

Output

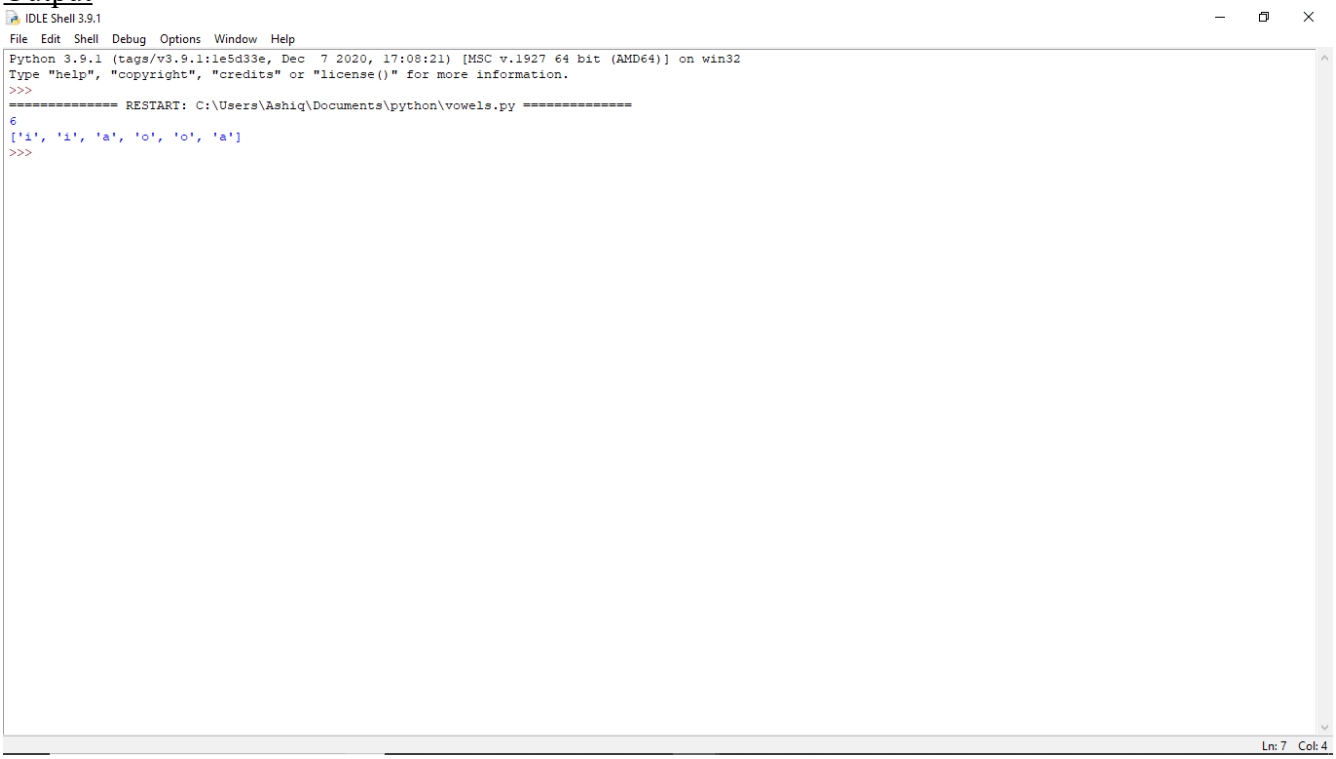


Program (c)

```
def Check_Vow(string, vowels):
    final = [each for each in string if each in vowels]
    print(len(final))
    print(final)


string = "This is a python program"
vowels = "AaEeIiOoUu"
Check_Vow(string, vowels);
```

Output



4.Count the occurrences of each word in a line of text.

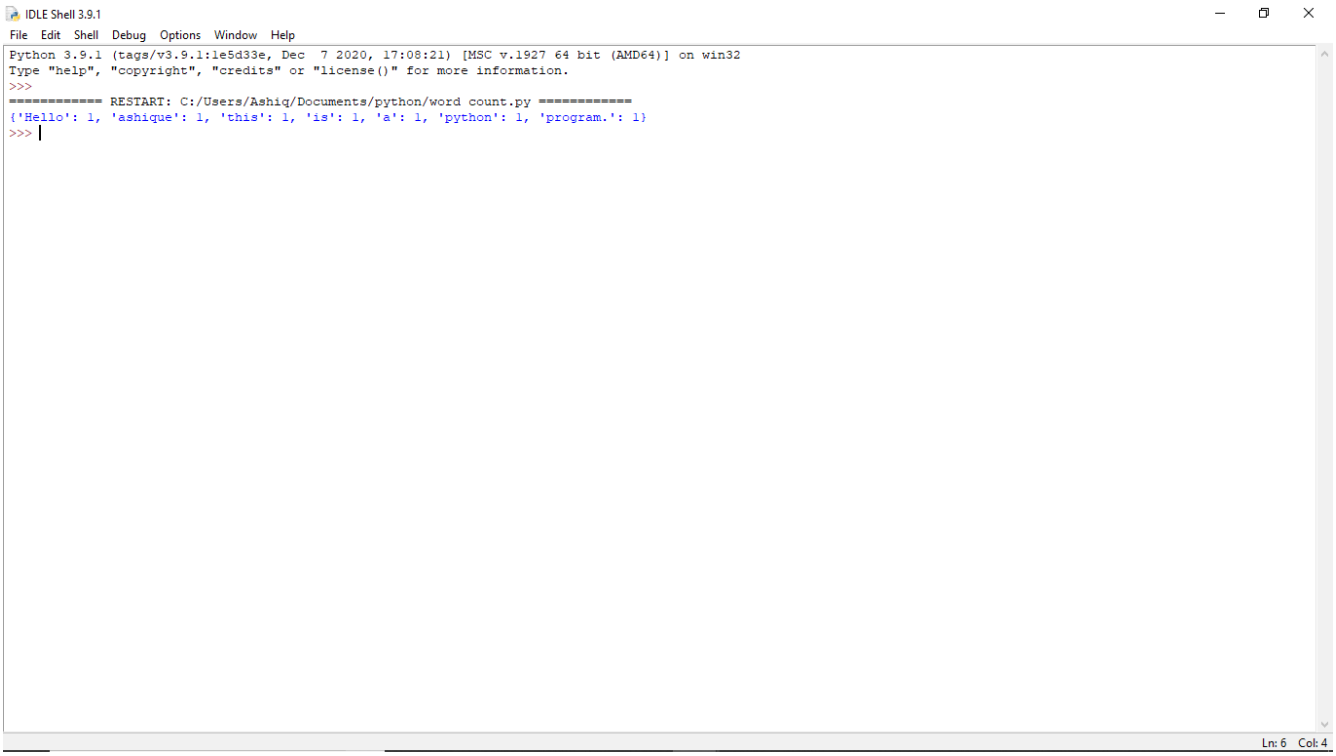
Program

```
def word_count(str):
    counts = dict()
    words = str.split()

    for word in words:
        if word in counts:
            counts[word] += 1
        else:
            counts[word] = 1

    return counts
print( word_count(' Hello ashique this is a python program.'))
```

Output



6.Store a list of first names. Count the occurrences of ‘a’ within the list

Program

```
test_str = "Hey ashique this is python program"
count = 0

for i in test_str:
    if i == 'a':
        count = count + 1


print ("Count of a in Hey ashique this is python program  is : " +  str(count))
```

Output

7.Enter 2 lists of integers. Check
a)Whether list are of same length
b)Whether list sums to same value
c)Whether any value occur in both?

Program

```
list1=[]
list2=[]
n=  int(input("Enter the size of list 1 : "))
m=  int(input("Enter the size of list 2 : "))

print("Enter integer elements of list 1")
for i in range(0,n):

    value = int(input())
    list1.append(value)

print("Enter integer elements of list 2")
for i in range(0,m):

    value = int(input())
    list2.append(value)
```

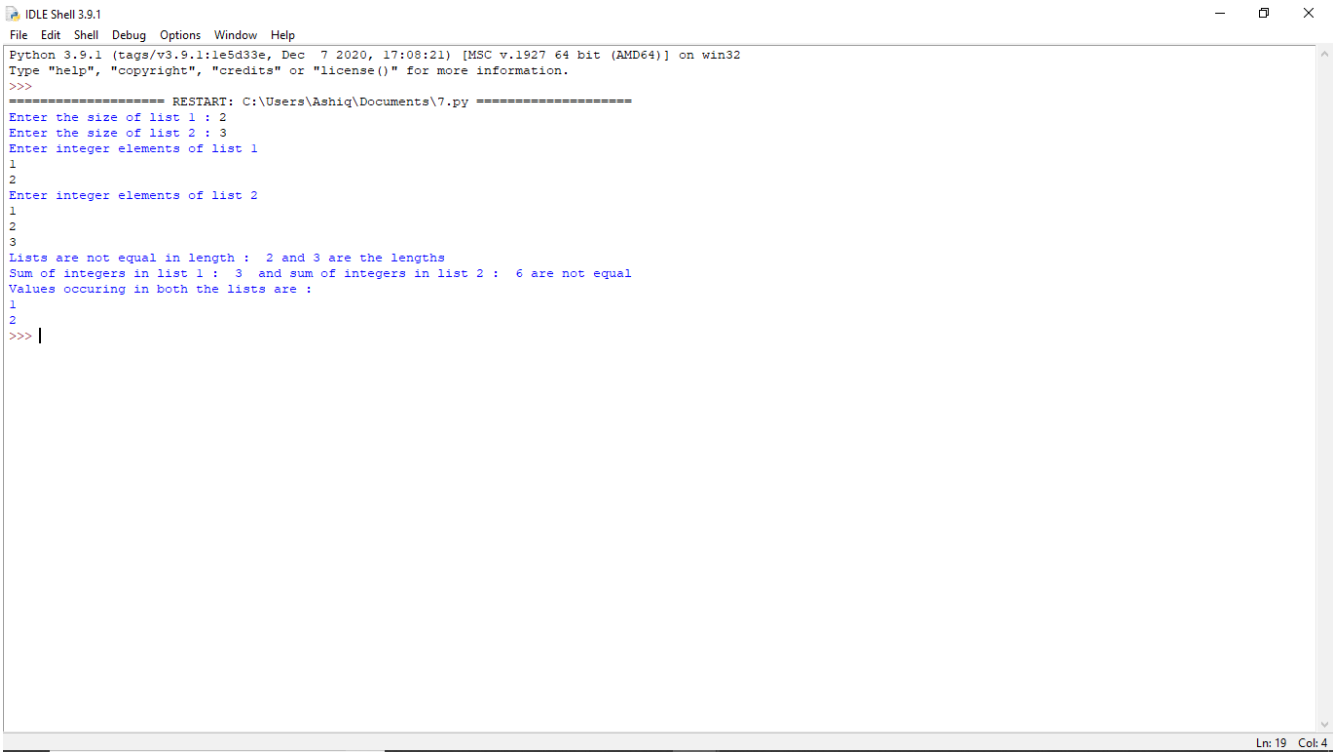
```
a = len(list1)
b = len(list2)
c = 0
d = 0

import math
if a == b:
   print("Lists are equal in length",+a)
else:
   print("Lists are not equal in length : ",+a,"and",+b,"are the lengths")
for i in range(0, len(list1)):
   c  =  c+list1[i]

for i in range(0, len(list2)):
   d  =  d+list2[i]


if c==d:
   print("Sum of integers are equal in both list : ",+ c)
else:
   print("Sum of integers in list 1 : ",+c ," and sum of integers in list 2 : ",+d , "are not equal")
flag=0
print("Values occuring in both the lists are : ")
for i in list1:
   for j in list2:
      if i==j:
         print(i)
         flag=1
if(flag==0):
   print("No same element occur in both the list ")
```

Output

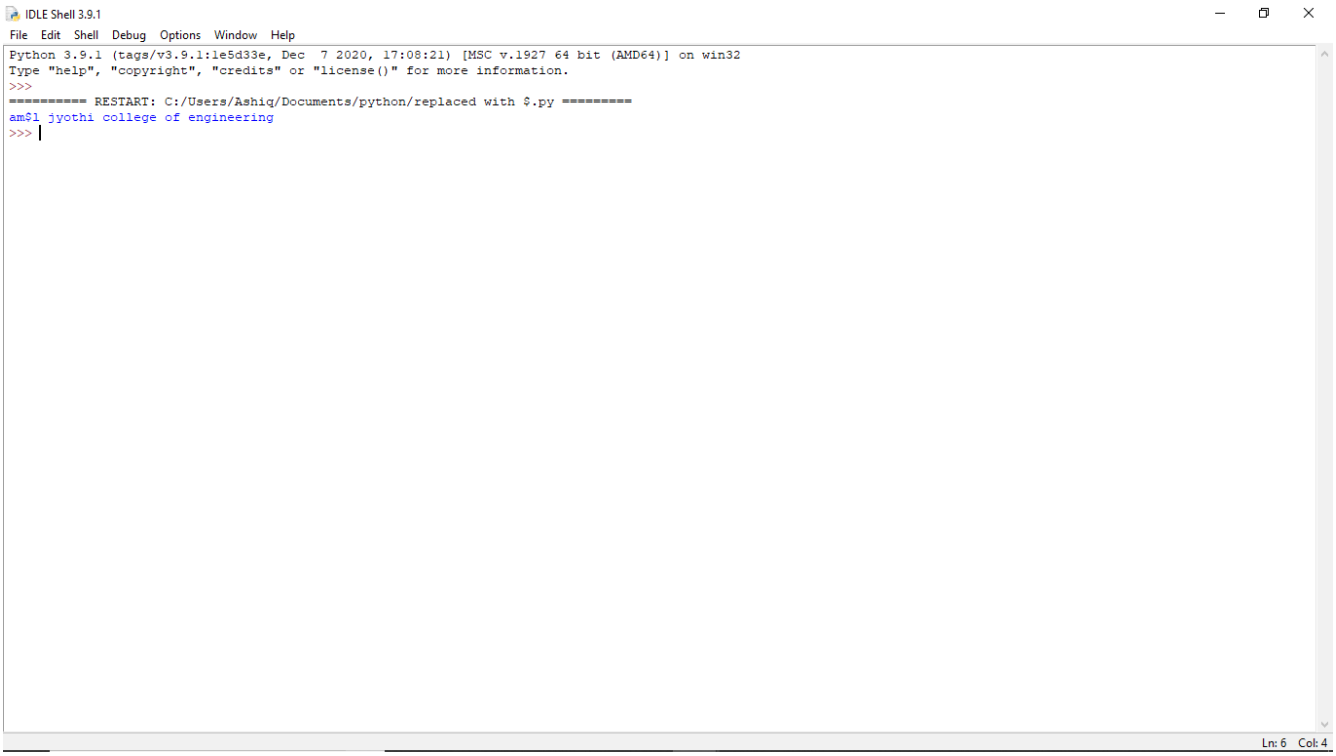


8.Get a string from an input string where all occurrences of first character replaced with '$', except first character?

Program

```
def change_char(str1):
  char = str1[0]
  str1 = str1.replace(char, '$')
  str1 = char + str1[1:]
  return str1
print(change_char('amal jyothi college of engineering'))
```

Output

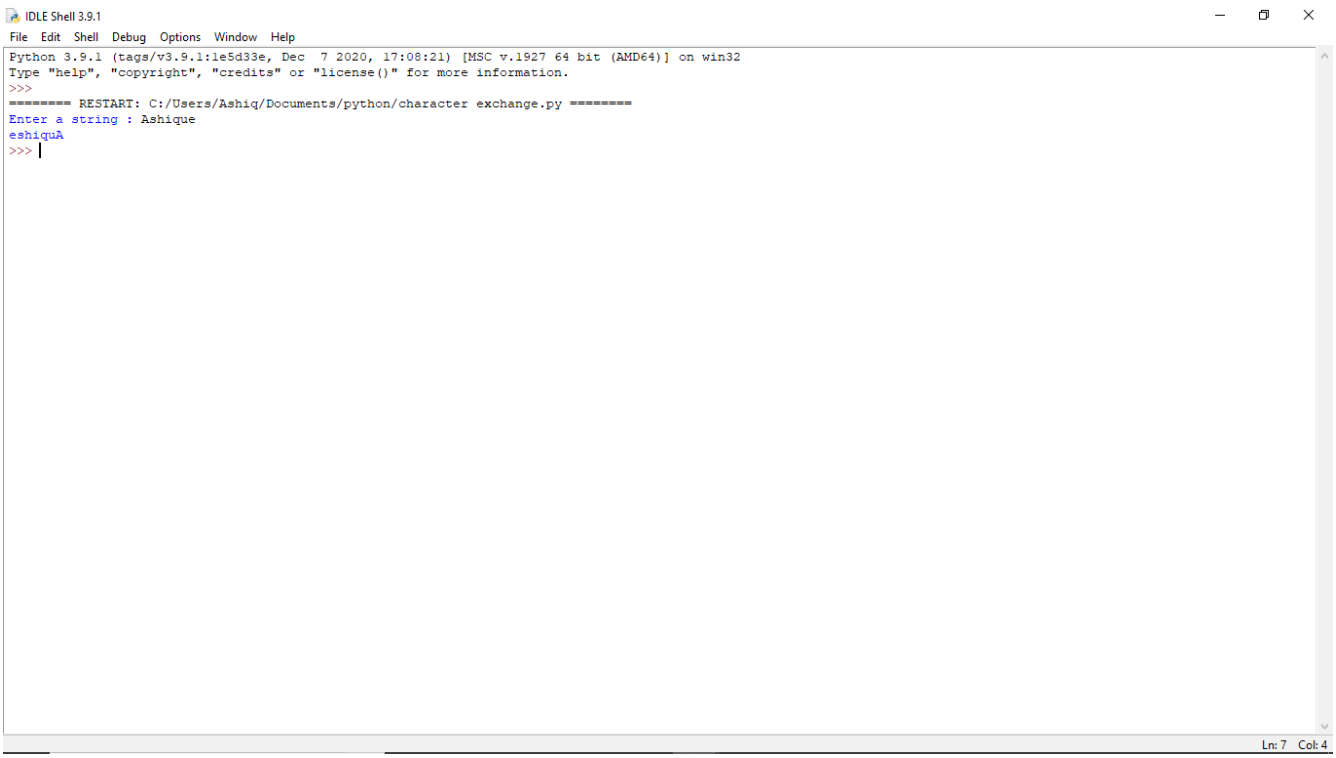


9.Create a string from given string where the first and last characters exchanged

Program

```
str = input("Enter a string : ")
new_str = str[-1:] + str[1:-1] + str[:1]
print(new_str)
```

Output

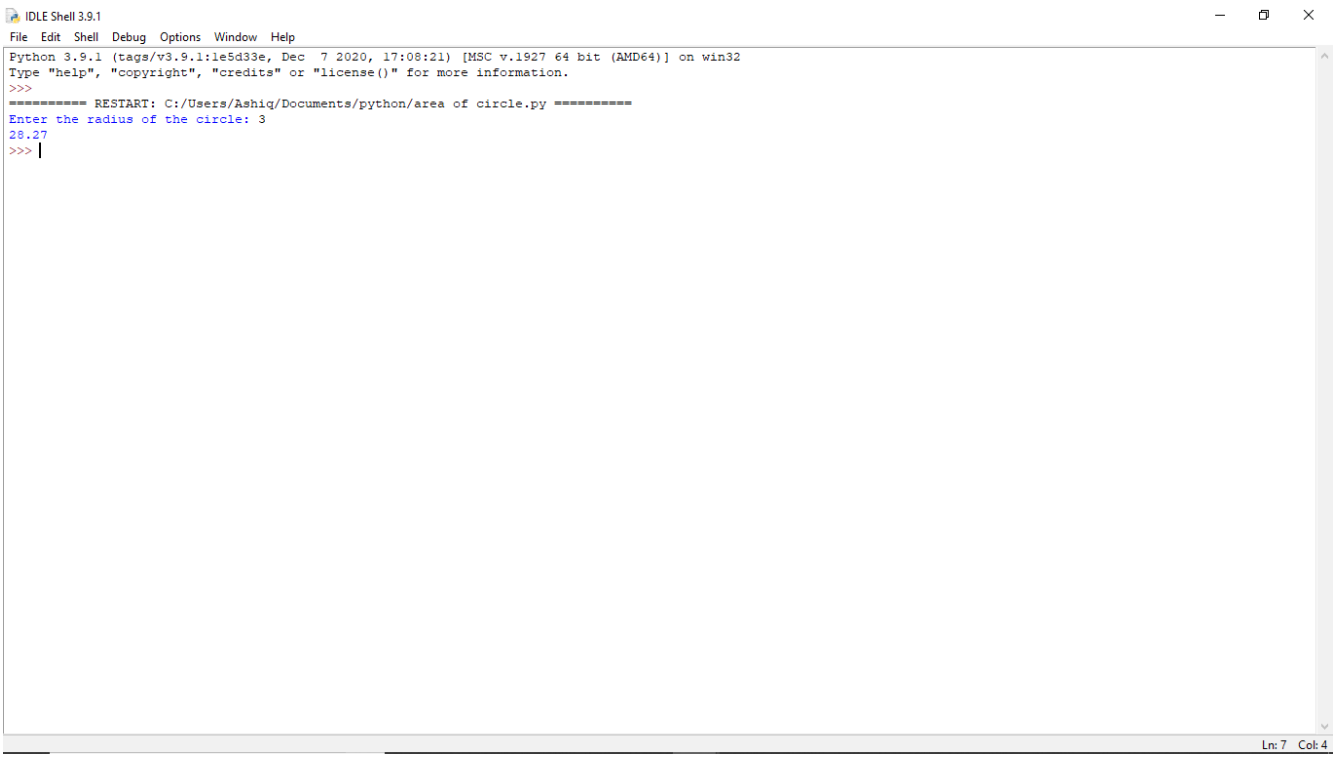


10.Accept the radius from user and find area of circle?

Program

```
import math
r = float(input("Enter the radius of the circle: "))
area = math.pi* r * r
print("%.2f" %area)
```

Output

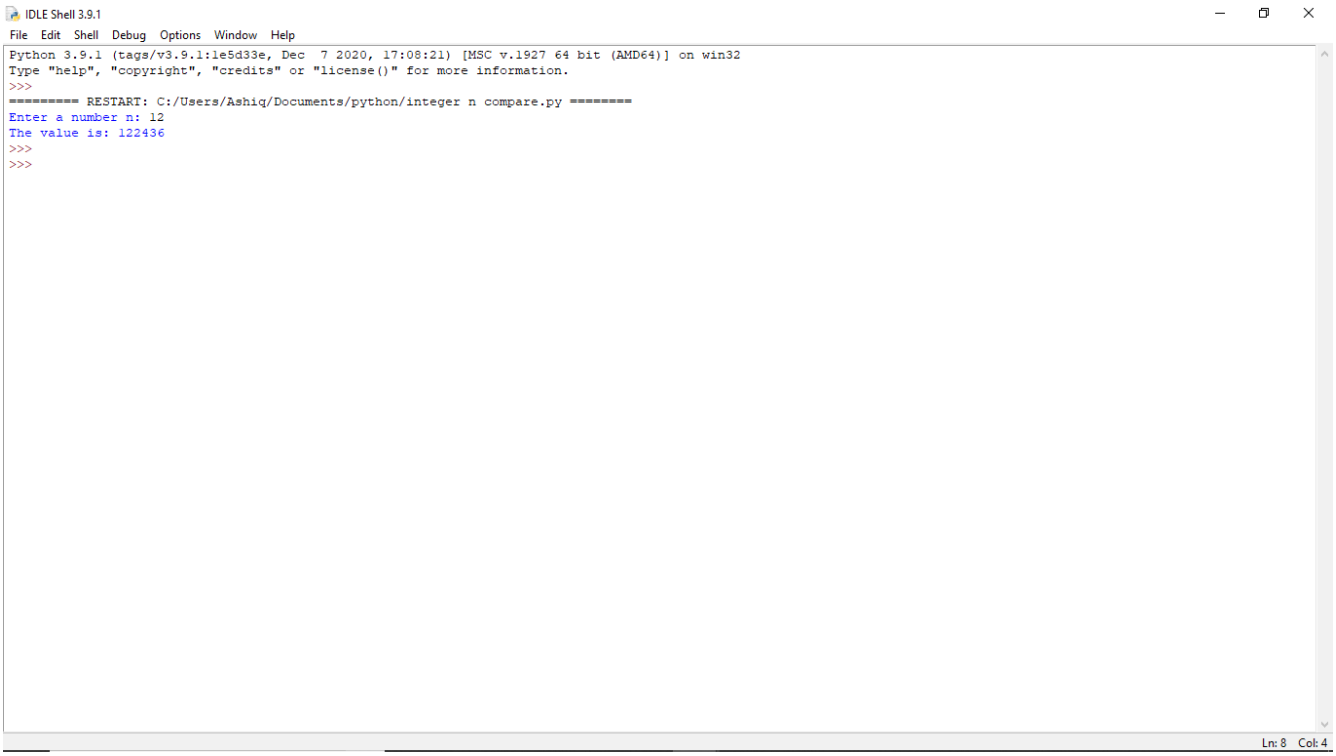


14.Accept an integer n and compare n+nn+nnn?

Program

```
n=int(input("Enter a number n: "))
temp=str(n)
t1=temp+temp
t2=temp+temp+temp
comp=n+int(t1)+int(t2)
print("The value is:",comp)
```

Output

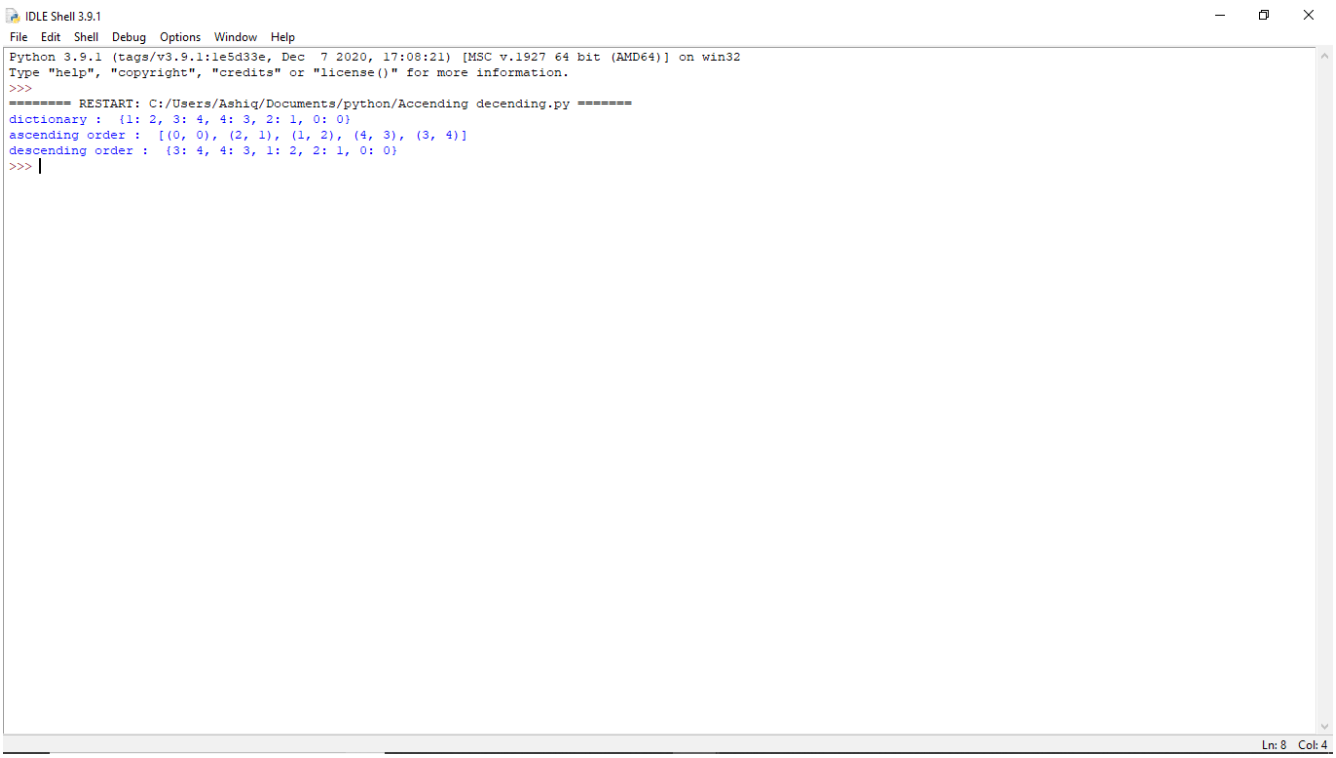


17.Sort dictionary in ascending and descending order?

Program

```
import operator
d = {1: 2, 3: 4, 4: 3, 2: 1, 0: 0}
print('dictionary : ',d)
s= sorted(d.items(), key=operator.itemgetter(1))
print('ascending order : ',s)
s1= dict( sorted(d.items(), key=operator.itemgetter(1),reverse=True))
print('descending order : ',s1)
```

Output

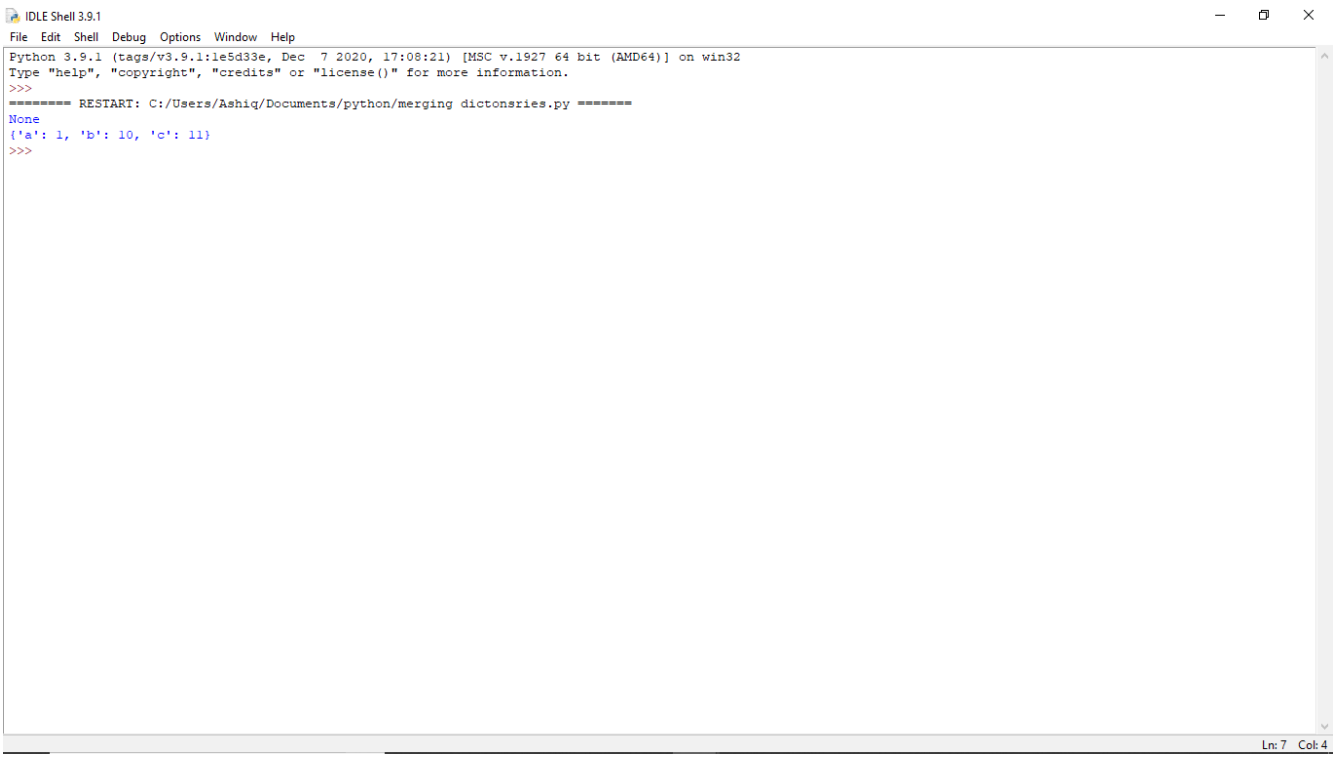


18)Merge two dictionaries?

Program

```
x = {'a': 1, 'b': 2}
y = {'b': 10, 'c': 11}
z = x.update(y)
print(z)
print(x)
```

Output

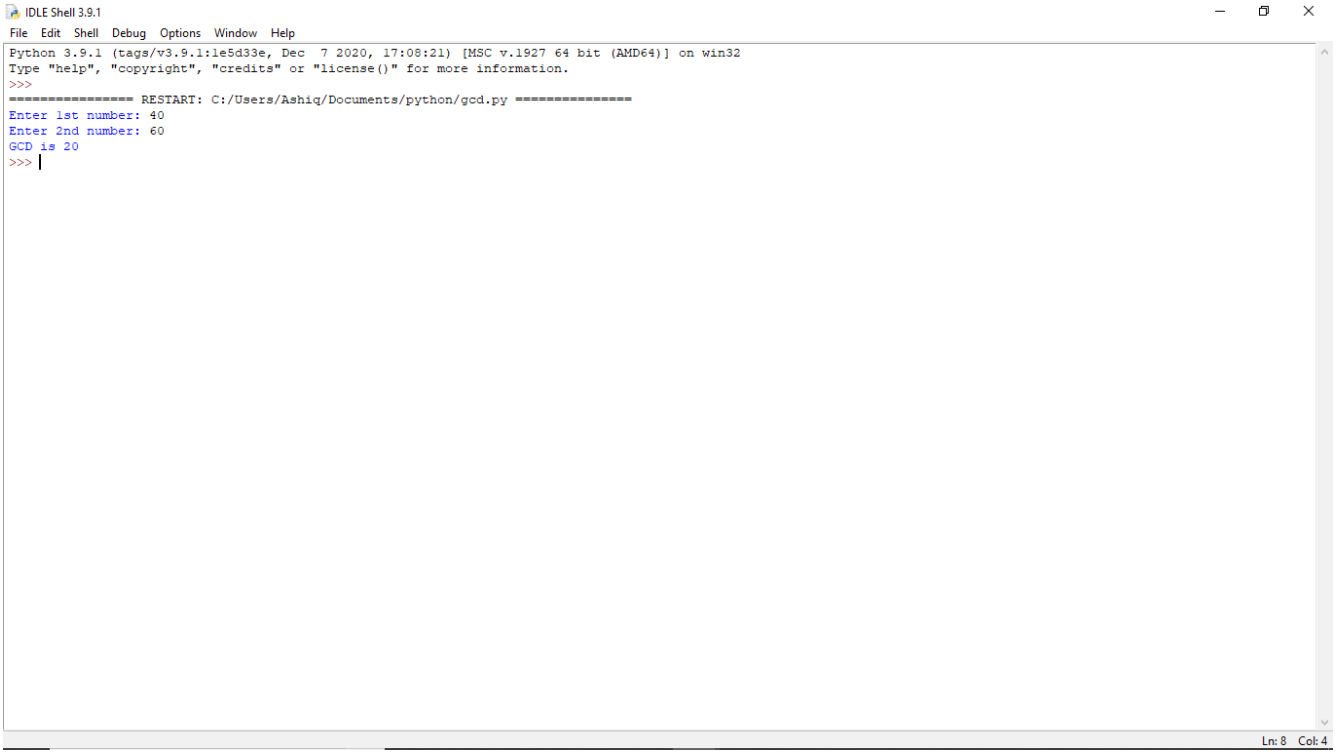


19.Find gcd of two numbers?

Program

```
num1 = int(input("Enter 1st number: "))
num2 = int(input("Enter 2nd number: "))
i = 1
while(i <= num1 and i <= num2):
  if(num1 % i == 0 and num2 % i == 0):
    gcd = i
  i = i + 1
print("GCD is", gcd)
```

Output


IDLE Shell 3.9.1
File Edit Shell Debug Options Window Help
Python 3.9.1 (tags/v3.9.1:1e5d33e, Dec 7 2020, 17:08:21) [MSC v.1927 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: C:/Users/Ashiq/Documents/python/gcd.py ==========
Enter 1st number: 40
Enter 2nd number: 60
GCD is 20
>>>
Ln: 8 Col: 4