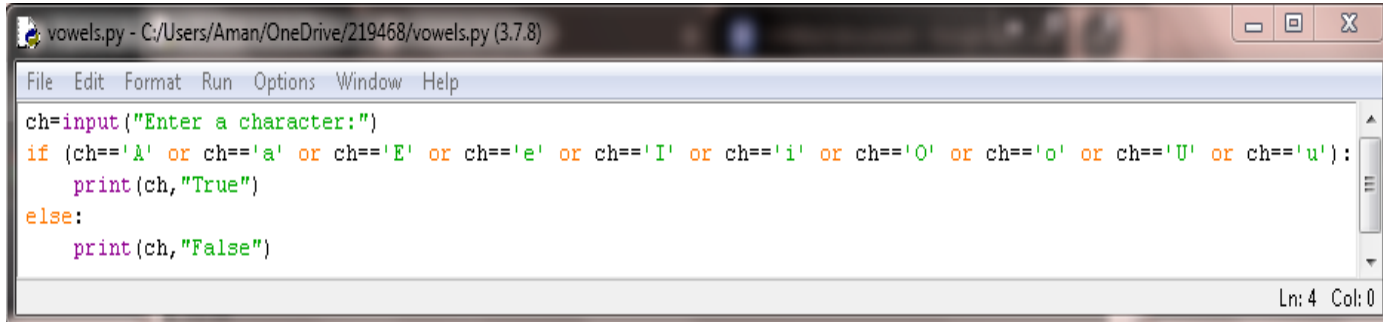


Name : AmanKumar Arunkumar Yadav
Div : B
Roll No. : 219468
Class : SY.BSc.IT.
Subject : Python Programming practical(2-8)

Practical no 2

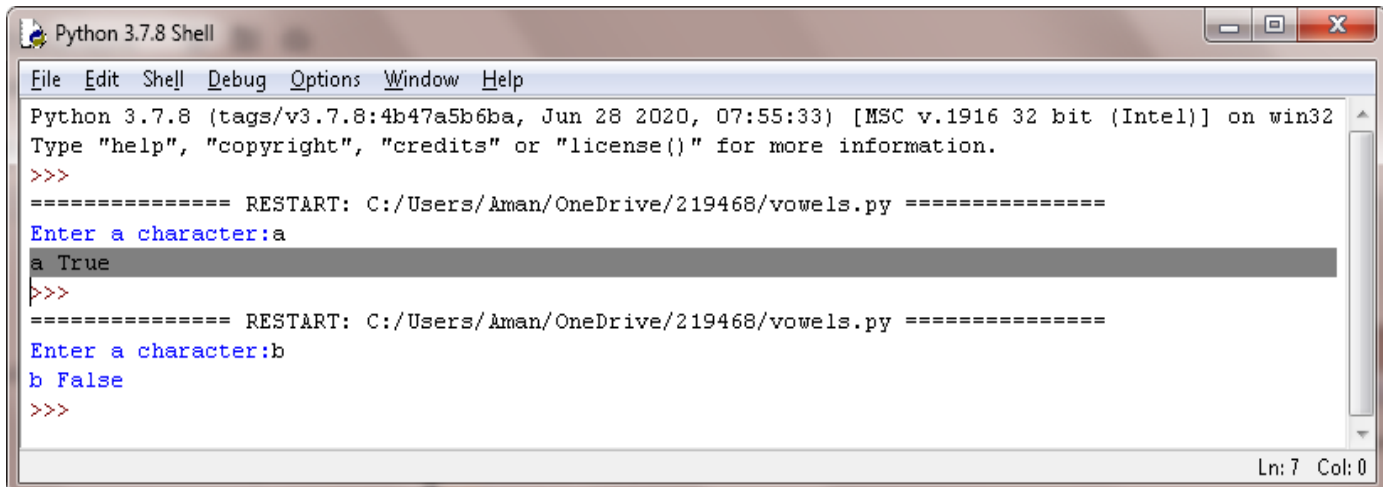
1. Write a function that takes a character (i.e. a string of length 1) and returns True if it is a vowel, False otherwise.

Code:



```
vowels.py - C:/Users/Aman/OneDrive/219468/vowels.py (3.7.8)
File Edit Format Run Options Window Help
ch=input("Enter a character:")
if (ch=='A' or ch=='a' or ch=='E' or ch=='e' or ch=='I' or ch=='i' or ch=='O' or ch=='o' or ch=='U' or ch=='u'):
    print(ch,"True")
else:
    print(ch,"False")
Ln: 4 Col: 0
```

Output:



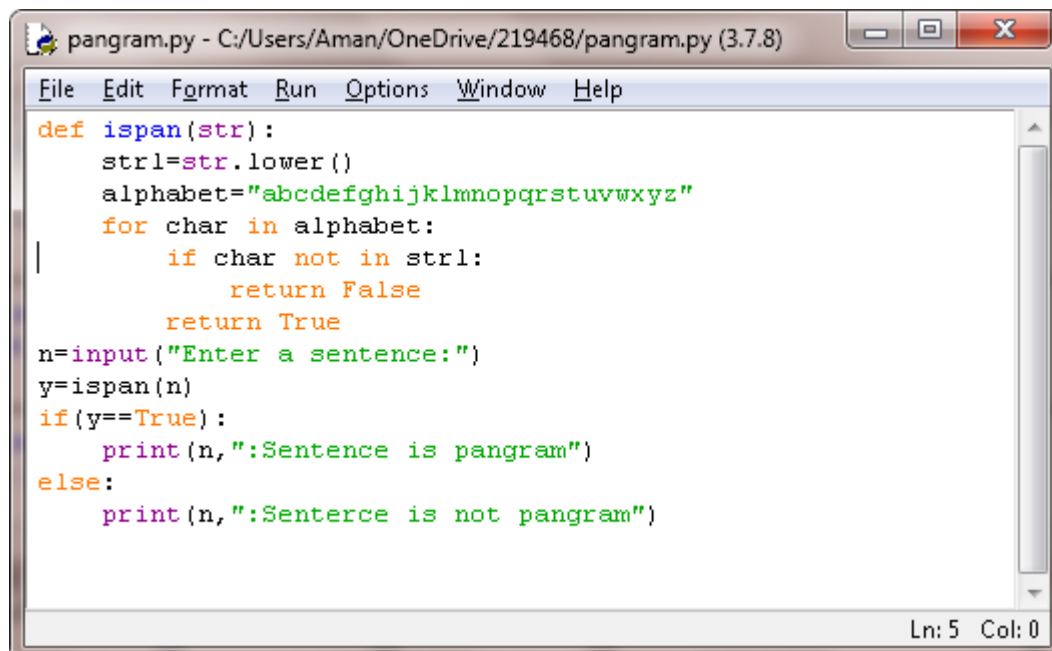
```
Python 3.7.8 Shell
File Edit Shell Debug Options Window Help
Python 3.7.8 (tags/v3.7.8:4b47a5b6ba, Jun 28 2020, 07:55:33) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/Aman/OneDrive/219468/vowels.py =====
Enter a character:a
a True
>>>
===== RESTART: C:/Users/Aman/OneDrive/219468/vowels.py =====
Enter a character:b
b False
>>>
Ln: 7 Col: 0
```

2. Define a function histogram() that takes a list of integers and prints a histogram to the screen. For example, histogram(4, 9, 7) should print the following:

Code:

3. A pangram is a sentence that contains all the letters of the English alphabet at least once, for example: The quick brown fox jumps over the lazy dog. Your task here is to write a function to check a sentence to see if it is a pangram or not.

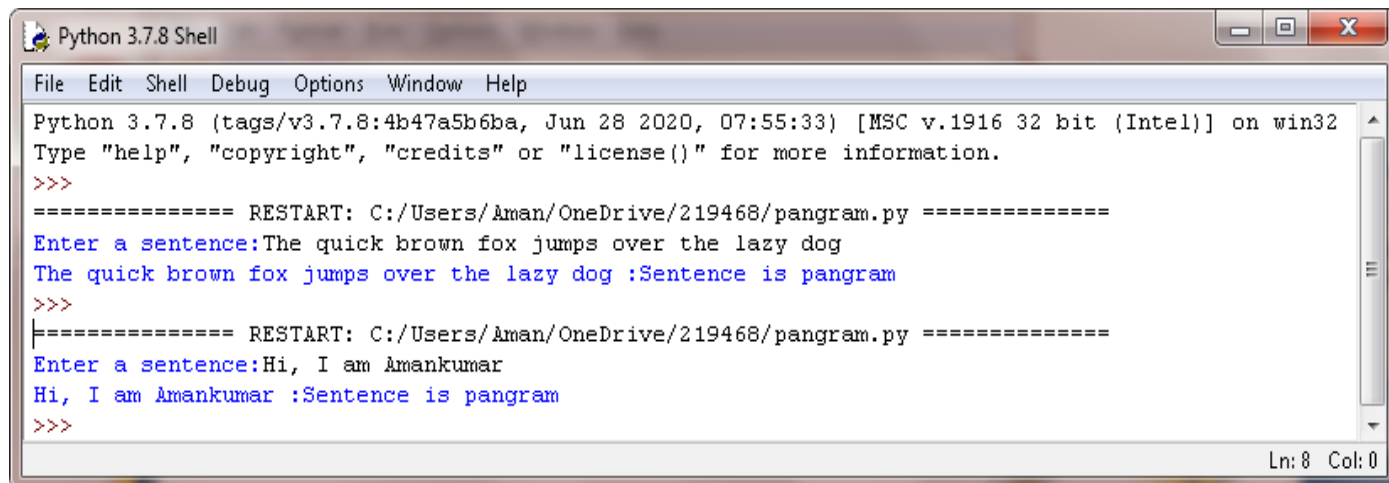
Code:

A screenshot of a Python IDE window titled 'pangram.py - C:/Users/Aman/OneDrive/219468/pangram.py (3.7.8)'. The window contains the following Python code:

```
def ispan(str):  
    str1=str.lower()  
    alphabet="abcdefghijklmnopqrstuvwxyz"  
    for char in alphabet:  
        if char not in str1:  
            return False  
    return True  
n=input("Enter a sentence:")  
y=ispan(n)  
if (y==True):  
    print(n,":Sentence is pangram")  
else:  
    print(n,":Senterce is not pangram")
```

The status bar at the bottom right shows 'Ln: 5 Col: 0'.

Output:

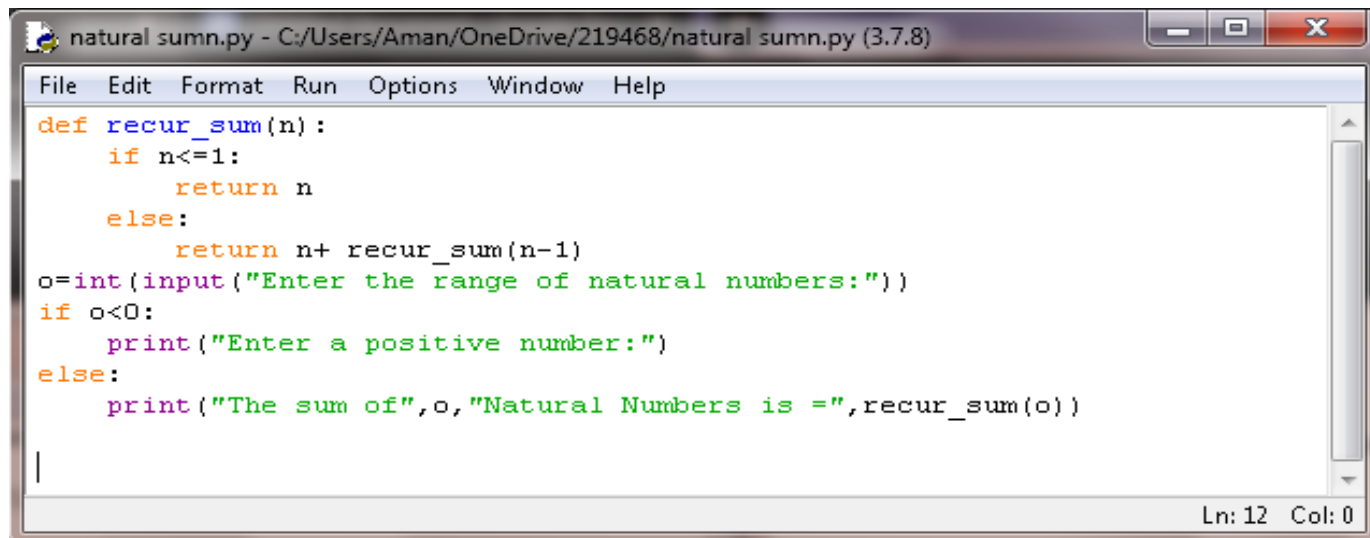
A screenshot of a Python 3.7.8 Shell window. The window shows the execution of the pangram.py script. The output is as follows:

```
Python 3.7.8 (tags/v3.7.8:4b47a5b6ba, Jun 28 2020, 07:55:33) [MSC v.1916 32 bit (Intel)] on win32  
Type "help", "copyright", "credits" or "license()" for more information.  
>>>  
===== RESTART: C:/Users/Aman/OneDrive/219468/pangram.py =====  
Enter a sentence:The quick brown fox jumps over the lazy dog  
The quick brown fox jumps over the lazy dog :Sentence is pangram  
>>>  
===== RESTART: C:/Users/Aman/OneDrive/219468/pangram.py =====  
Enter a sentence:Hi, I am Amankumar  
Hi, I am Amankumar :Sentence is pangram  
>>>
```

The status bar at the bottom right shows 'Ln: 8 Col: 0'.

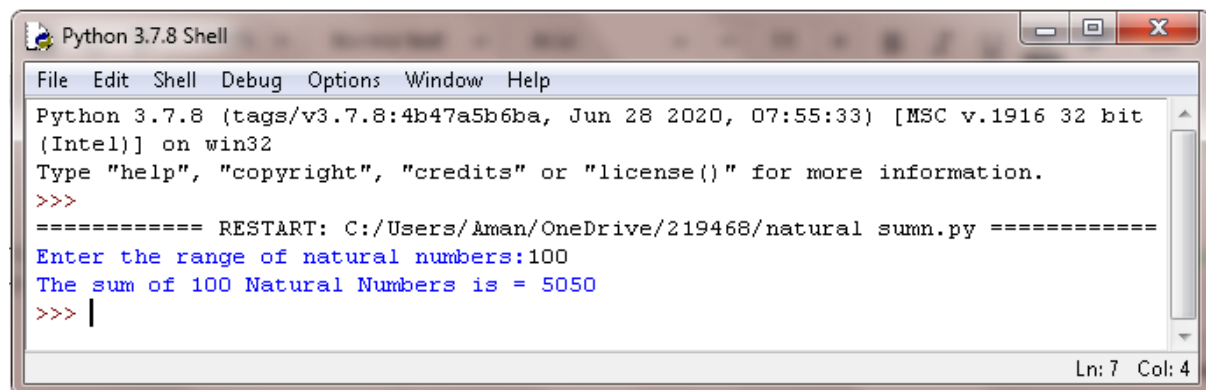
4. Write a python code to print the sum of natural numbers using recursive functions.

Code:



```
natural sumn.py - C:/Users/Aman/OneDrive/219468/natural sumn.py (3.7.8)
File Edit Format Run Options Window Help
def recur_sum(n):
    if n<=1:
        return n
    else:
        return n+ recur_sum(n-1)
o=int(input("Enter the range of natural numbers:"))
if o<0:
    print("Enter a positive number:")
else:
    print("The sum of",o,"Natural Numbers is =",recur_sum(o))
|
Ln: 12 Col: 0
```

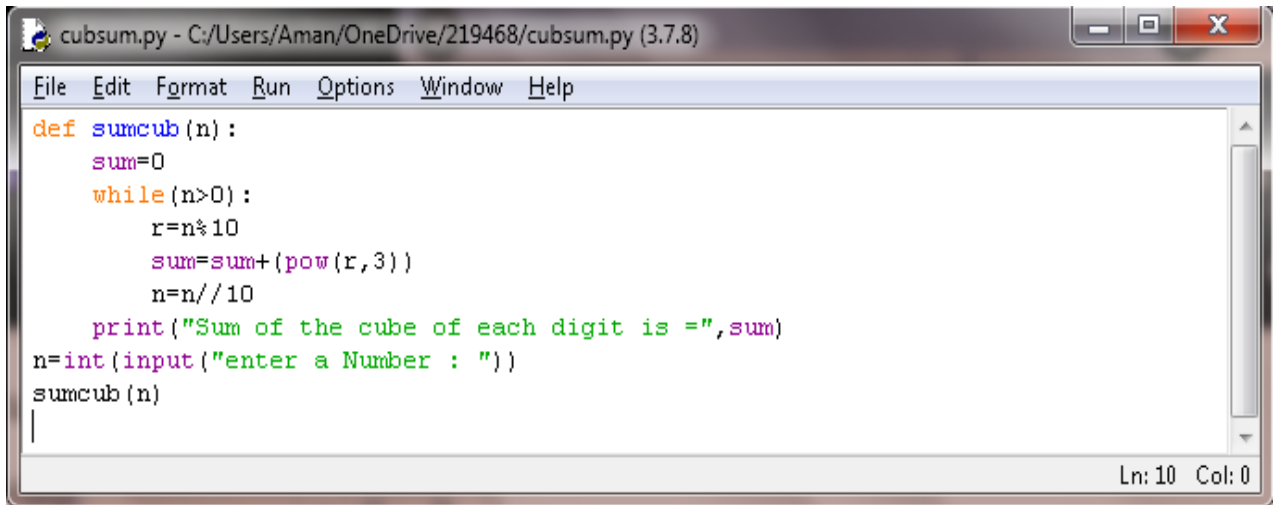
Output:



```
Python 3.7.8 Shell
File Edit Shell Debug Options Window Help
Python 3.7.8 (tags/v3.7.8:4b47a5b6ba, Jun 28 2020, 07:55:33) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/Aman/OneDrive/219468/natural sumn.py =====
Enter the range of natural numbers:100
The sum of 100 Natural Numbers is = 5050
>>> |
Ln: 7 Col: 4
```

5. Write a python code to display the sum of cubes of digits of a number using function.

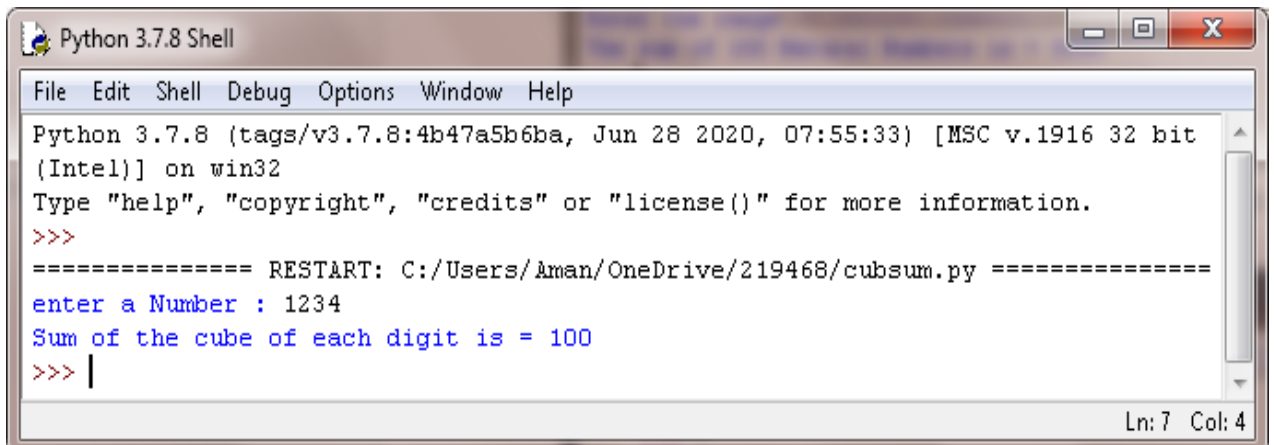
Code:

A screenshot of a Python IDE window titled 'cubsum.py - C:/Users/Aman/OneDrive/219468/cubsum.py (3.7.8)'. The window has a menu bar with 'File', 'Edit', 'Format', 'Run', 'Options', 'Window', and 'Help'. The code is as follows:

```
def sumcub(n):  
    sum=0  
    while(n>0):  
        r=n%10  
        sum=sum+(pow(r,3))  
        n=n//10  
    print("Sum of the cube of each digit is =",sum)  
n=int(input("enter a Number : "))  
sumcub(n)
```

The status bar at the bottom right shows 'Ln: 10 Col: 0'.

Output :

A screenshot of a 'Python 3.7.8 Shell' window. The window has a menu bar with 'File', 'Edit', 'Shell', 'Debug', 'Options', 'Window', and 'Help'. The output text is as follows:

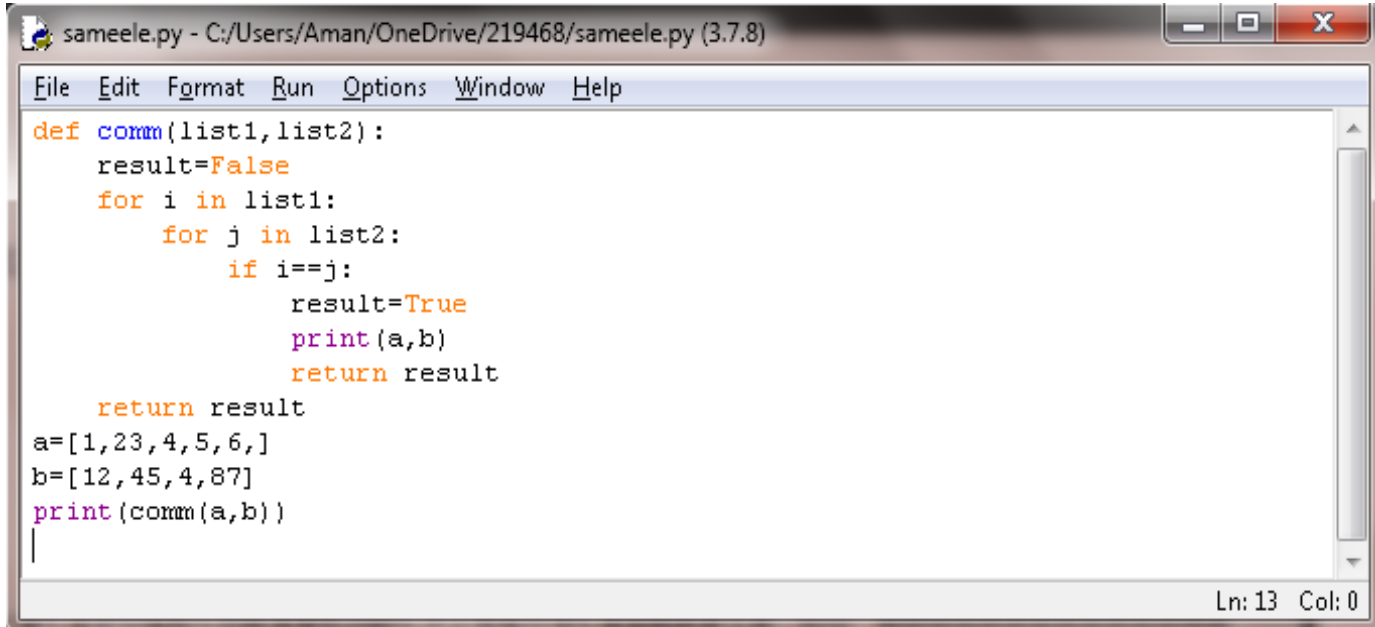
```
Python 3.7.8 (tags/v3.7.8:4b47a5b6ba, Jun 28 2020, 07:55:33) [MSC v.1916 32 bit  
(Intel)] on win32  
Type "help", "copyright", "credits" or "license()" for more information.  
>>>  
===== RESTART: C:/Users/Aman/OneDrive/219468/cubsum.py =====  
enter a Number : 1234  
Sum of the cube of each digit is = 100  
>>> |
```

The status bar at the bottom right shows 'Ln: 7 Col: 4'.

Practical no 3

1. Write a program that takes two lists and returns True if they have at least one common member.

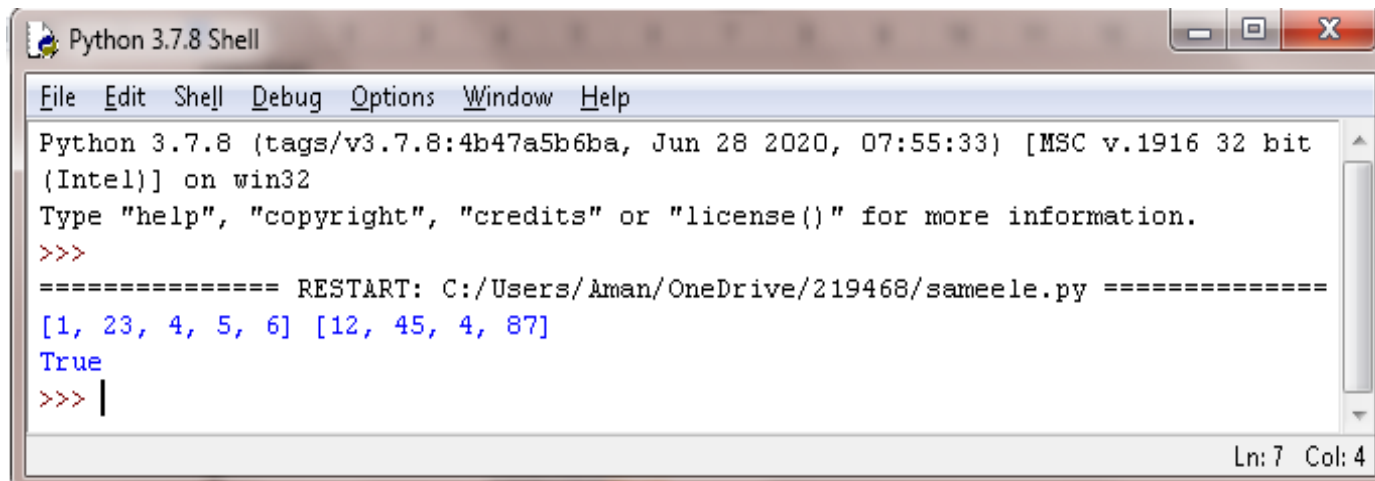
Code:

A screenshot of a Python IDE window titled 'sameele.py - C:/Users/Aman/OneDrive/219468/sameele.py (3.7.8)'. The window has a menu bar with 'File', 'Edit', 'Format', 'Run', 'Options', 'Window', and 'Help'. The code is as follows:

```
def comm(list1,list2):  
    result=False  
    for i in list1:  
        for j in list2:  
            if i==j:  
                result=True  
                print(a,b)  
                return result  
    return result  
a=[1,23,4,5,6,]  
b=[12,45,4,87]  
print(comm(a,b))  
|
```

The status bar at the bottom right shows 'Ln: 13 Col: 0'.

Output:

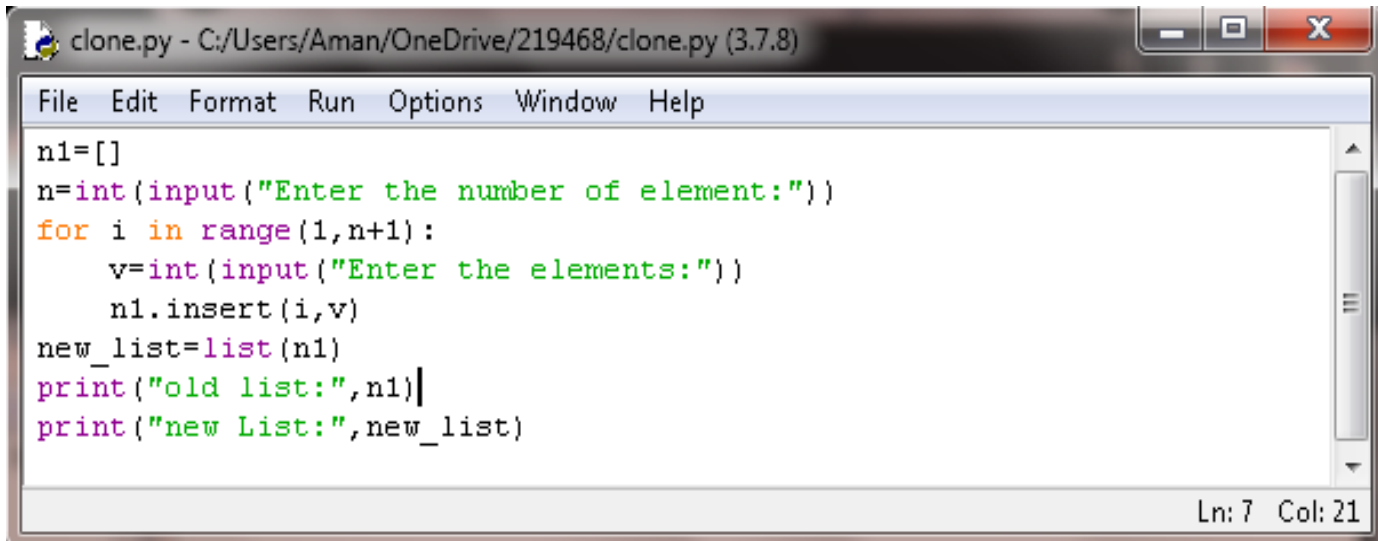
A screenshot of a Python 3.7.8 Shell window. The window has a menu bar with 'File', 'Edit', 'Shell', 'Debug', 'Options', 'Window', and 'Help'. The output is as follows:

```
Python 3.7.8 (tags/v3.7.8:4b47a5b6ba, Jun 28 2020, 07:55:33) [MSC v.1916 32 bit  
(Intel)] on win32  
Type "help", "copyright", "credits" or "license()" for more information.  
>>>  
===== RESTART: C:/Users/Aman/OneDrive/219468/sameele.py =====  
[1, 23, 4, 5, 6] [12, 45, 4, 87]  
True  
>>> |
```

The status bar at the bottom right shows 'Ln: 7 Col: 4'.

2. Write a Python program to clone or copy a list.

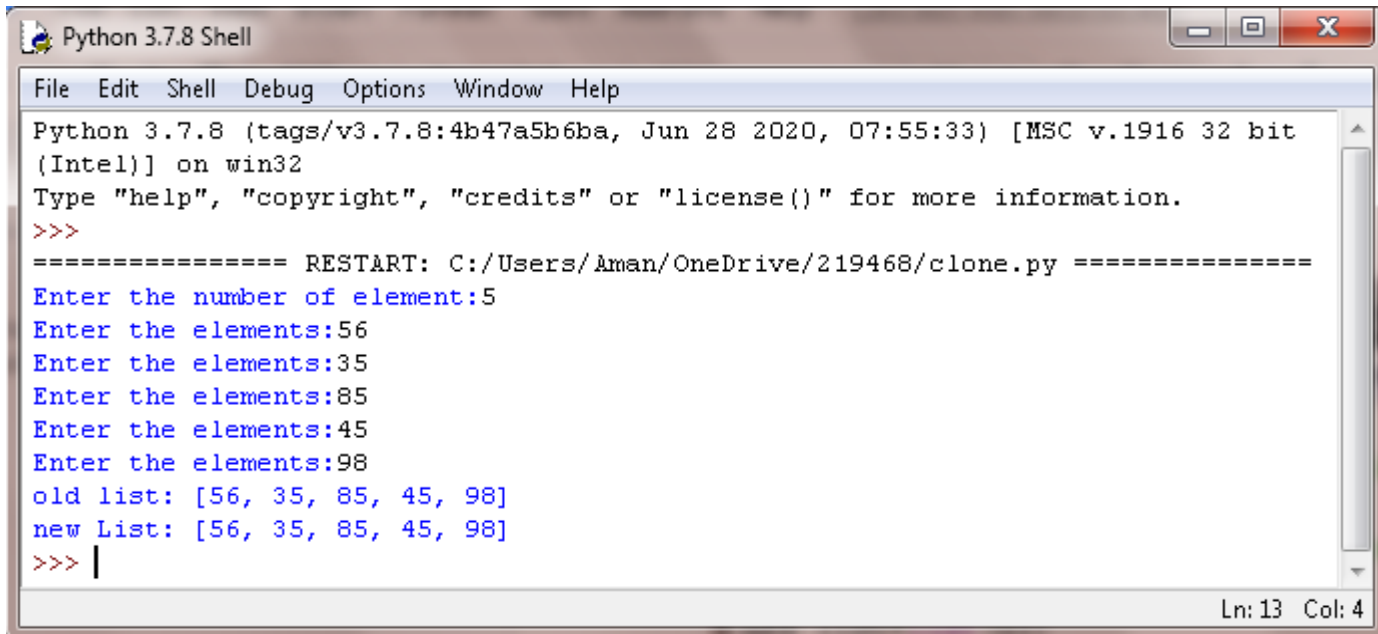
Code:

A screenshot of a Python IDE window titled 'clone.py - C:/Users/Aman/OneDrive/219468/clone.py (3.7.8)'. The window has a menu bar with 'File', 'Edit', 'Format', 'Run', 'Options', 'Window', and 'Help'. The code is as follows:

```
n1=[]
n=int(input("Enter the number of element:"))
for i in range(1,n+1):
    v=int(input("Enter the elements:"))
    n1.insert(i,v)
new_list=list(n1)
print("old list:",n1)
print("new List:",new_list)
```

The status bar at the bottom right shows 'Ln: 7 Col: 21'.

Output:

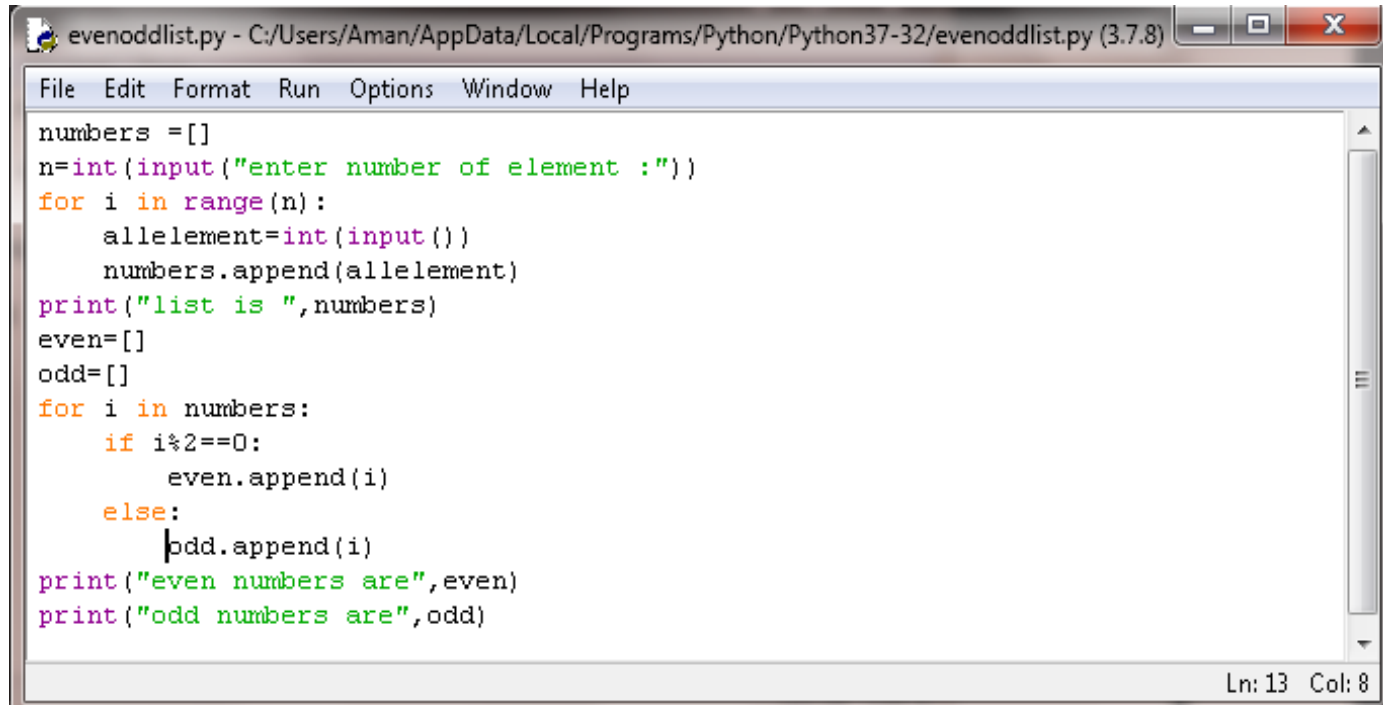
A screenshot of a Python 3.7.8 Shell window titled 'Python 3.7.8 Shell'. The window has a menu bar with 'File', 'Edit', 'Shell', 'Debug', 'Options', 'Window', and 'Help'. The output of the program is as follows:

```
Python 3.7.8 (tags/v3.7.8:4b47a5b6ba, Jun 28 2020, 07:55:33) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/Aman/OneDrive/219468/clone.py =====
Enter the number of element:5
Enter the elements:56
Enter the elements:35
Enter the elements:85
Enter the elements:45
Enter the elements:98
old list: [56, 35, 85, 45, 98]
new List: [56, 35, 85, 45, 98]
>>> |
```

The status bar at the bottom right shows 'Ln: 13 Col: 4'.

3. Write a python code to display the odd and even numbers separately from a list. (All elements in the list should be taken from user).

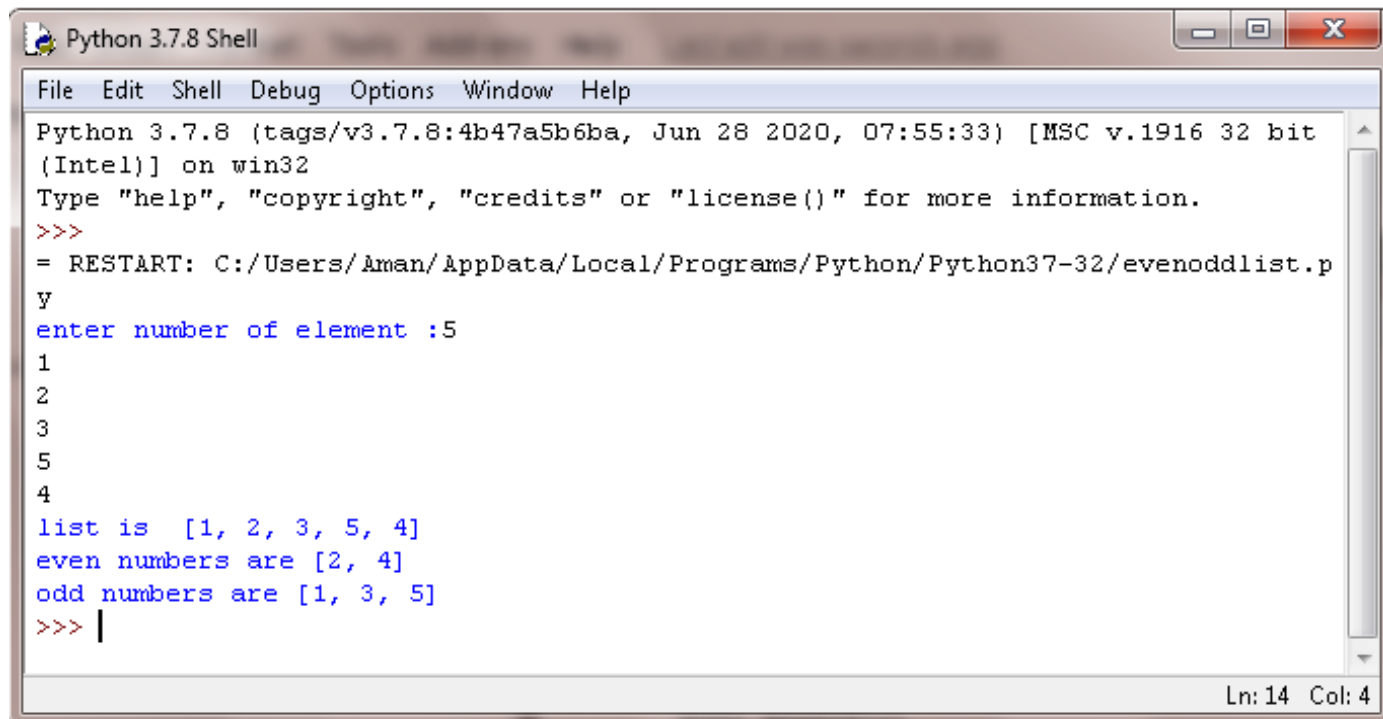
Code:



```
evenoddlist.py - C:/Users/Aman/AppData/Local/Programs/Python/Python37-32/evenoddlist.py (3.7.8)
File Edit Format Run Options Window Help
numbers = []
n=int(input("enter number of element :"))
for i in range(n):
    allelement=int(input())
    numbers.append(allelement)
print("list is ",numbers)
even=[]
odd=[]
for i in numbers:
    if i%2==0:
        even.append(i)
    else:
        odd.append(i)
print("even numbers are",even)
print("odd numbers are",odd)
```

Ln: 13 Col: 8

Output:

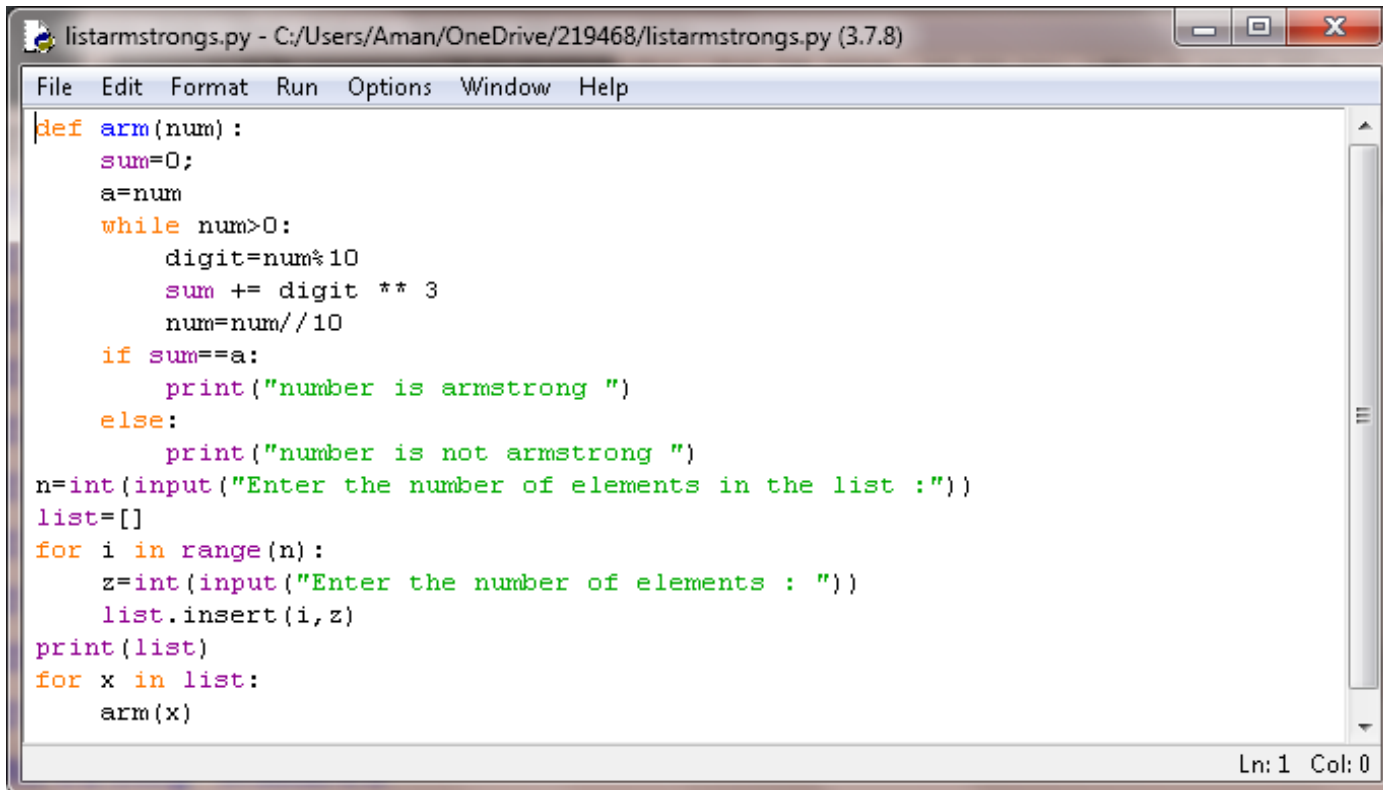


```
Python 3.7.8 Shell
File Edit Shell Debug Options Window Help
Python 3.7.8 (tags/v3.7.8:4b47a5b6ba, Jun 28 2020, 07:55:33) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/Aman/AppData/Local/Programs/Python/Python37-32/evenoddlist.py
enter number of element :5
1
2
3
5
4
list is [1, 2, 3, 5, 4]
even numbers are [2, 4]
odd numbers are [1, 3, 5]
>>> |
```

Ln: 14 Col: 4

Q4. Write a python program to accept an Integer list from user and print all the Armstrong numbers in that list.

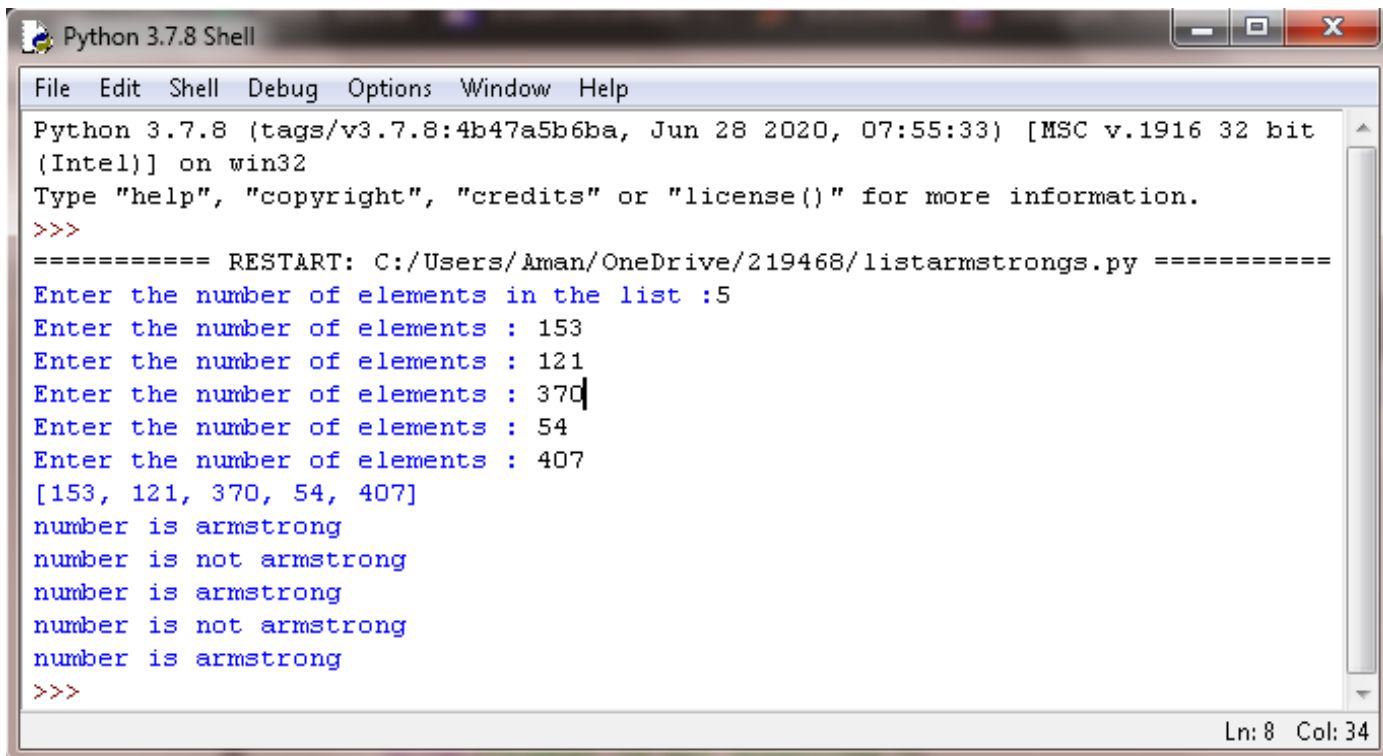
Code:



```
listarmstrongs.py - C:/Users/Aman/OneDrive/219468/listarmstrongs.py (3.7.8)
File Edit Format Run Options Window Help
def arm(num):
    sum=0;
    a=num
    while num>0:
        digit=num%10
        sum += digit ** 3
        num=num//10
    if sum==a:
        print("number is armstrong ")
    else:
        print("number is not armstrong ")
n=int(input("Enter the number of elements in the list :"))
list=[]
for i in range(n):
    z=int(input("Enter the number of elements : "))
    list.insert(i,z)
print(list)
for x in list:
    arm(x)
```

Ln: 1 Col: 0

Output:

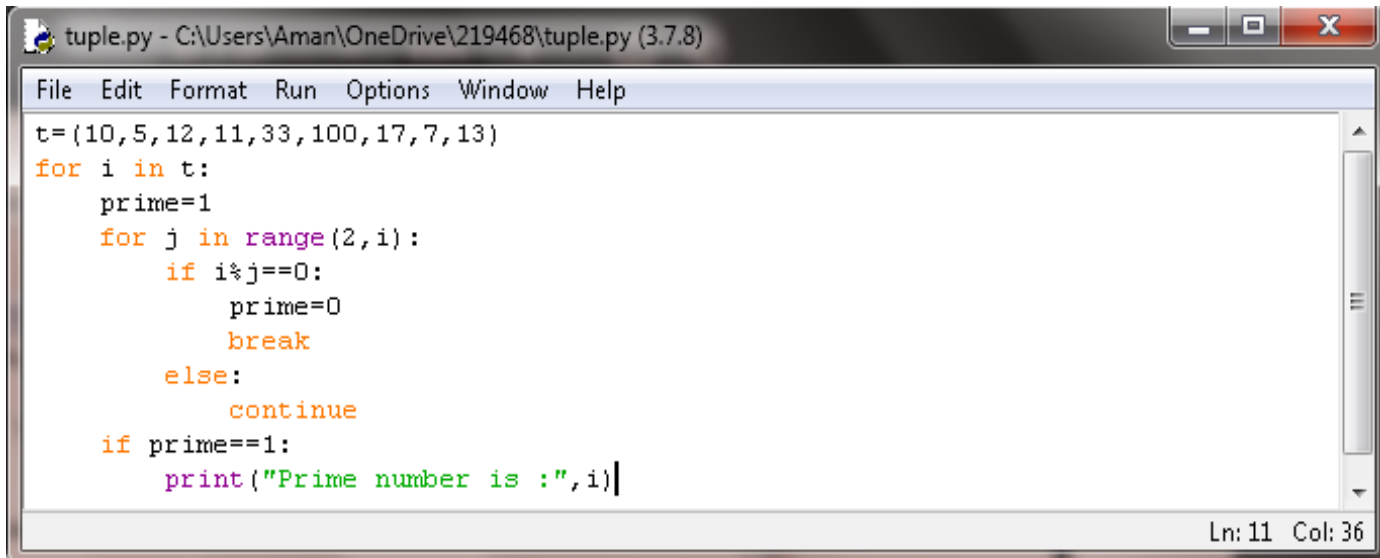


```
Python 3.7.8 Shell
File Edit Shell Debug Options Window Help
Python 3.7.8 (tags/v3.7.8:4b47a5b6ba, Jun 28 2020, 07:55:33) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/Aman/OneDrive/219468/listarmstrongs.py =====
Enter the number of elements in the list :5
Enter the number of elements : 153
Enter the number of elements : 121
Enter the number of elements : 370
Enter the number of elements : 54
Enter the number of elements : 407
[153, 121, 370, 54, 407]
number is armstrong
number is not armstrong
number is armstrong
number is not armstrong
number is armstrong
>>>
```

Ln: 8 Col: 34

Q.5 Consider the Tuple t=(10,5,12,11,33,100,17,7,13).Write a python code to display all the prime numbers from the tuple t.

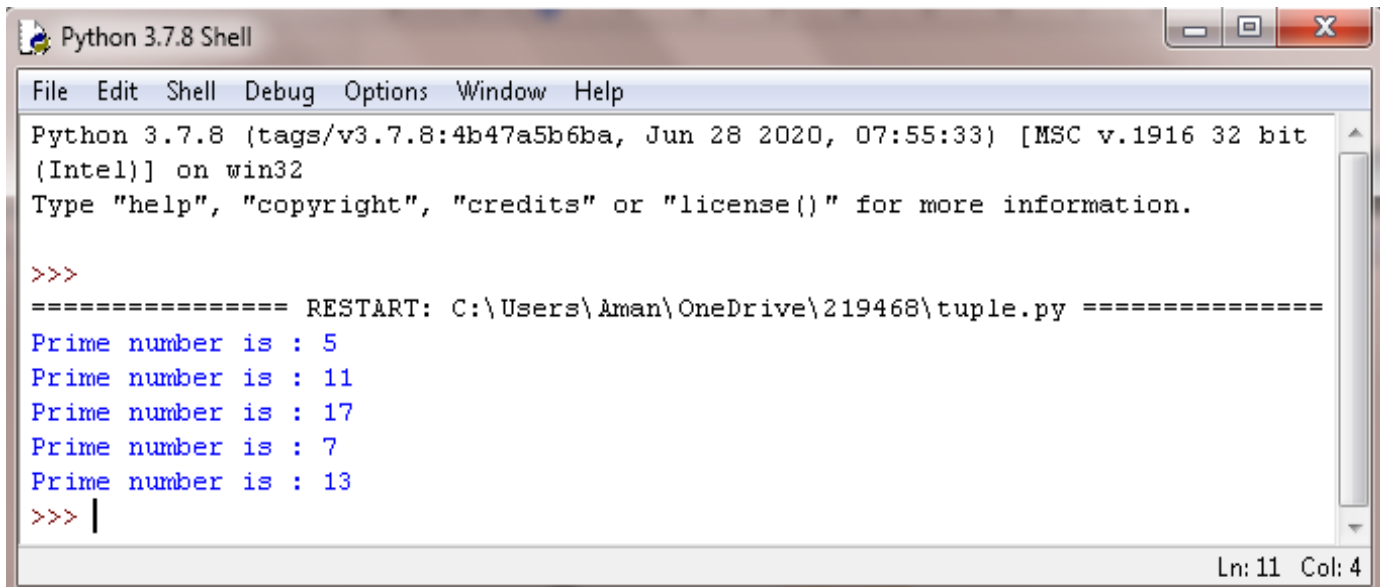
Code:

A screenshot of a Python IDE window titled 'tuple.py - C:\Users\Aman\OneDrive\219468\tuple.py (3.7.8)'. The window has a menu bar with 'File', 'Edit', 'Format', 'Run', 'Options', 'Window', and 'Help'. The code is as follows:

```
t=(10,5,12,11,33,100,17,7,13)
for i in t:
    prime=1
    for j in range(2,i):
        if i%j==0:
            prime=0
            break
        else:
            continue
    if prime==1:
        print("Prime number is :",i)
```

The status bar at the bottom right shows 'Ln: 11 Col: 36'.

Output:

A screenshot of a Python 3.7.8 Shell window titled 'Python 3.7.8 Shell'. The window has a menu bar with 'File', 'Edit', 'Shell', 'Debug', 'Options', 'Window', and 'Help'. The output is as follows:

```
Python 3.7.8 (tags/v3.7.8:4b47a5b6ba, Jun 28 2020, 07:55:33) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.

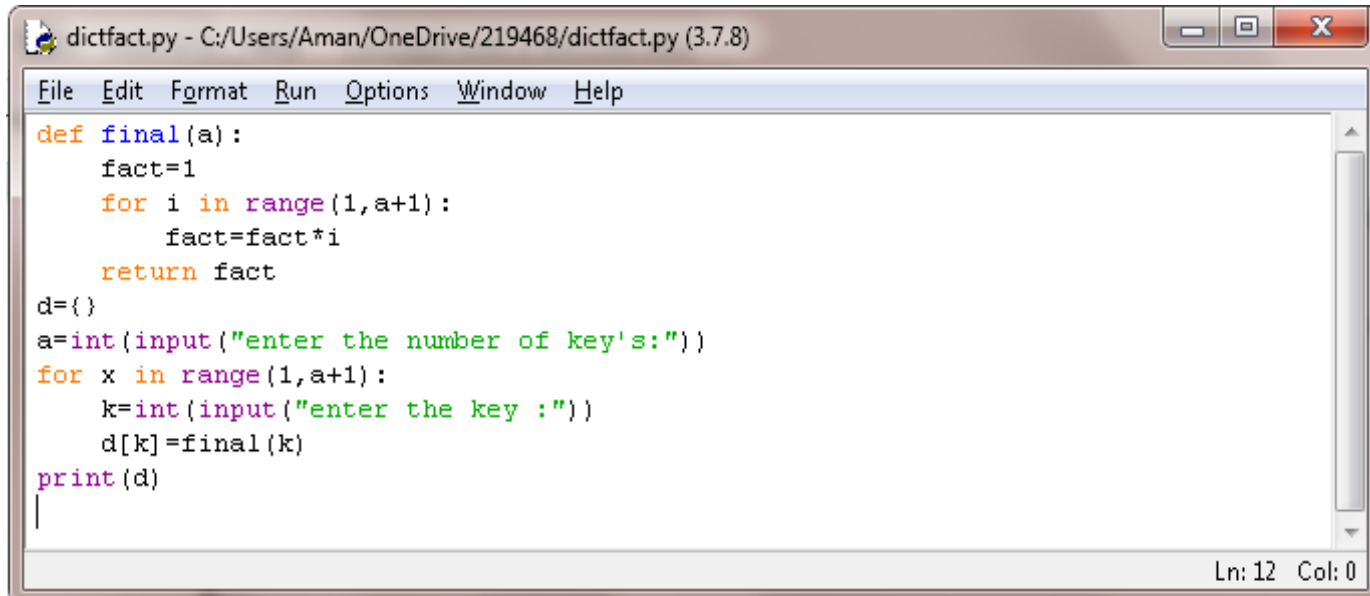
>>>
===== RESTART: C:\Users\Aman\OneDrive\219468\tuple.py =====
Prime number is : 5
Prime number is : 11
Prime number is : 17
Prime number is : 7
Prime number is : 13
>>> |
```

The status bar at the bottom right shows 'Ln: 11 Col: 4'.

Practical.no. 4

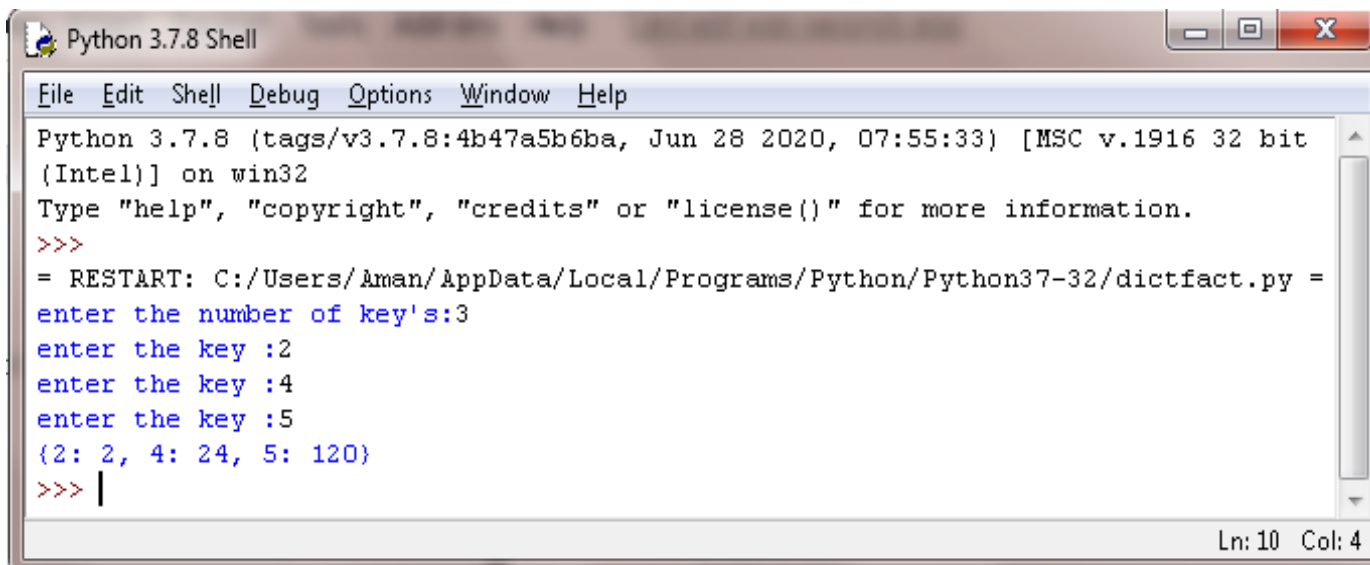
Q.1 Write a python script to create a dictionary where key will be number and the value will be factorial

Code:



```
dictfact.py - C:/Users/Aman/OneDrive/219468/dictfact.py (3.7.8)
File Edit Format Run Options Window Help
def final(a):
    fact=1
    for i in range(1,a+1):
        fact=fact*i
    return fact
d={}
a=int(input("enter the number of key's:"))
for x in range(1,a+1):
    k=int(input("enter the key :"))
    d[k]=final(k)
print(d)
|
Ln: 12 Col: 0
```

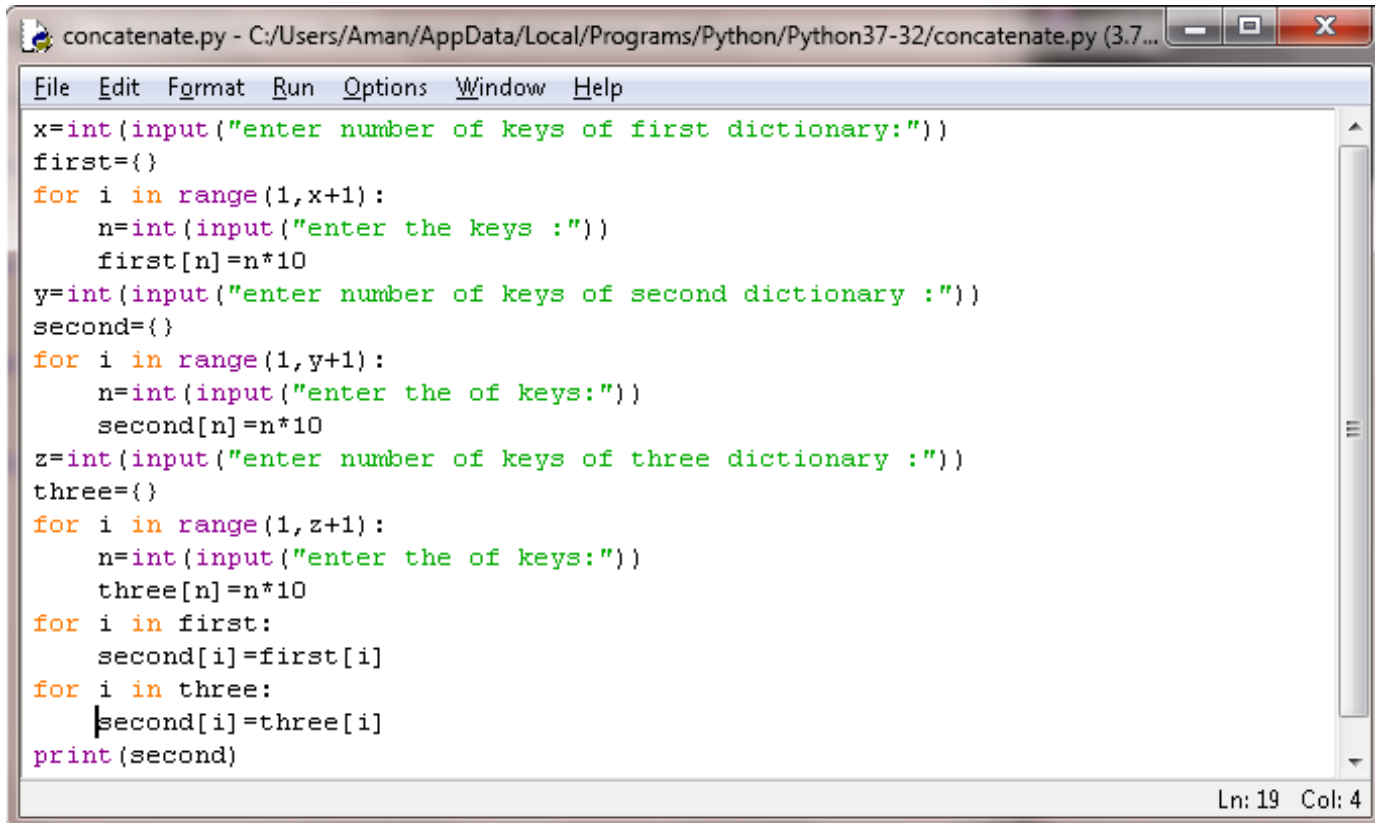
Output:



```
Python 3.7.8 Shell
File Edit Shell Debug Options Window Help
Python 3.7.8 (tags/v3.7.8:4b47a5b6ba, Jun 28 2020, 07:55:33) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/Aman/AppData/Local/Programs/Python/Python37-32/dictfact.py =
enter the number of key's:3
enter the key :2
enter the key :4
enter the key :5
{2: 2, 4: 24, 5: 120}
>>> |
Ln: 10 Col: 4
```

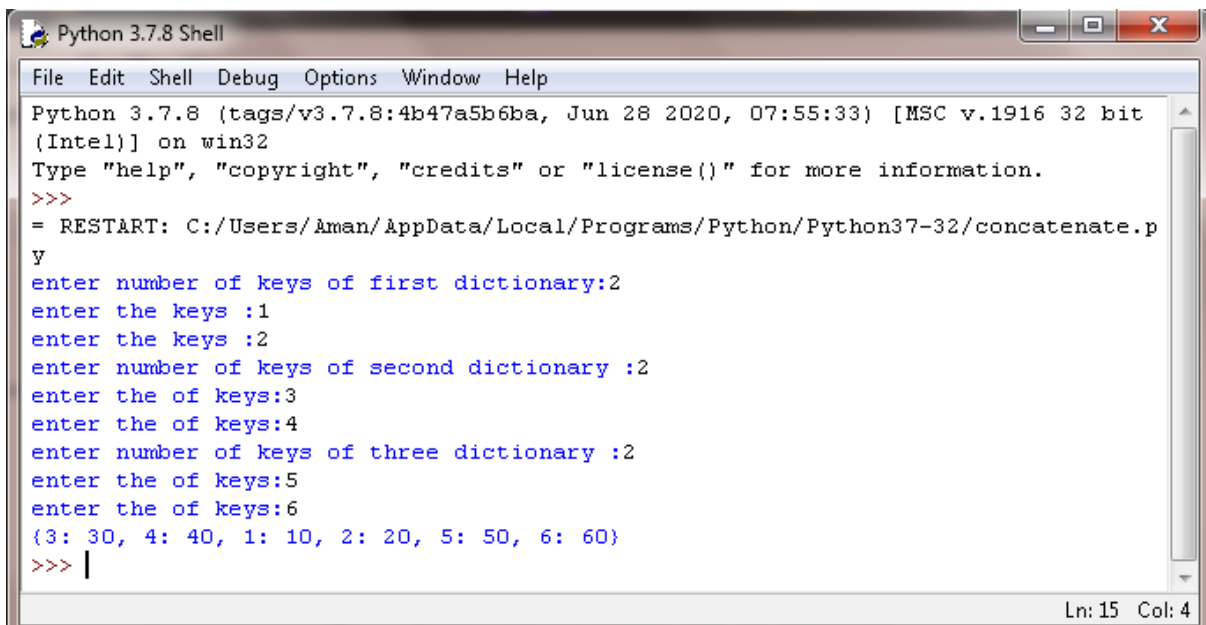
Q.2 Write a Python script to concatenate following dictionaries to create a new one. For Example: dic1={1:10, 2:20} dic2={3:30, 4:40} dic3={5:50,6:60} Expected Result : {1: 10, 2: 20, 3: 30, 4: 40, 5: 50, 6: 60}

Code:



```
concatenate.py - C:/Users/Aman/AppData/Local/Programs/Python/Python37-32/concatenate.py (3.7...  
File Edit Format Run Options Window Help  
x=int(input("enter number of keys of first dictionary:"))  
first={}  
for i in range(1,x+1):  
    n=int(input("enter the keys :"))  
    first[n]=n*10  
y=int(input("enter number of keys of second dictionary :"))  
second={}  
for i in range(1,y+1):  
    n=int(input("enter the of keys:"))  
    second[n]=n*10  
z=int(input("enter number of keys of three dictionary :"))  
three={}  
for i in range(1,z+1):  
    n=int(input("enter the of keys:"))  
    three[n]=n*10  
for i in first:  
    second[i]=first[i]  
for i in three:  
    second[i]=three[i]  
print(second)  
Ln: 19 Col: 4
```

Output:

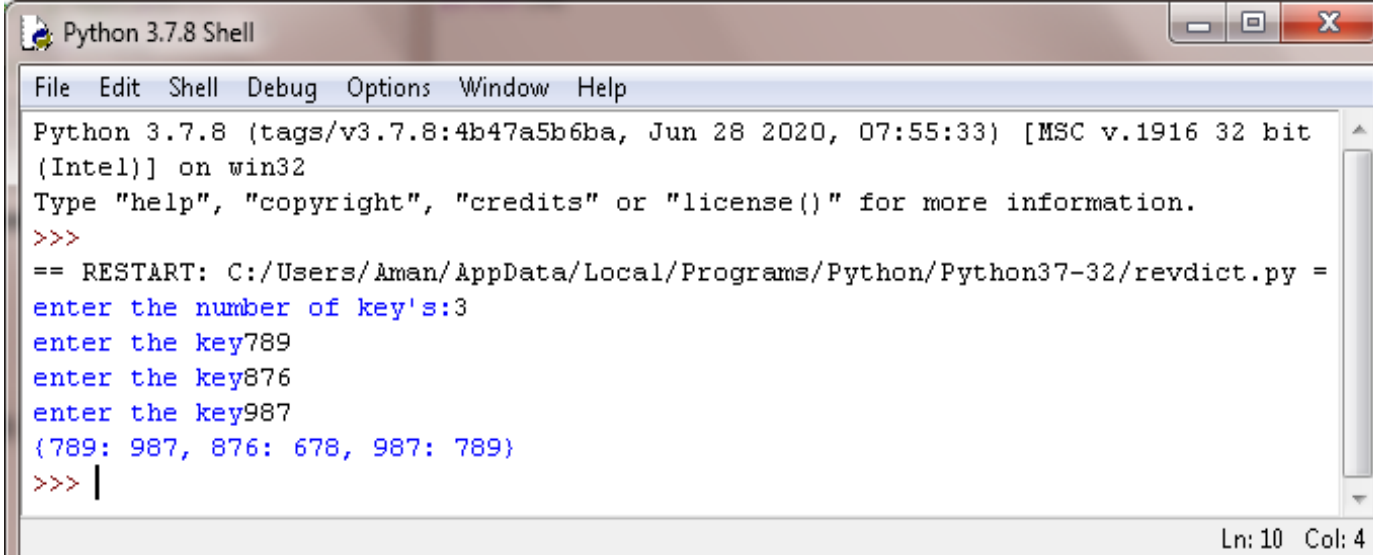


```
Python 3.7.8 Shell  
File Edit Shell Debug Options Window Help  
Python 3.7.8 (tags/v3.7.8:4b47a5b6ba, Jun 28 2020, 07:55:33) [MSC v.1916 32 bit  
(Intel)] on win32  
Type "help", "copyright", "credits" or "license()" for more information.  
>>>  
= RESTART: C:/Users/Aman/AppData/Local/Programs/Python/Python37-32/concatenate.p  
y  
enter number of keys of first dictionary:2  
enter the keys :1  
enter the keys :2  
enter number of keys of second dictionary :2  
enter the of keys:3  
enter the of keys:4  
enter number of keys of three dictionary :2  
enter the of keys:5  
enter the of keys:6  
{3: 30, 4: 40, 1: 10, 2: 20, 5: 50, 6: 60}  
>>> |  
Ln: 15 Col: 4
```

Q.3 Write a python script to create a dictionary where key will be numbers and value will be its reverse of that number. For Example:

dic1={123:321,89:98,236:632}

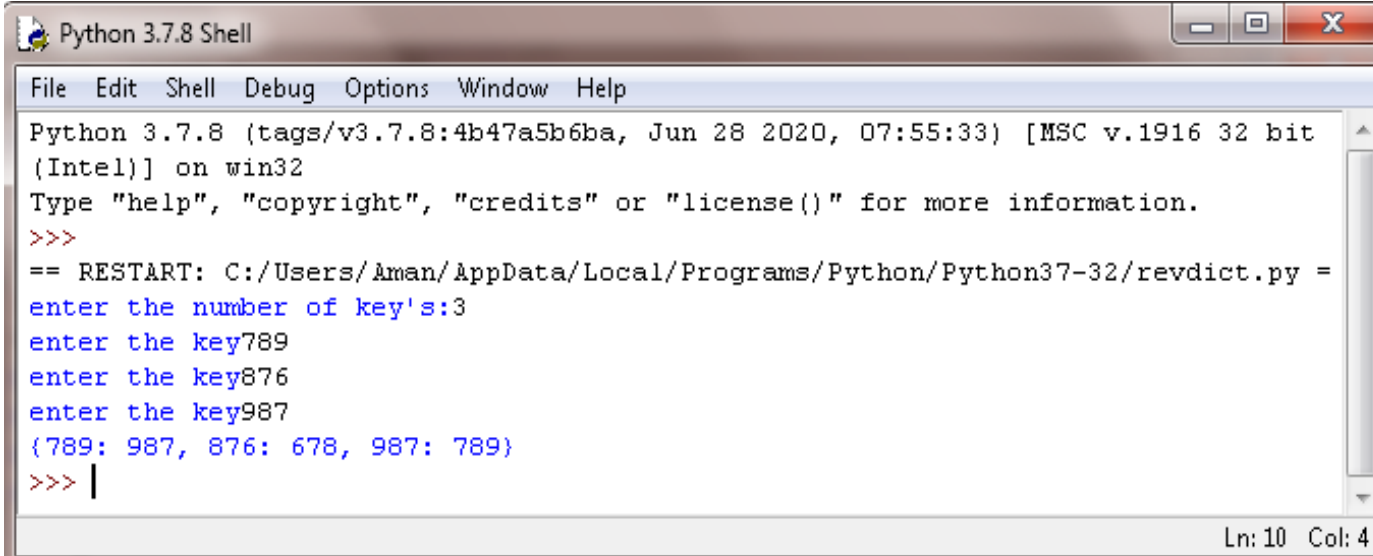
Code:



```
Python 3.7.8 Shell
File Edit Shell Debug Options Window Help
Python 3.7.8 (tags/v3.7.8:4b47a5b6ba, Jun 28 2020, 07:55:33) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
== RESTART: C:/Users/Aman/AppData/Local/Programs/Python/Python37-32/revdict.py =
enter the number of key's:3
enter the key789
enter the key876
enter the key987
{789: 987, 876: 678, 987: 789}
>>> |
```

Ln: 10 Col: 4

Output:

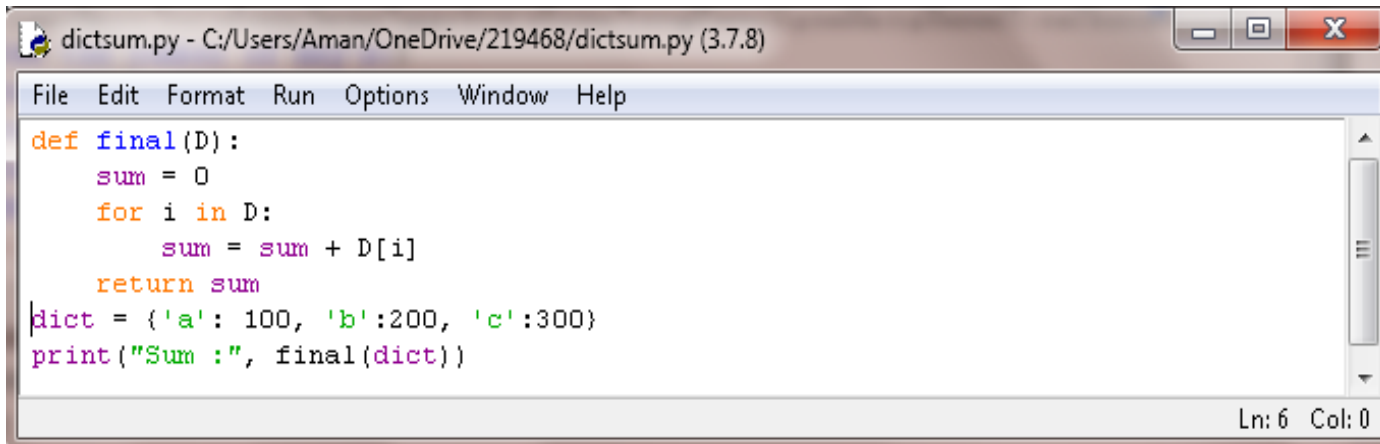


```
Python 3.7.8 Shell
File Edit Shell Debug Options Window Help
Python 3.7.8 (tags/v3.7.8:4b47a5b6ba, Jun 28 2020, 07:55:33) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
== RESTART: C:/Users/Aman/AppData/Local/Programs/Python/Python37-32/revdict.py =
enter the number of key's:3
enter the key789
enter the key876
enter the key987
{789: 987, 876: 678, 987: 789}
>>> |
```

Ln: 10 Col: 4

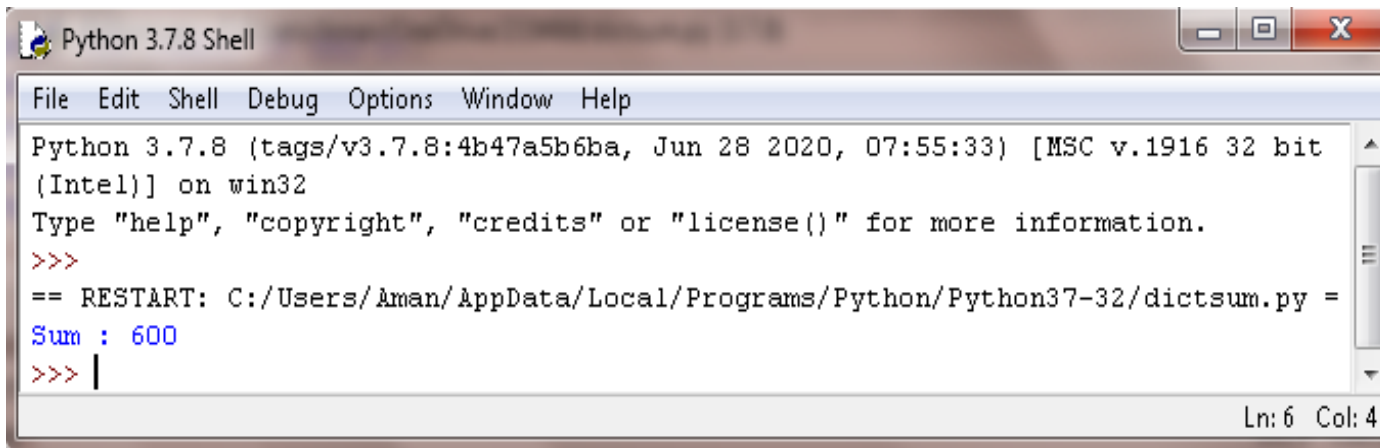
Q4 Write a Python program to sum all the items in a dictionary.

Code:



```
dictsum.py - C:/Users/Aman/OneDrive/219468/dictsum.py (3.7.8)
File Edit Format Run Options Window Help
def final(D):
    sum = 0
    for i in D:
        sum = sum + D[i]
    return sum
dict = {'a': 100, 'b':200, 'c':300}
print("Sum :", final(dict))
Ln: 6 Col: 0
```

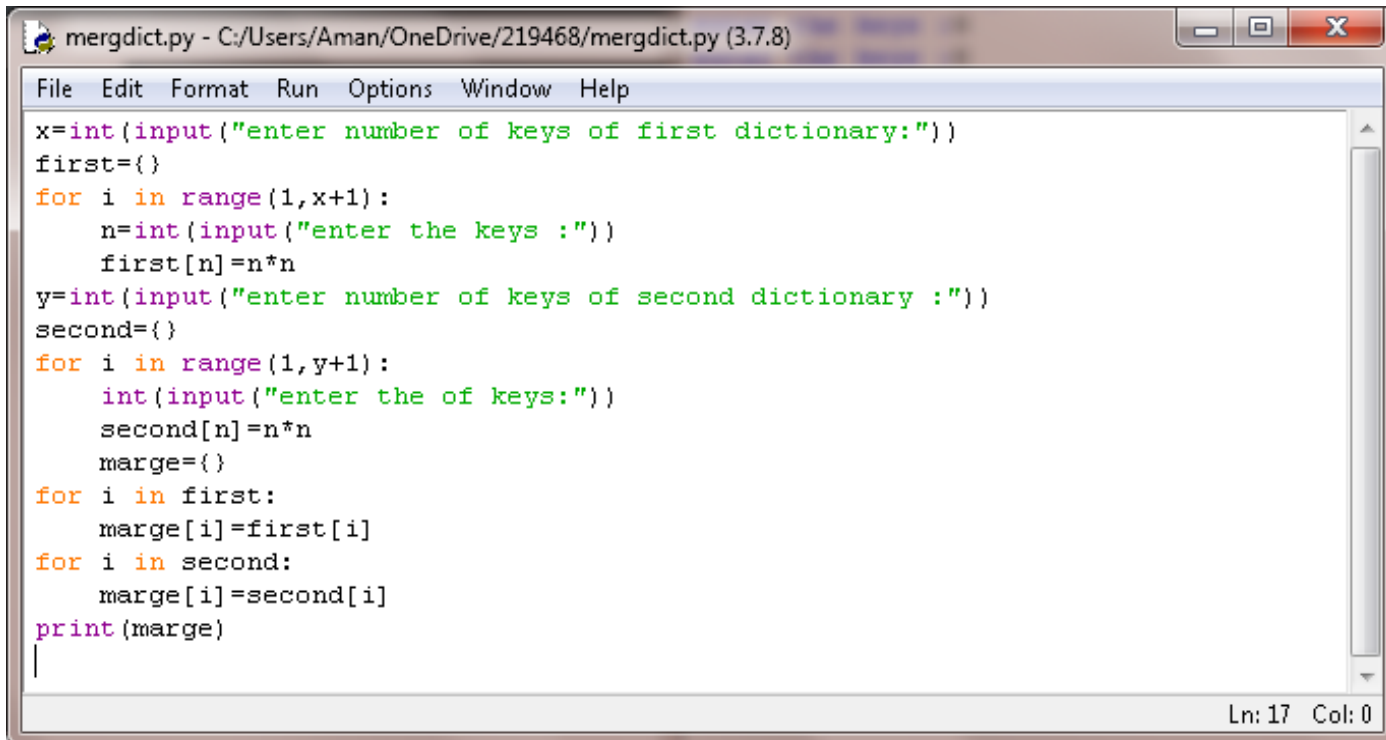
Output:



```
Python 3.7.8 Shell
File Edit Shell Debug Options Window Help
Python 3.7.8 (tags/v3.7.8:4b47a5b6ba, Jun 28 2020, 07:55:33) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
== RESTART: C:/Users/Aman/AppData/Local/Programs/Python/Python37-32/dictsum.py =
Sum : 600
>>> |
Ln: 6 Col: 4
```

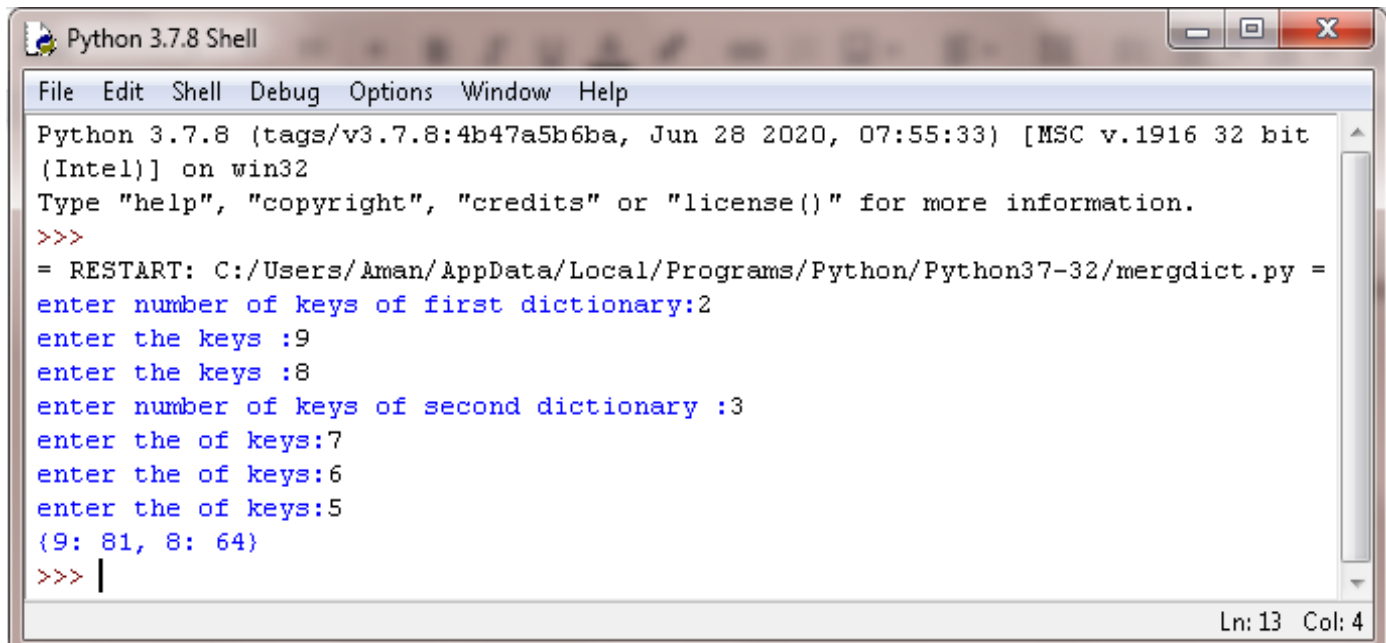
Q.5 Write a Python script to merge two Python dictionaries

Code:



```
mergdict.py - C:/Users/Aman/OneDrive/219468/mergdict.py (3.7.8)
File Edit Format Run Options Window Help
x=int(input("enter number of keys of first dictionary:"))
first={}
for i in range(1,x+1):
    n=int(input("enter the keys :"))
    first[n]=n*n
y=int(input("enter number of keys of second dictionary :"))
second={}
for i in range(1,y+1):
    int(input("enter the of keys:"))
    second[n]=n*n
marge={}
for i in first:
    marge[i]=first[i]
for i in second:
    marge[i]=second[i]
print(marge)
|
Ln: 17 Col: 0
```

Output:

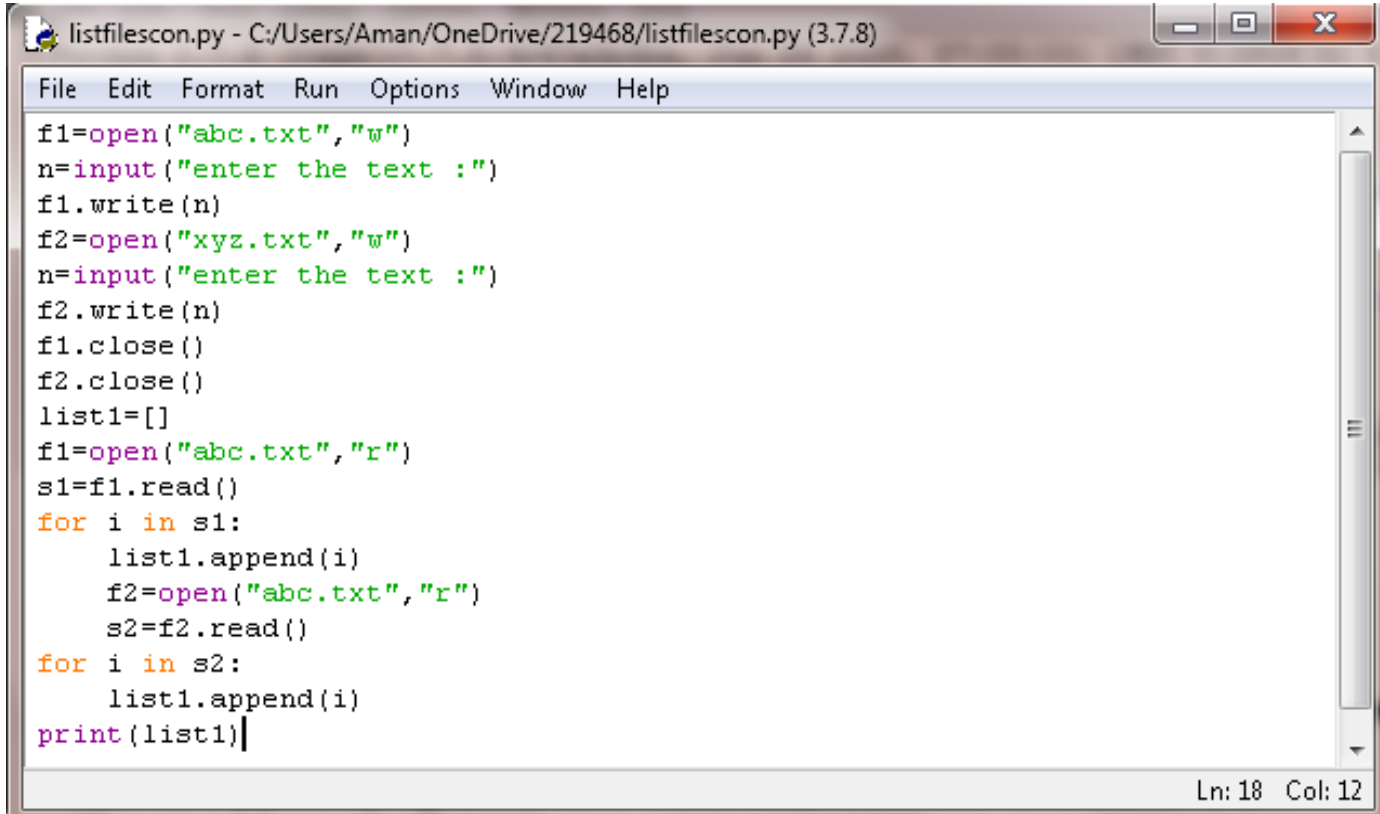


```
Python 3.7.8 Shell
File Edit Shell Debug Options Window Help
Python 3.7.8 (tags/v3.7.8:4b47a5b6ba, Jun 28 2020, 07:55:33) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/Aman/AppData/Local/Programs/Python/Python37-32/mergdict.py =
enter number of keys of first dictionary:2
enter the keys :9
enter the keys :8
enter number of keys of second dictionary :3
enter the of keys:7
enter the of keys:6
enter the of keys:5
{9: 81, 8: 64}
>>> |
Ln: 13 Col: 4
```

Practical no :5

Q1 Write a python program to combine the content of two file and store it in a single list and display it in that list.

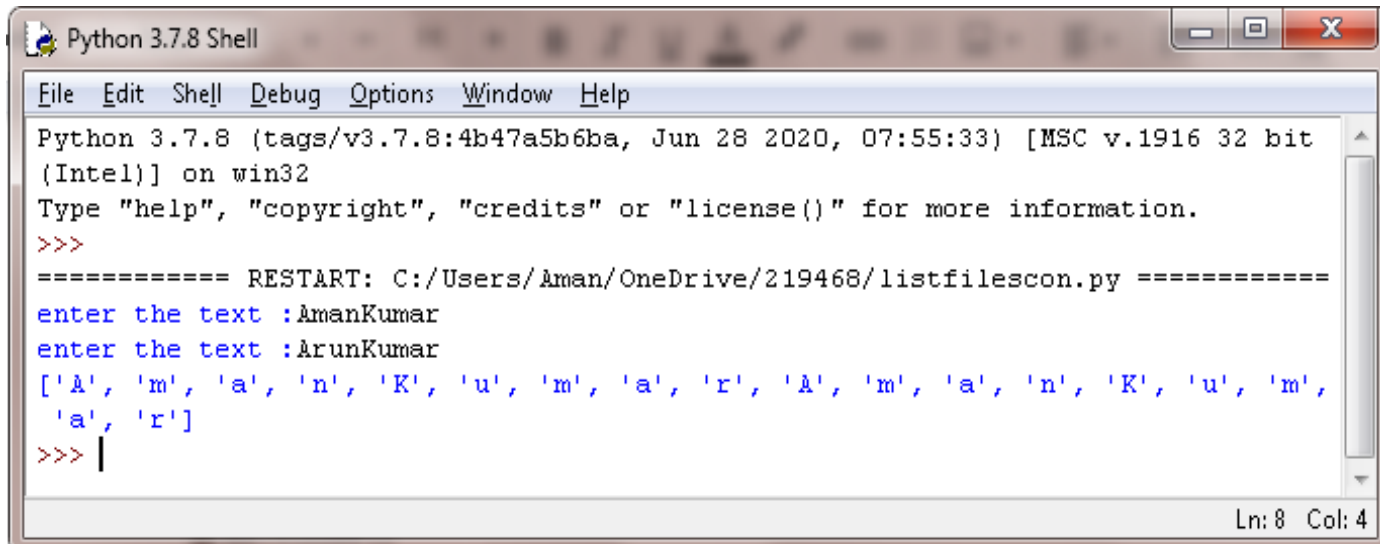
Code:



```
File Edit Format Run Options Window Help
f1=open("abc.txt","w")
n=input("enter the text :")
f1.write(n)
f2=open("xyz.txt","w")
n=input("enter the text :")
f2.write(n)
f1.close()
f2.close()
list1=[]
f1=open("abc.txt","r")
s1=f1.read()
for i in s1:
    list1.append(i)
f2=open("abc.txt","r")
s2=f2.read()
for i in s2:
    list1.append(i)
print(list1)
```

Ln: 18 Col: 12

Output:

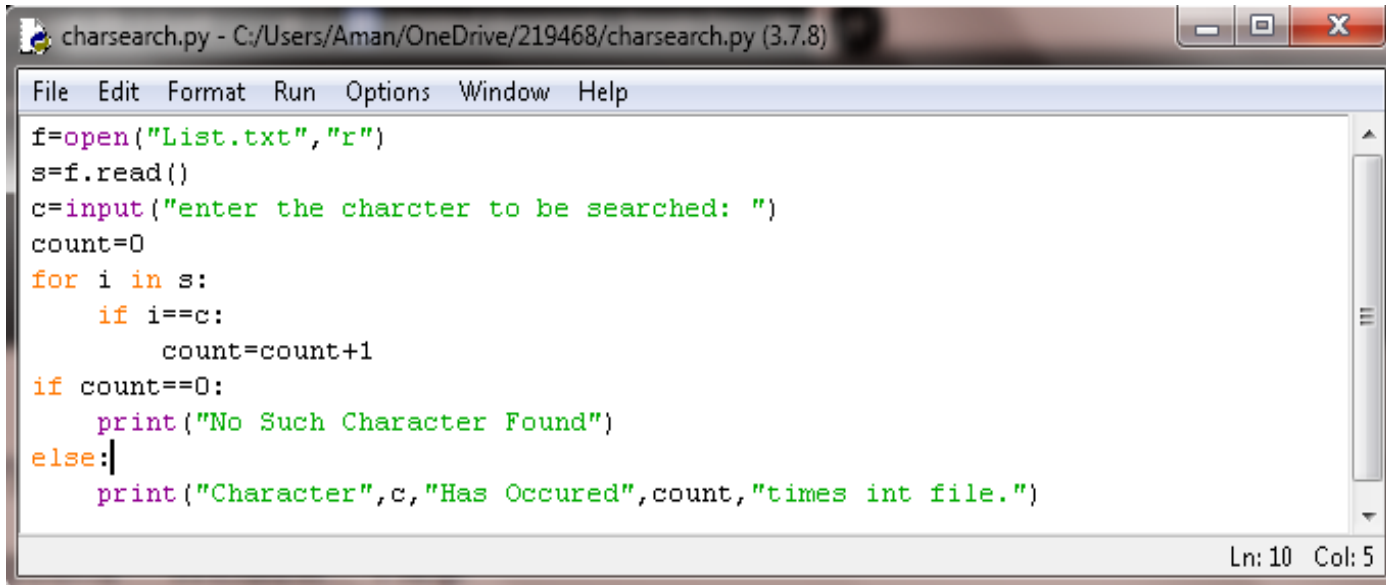


```
Python 3.7.8 Shell
File Edit Shell Debug Options Window Help
Python 3.7.8 (tags/v3.7.8:4b47a5b6ba, Jun 28 2020, 07:55:33) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/Aman/OneDrive/219468/listfilescon.py =====
enter the text :AmanKumar
enter the text :ArunKumar
['A', 'm', 'a', 'n', 'K', 'u', 'm', 'a', 'r', 'A', 'r', 'u', 'n', 'K', 'u', 'm',
'a', 'r']
>>> |
```

Ln: 8 Col: 4

2)write a python program to take a character from user and search that character in the file. If the character is present then print total count of that character in the filr or display the message “no such character”.

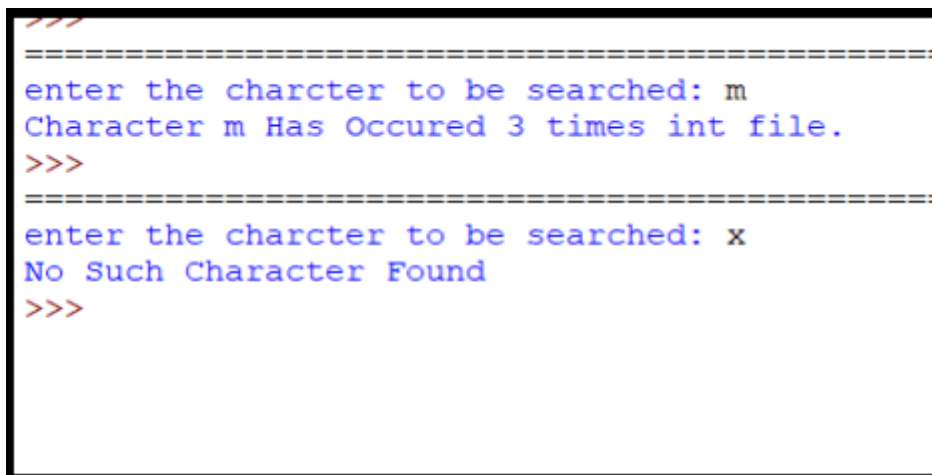
Code:

A screenshot of a Python IDE window titled 'charsearch.py - C:/Users/Aman/OneDrive/219468/charsearch.py (3.7.8)'. The window has a menu bar with 'File', 'Edit', 'Format', 'Run', 'Options', 'Window', and 'Help'. The code is as follows:

```
f=open("List.txt","r")
s=f.read()
c=input("enter the charcter to be searched: ")
count=0
for i in s:
    if i==c:
        count=count+1
if count==0:
    print("No Such Character Found")
else:|
    print("Character",c,"Has Occured",count,"times int file.")
```

The status bar at the bottom right shows 'Ln: 10 Col: 5'.

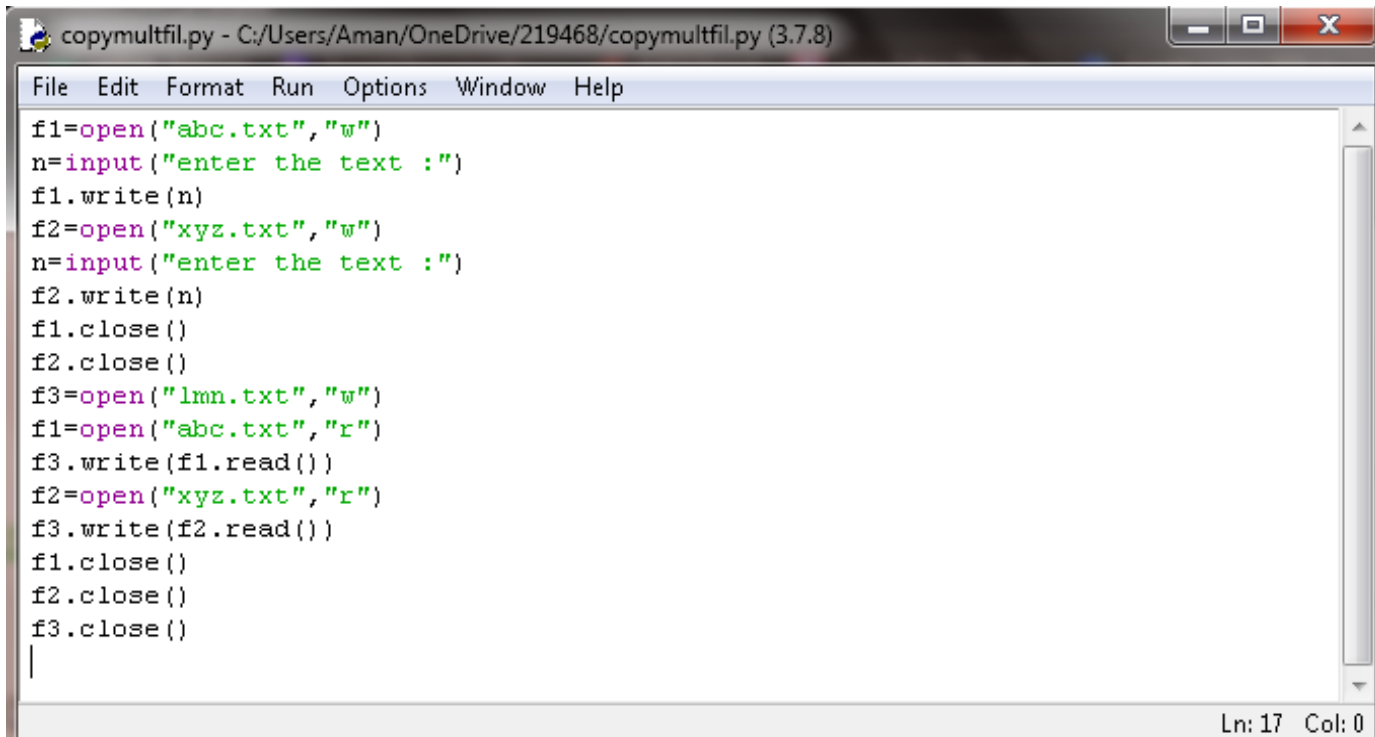
Output:

A screenshot of the program's output, showing two test cases separated by dashed lines. The first test case shows the user inputting 'm' and the output 'Character m Has Occured 3 times int file.'. The second test case shows the user inputting 'x' and the output 'No Such Character Found'. The prompt '>>>' is visible at the start of each input line.

```
>>>
=====
enter the charcter to be searched: m
Character m Has Occured 3 times int file.
>>>
=====
enter the charcter to be searched: x
No Such Character Found
>>>
```

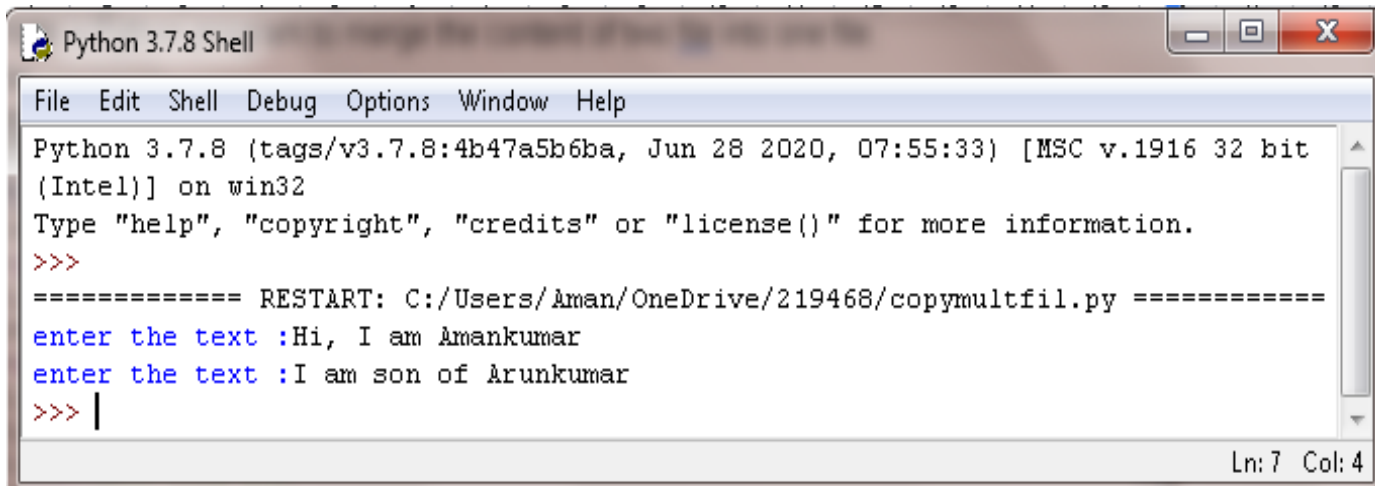
3. Write a Python program to merge the content of two file into one file.

Code:



```
copymultfil.py - C:/Users/Aman/OneDrive/219468/copymultfil.py (3.7.8)
File Edit Format Run Options Window Help
f1=open("abc.txt","w")
n=input("enter the text :")
f1.write(n)
f2=open("xyz.txt","w")
n=input("enter the text :")
f2.write(n)
f1.close()
f2.close()
f3=open("lmn.txt","w")
f1=open("abc.txt","r")
f3.write(f1.read())
f2=open("xyz.txt","r")
f3.write(f2.read())
f1.close()
f2.close()
f3.close()
|
Ln: 17 Col: 0
```

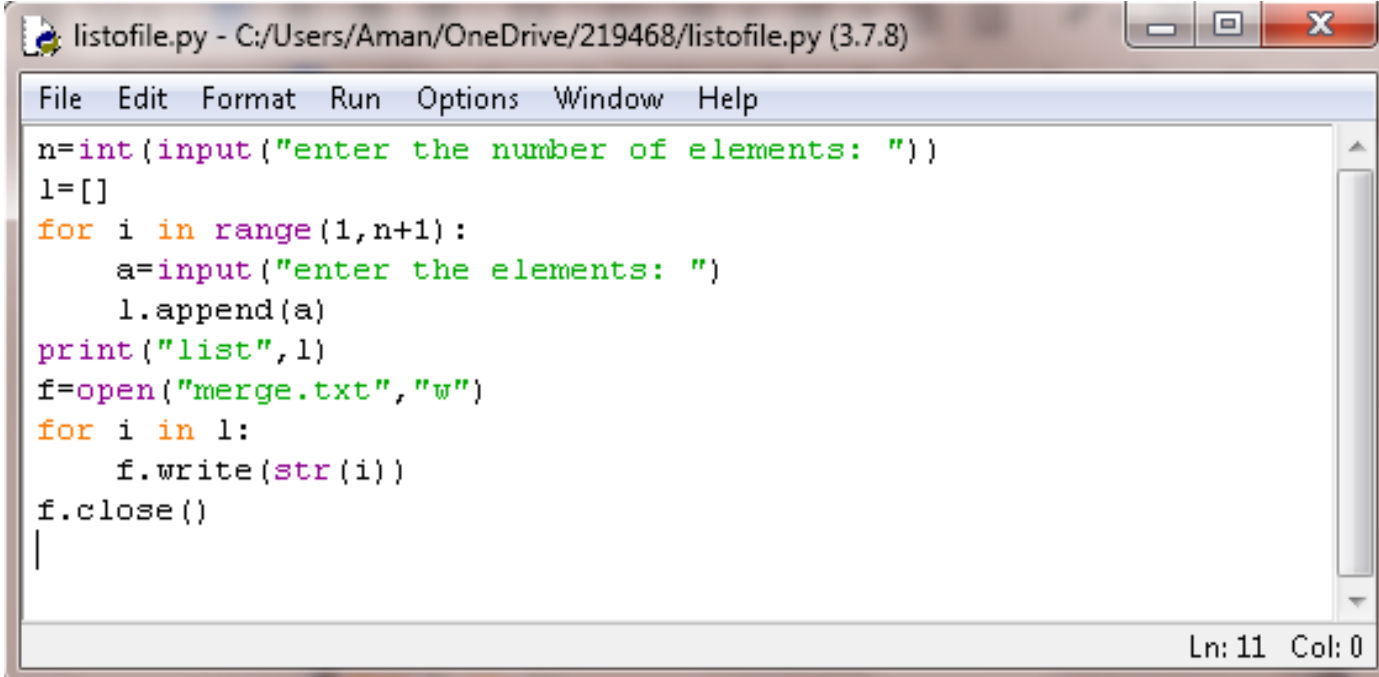
Output:



```
Python 3.7.8 Shell
File Edit Shell Debug Options Window Help
Python 3.7.8 (tags/v3.7.8:4b47a5b6ba, Jun 28 2020, 07:55:33) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/Aman/OneDrive/219468/copymultfil.py =====
enter the text :Hi, I am Amankumar
enter the text :I am son of Arunkumar
>>> |
Ln: 7 Col: 4
```

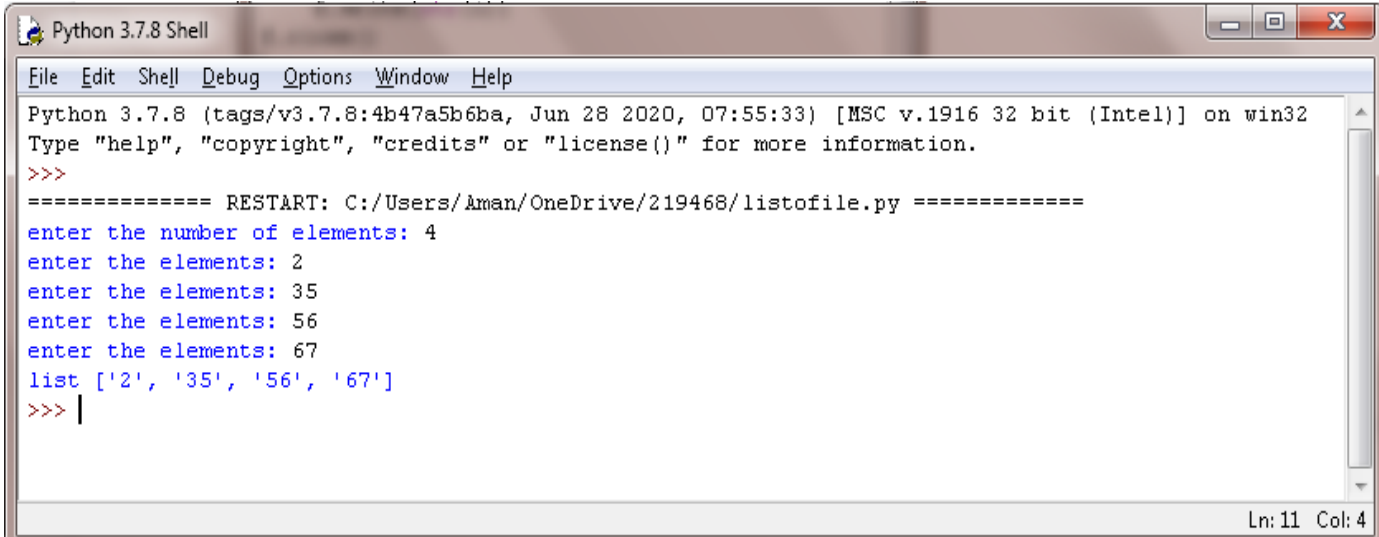
4)write a python program to copy the elements of a list into the file.

Code:



```
listofile.py - C:/Users/Aman/OneDrive/219468/listofile.py (3.7.8)
File Edit Format Run Options Window Help
n=int(input("enter the number of elements: "))
l=[]
for i in range(1,n+1):
    a=input("enter the elements: ")
    l.append(a)
print("list",l)
f=open("merge.txt","w")
for i in l:
    f.write(str(i))
f.close()
|
Ln: 11 Col: 0
```

Output:

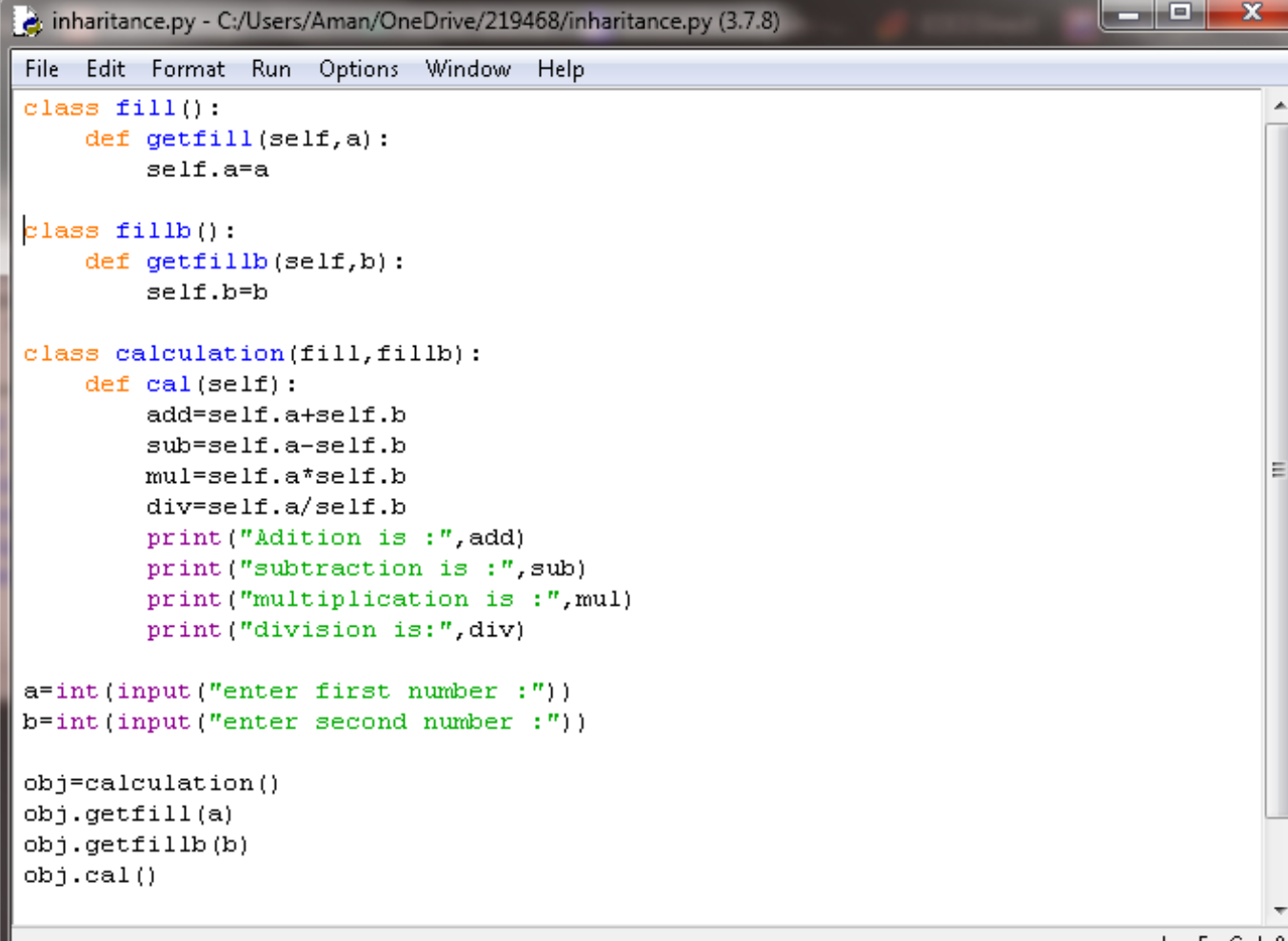


```
Python 3.7.8 Shell
File Edit Shell Debug Options Window Help
Python 3.7.8 (tags/v3.7.8:4b47a5b6ba, Jun 28 2020, 07:55:33) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/Aman/OneDrive/219468/listofile.py =====
enter the number of elements: 4
enter the elements: 2
enter the elements: 35
enter the elements: 56
enter the elements: 67
list ['2', '35', '56', '67']
>>> |
Ln: 11 Col: 4
```

Practical no 6

1.Implement the concept of multiple inheritance using python.

Code:



```
inharitance.py - C:/Users/Aman/OneDrive/219468/inharitance.py (3.7.8)
File Edit Format Run Options Window Help

class fill():
    def getfill(self,a):
        self.a=a

class fillb():
    def getfillb(self,b):
        self.b=b

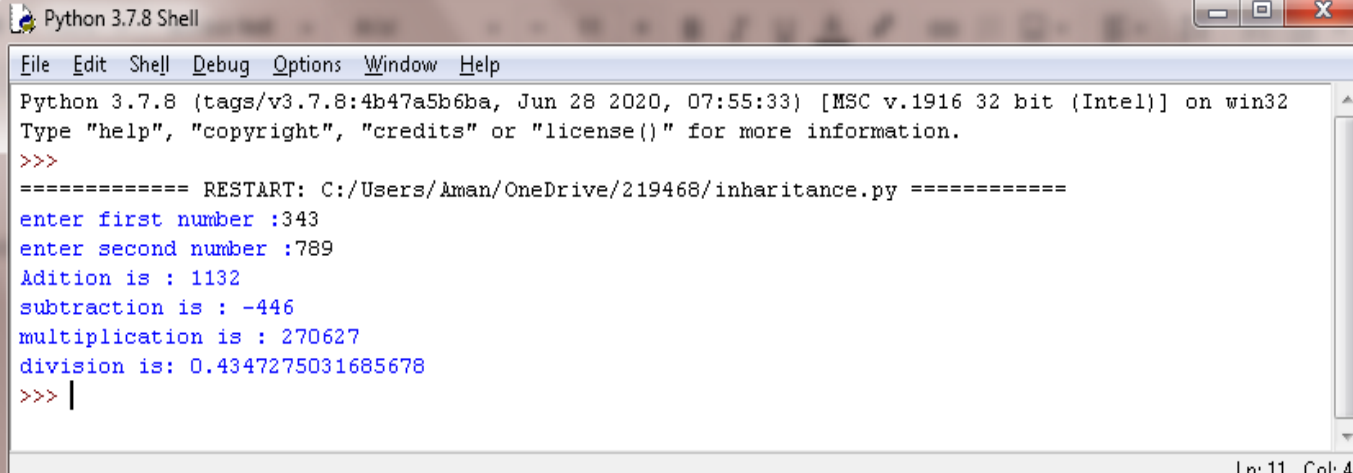
class calculation(fill,fillb):
    def cal(self):
        add=self.a+self.b
        sub=self.a-self.b
        mul=self.a*self.b
        div=self.a/self.b
        print("Addition is :",add)
        print("subtraction is :",sub)
        print("multiplication is :",mul)
        print("division is:",div)

a=int(input("enter first number :"))
b=int(input("enter second number :"))

obj=calculation()
obj.getfill(a)
obj.getfillb(b)
obj.cal()
```

Ln: 5 Col: 0

Output:



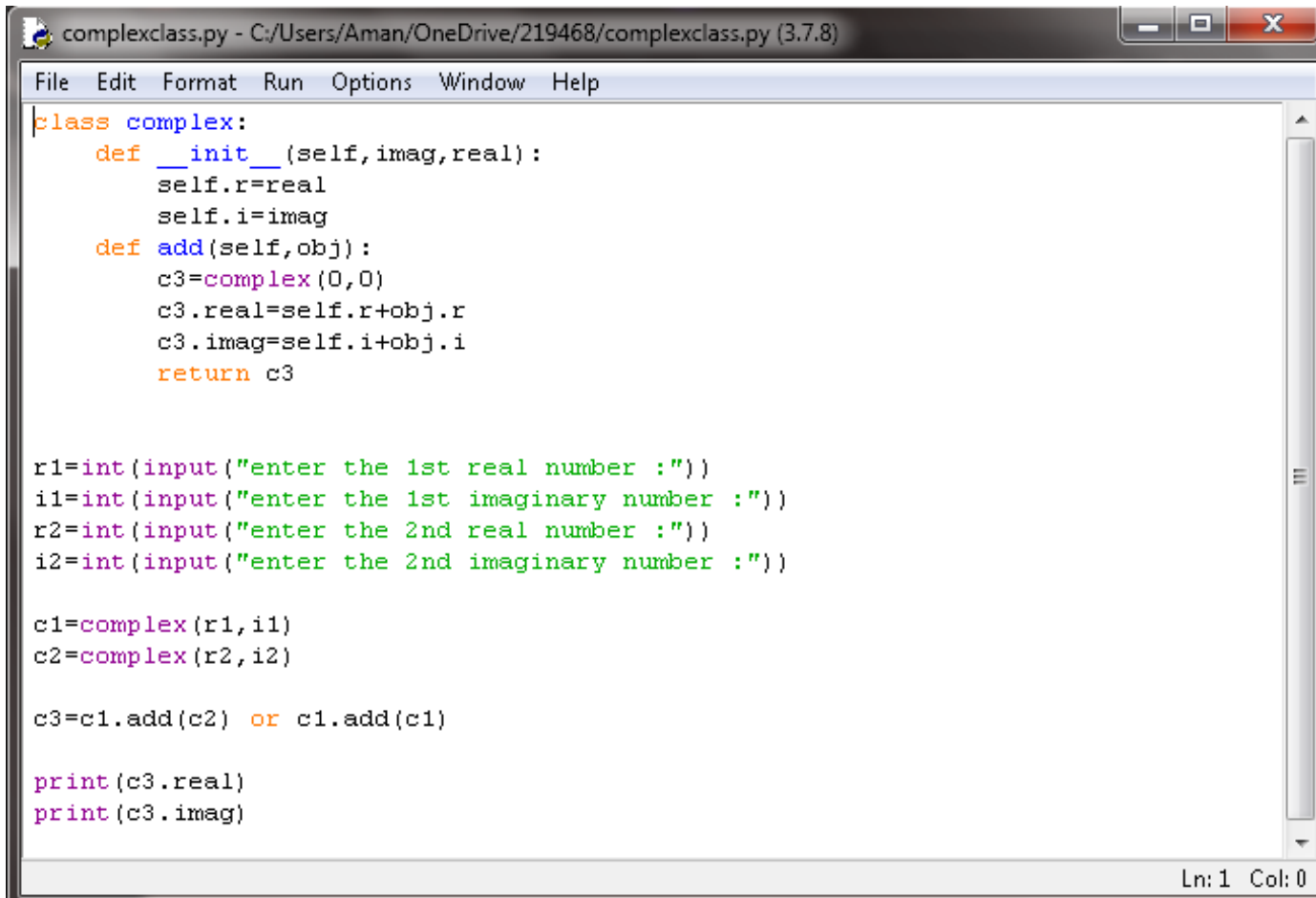
```
Python 3.7.8 Shell
File Edit Shell Debug Options Window Help

Python 3.7.8 (tags/v3.7.8:4b47a5b6ba, Jun 28 2020, 07:55:33) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/Aman/OneDrive/219468/inharitance.py =====
enter first number :343
enter second number :789
Addition is : 1132
subtraction is : -446
multiplication is : 270627
division is: 0.4347275031685678
>>> |
```

Ln: 11 Col: 4

2.Design a class complex for adding two complex numbers and also show the use of constructors.

Code:

A screenshot of a Python IDE window titled 'complexclass.py - C:/Users/Aman/OneDrive/219468/complexclass.py (3.7.8)'. The window has a menu bar with 'File', 'Edit', 'Format', 'Run', 'Options', 'Window', and 'Help'. The code is as follows:

```
class complex:
    def __init__(self,imag,real):
        self.r=real
        self.i=imag
    def add(self,obj):
        c3=complex(0,0)
        c3.real=self.r+obj.r
        c3.imag=self.i+obj.i
        return c3

r1=int(input("enter the 1st real number :"))
i1=int(input("enter the 1st imaginary number :"))
r2=int(input("enter the 2nd real number :"))
i2=int(input("enter the 2nd imaginary number :"))

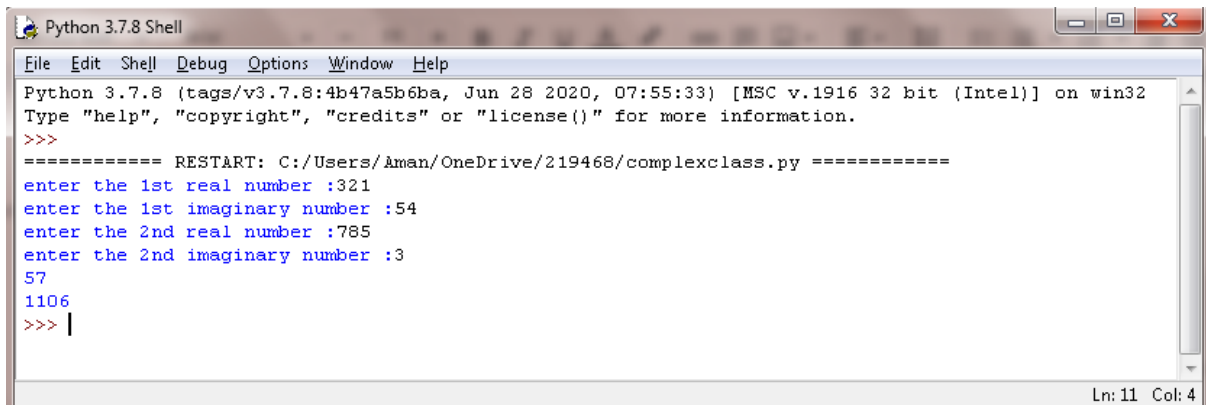
c1=complex(r1,i1)
c2=complex(r2,i2)

c3=c1.add(c2) or c1.add(c1)

print(c3.real)
print(c3.imag)
```

The status bar at the bottom right shows 'Ln: 1 Col: 0'.

Output:

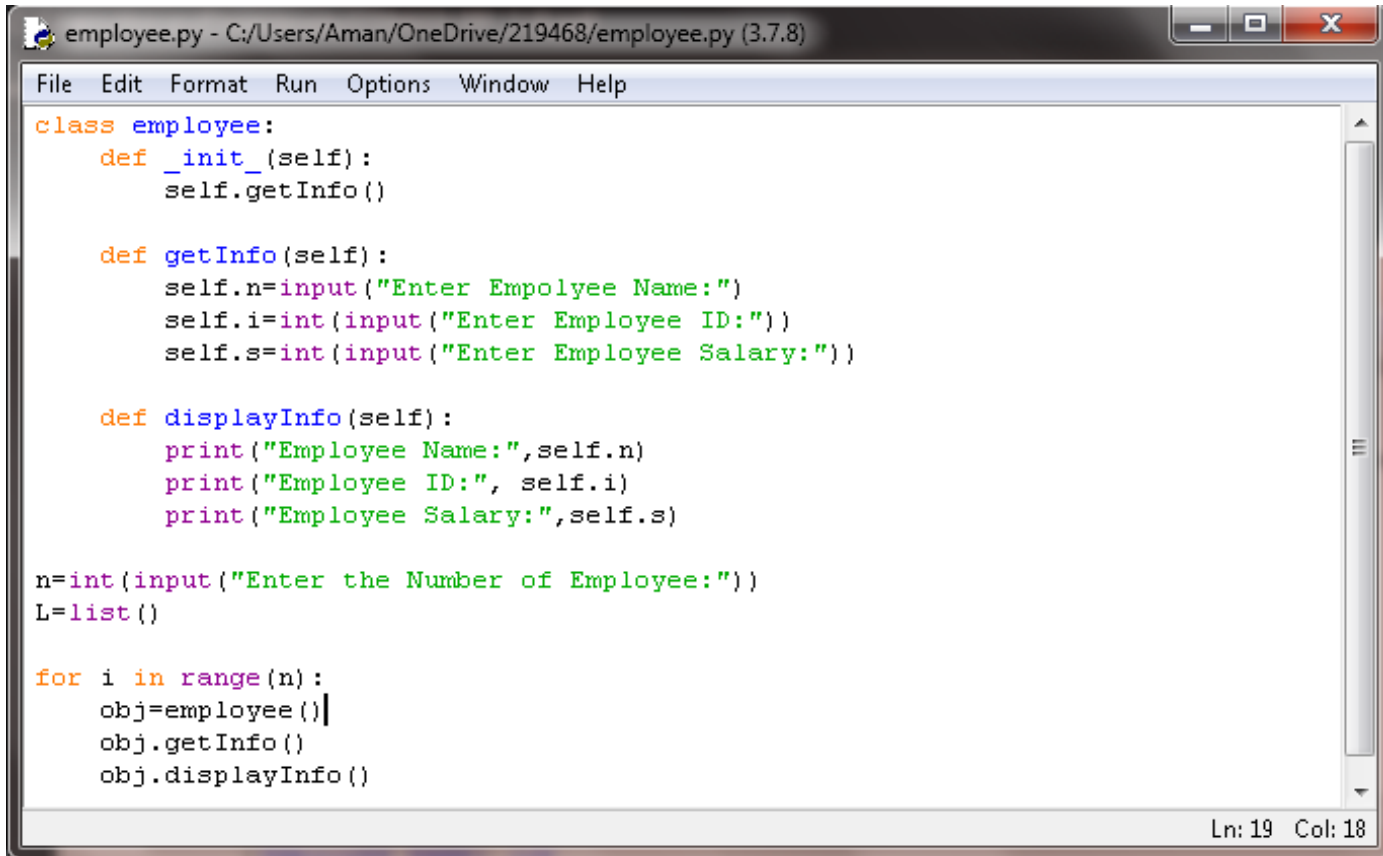
A screenshot of a Python 3.7.8 Shell window. The window has a menu bar with 'File', 'Edit', 'Shell', 'Debug', 'Options', 'Window', and 'Help'. The output is as follows:

```
Python 3.7.8 (tags/v3.7.8:4b47a5b6ba, Jun 28 2020, 07:55:33) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/Aman/OneDrive/219468/complexclass.py =====
enter the 1st real number :321
enter the 1st imaginary number :54
enter the 2nd real number :785
enter the 2nd imaginary number :3
57
1106
>>> |
```

The status bar at the bottom right shows 'Ln: 11 Col: 4'.

3.Design an employee class using Python for reading and displaying the employee information, The getInfo() and displayInfo() methods will be used respectively(use constructor).

Code:

A screenshot of a Python IDE window titled 'employee.py - C:/Users/Aman/OneDrive/219468/employee.py (3.7.8)'. The window has a menu bar with 'File', 'Edit', 'Format', 'Run', 'Options', 'Window', and 'Help'. The code is as follows:

```
class employee:
    def __init__(self):
        self.getInfo()

    def getInfo(self):
        self.n=input("Enter Empolyee Name:")
        self.i=int(input("Enter Employee ID:"))
        self.s=int(input("Enter Employee Salary:"))

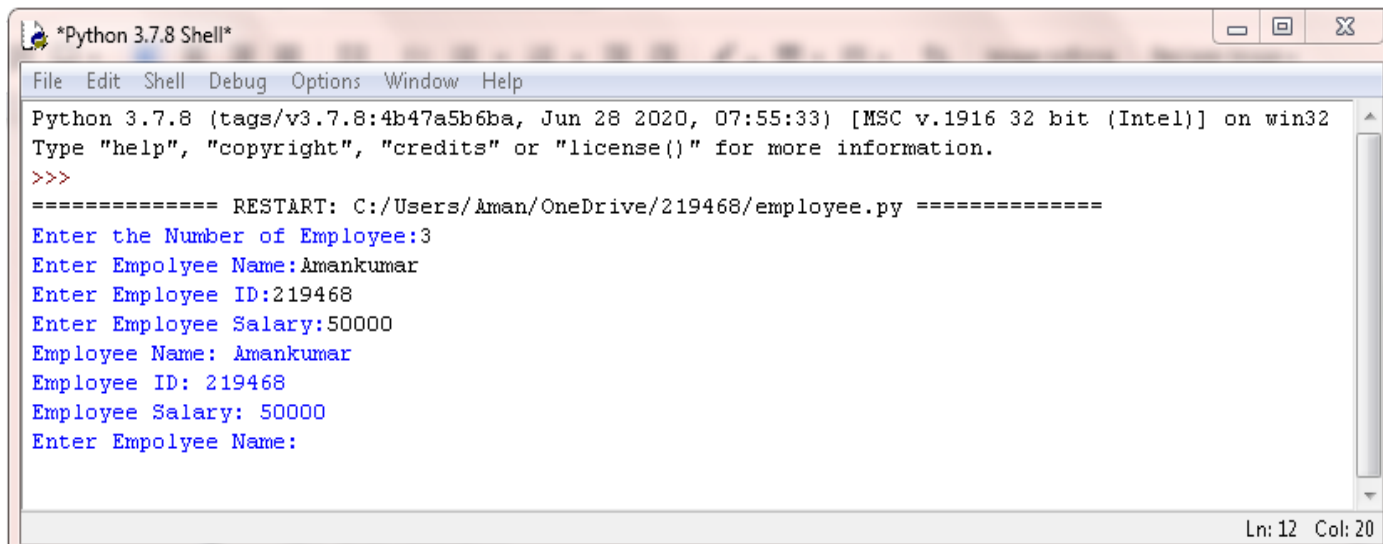
    def displayInfo(self):
        print("Employee Name:",self.n)
        print("Employee ID:", self.i)
        print("Employee Salary:",self.s)

n=int(input("Enter the Number of Employee:"))
L=list()

for i in range(n):
    obj=employee()
    obj.getInfo()
    obj.displayInfo()
```

The status bar at the bottom right shows 'Ln: 19 Col: 18'.

Output:

A screenshot of a Python 3.7.8 Shell window titled '*Python 3.7.8 Shell*'. The window has a menu bar with 'File', 'Edit', 'Shell', 'Debug', 'Options', 'Window', and 'Help'. The output is as follows:

```
Python 3.7.8 (tags/v3.7.8:4b47a5b6ba, Jun 28 2020, 07:55:33) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/Aman/OneDrive/219468/employee.py =====
Enter the Number of Employee:3
Enter Empolyee Name:Amankumar
Enter Employee ID:219468
Enter Employee Salary:50000
Employee Name: Amankumar
Employee ID: 219468
Employee Salary: 50000
Enter Empolyee Name:
```

The status bar at the bottom right shows 'Ln: 12 Col: 20'.

4.Design a class that store the information of student and display the same.

Code:

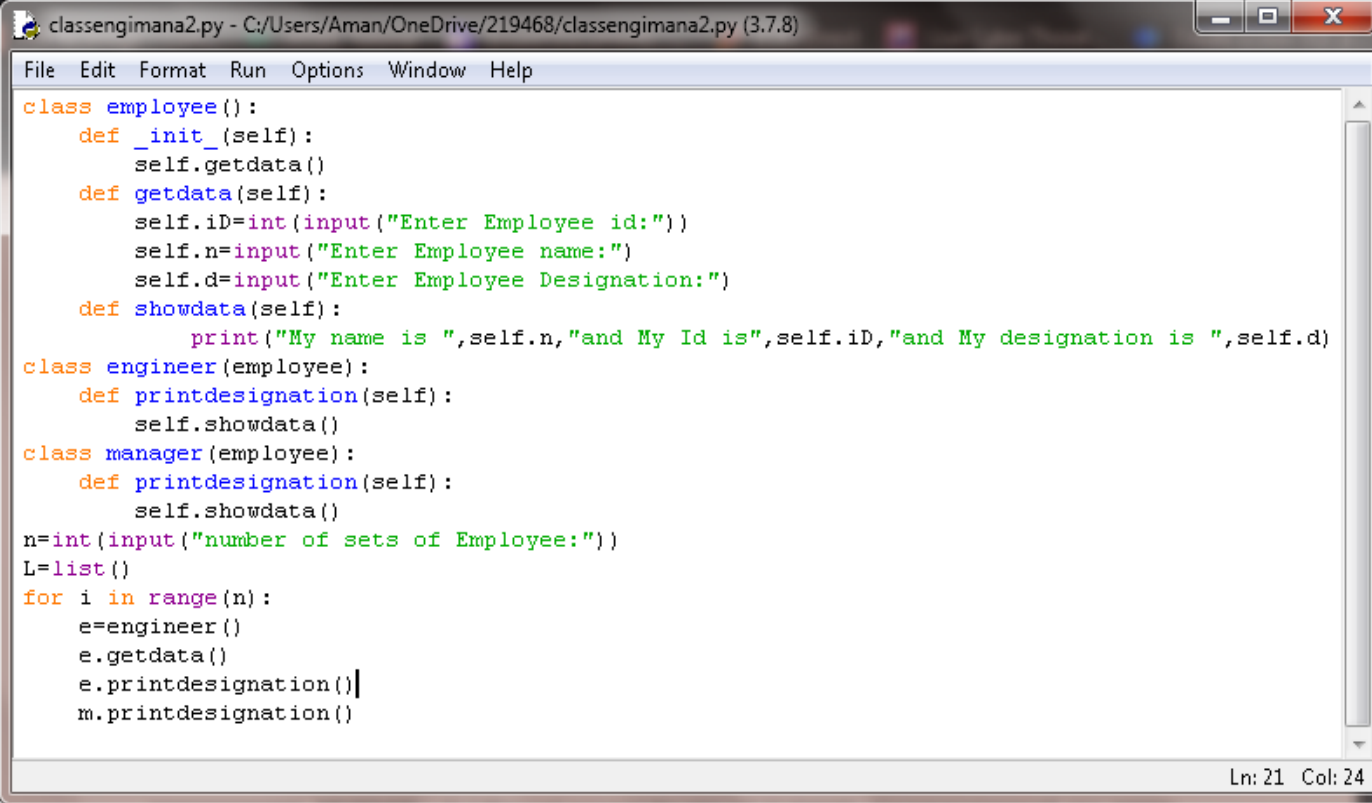
```
studentDetails.py - C:/Users/Aman/OneDrive/219468/studentDetails.py (3.7.8)
File Edit Format Run Options Window Help
class student:
    name=None
    roll=None
    Class=None
    def getInfo(self,roll,name,Class):
        self._roll=roll
        self._name=name
        self._Class=Class
    def displayInfo(self):
        print("Student Name:",self._name)
        print("Student Rollno:",self._roll)
        print("Student Class:",self._Class)
s=student()
n=int(input("Enter the Number of Student:"))
L=list()
for i in range(n):
    s.getInfo(
        name =input("Name:")
        ,roll=int(input("RollNo:"))
        ,Class=input("Class:"))
    s.displayInfo()
Ln: 23 Col: 0
```

```
Python 3.7.8 Shell
File Edit Shell Debug Options Window Help
Python 3.7.8 (tags/v3.7.8:4b47a5b6ba, Jun 28 2020, 07:55:33) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/Aman/OneDrive/219468/studentDetails.py =====
Enter the Number of Student:2
Name:Amankumar Yadav
RollNo:219468
Class:Bsc it(sy)
Student Name: Amankumar Yadav
Student Rollno: 219468
Student Class: Bsc it(sy)
Name:Arunkumar Yadav
RollNo:219465
Class:Bsc it(sy)
Student Name: Arunkumar Yadav
Student Rollno: 219465
Student Class: Bsc it(sy)
>>>
Ln: 18 Col: 4
```

Output:

5. Write a python program that defines a class employee. Define two subclass engineers and manager. Every class should have a method "print designation" that print designation of each employee.

Code:

A screenshot of a Python IDE window titled 'classengimana2.py - C:/Users/Aman/OneDrive/219468/classengimana2.py (3.7.8)'. The window contains a Python script with the following code:

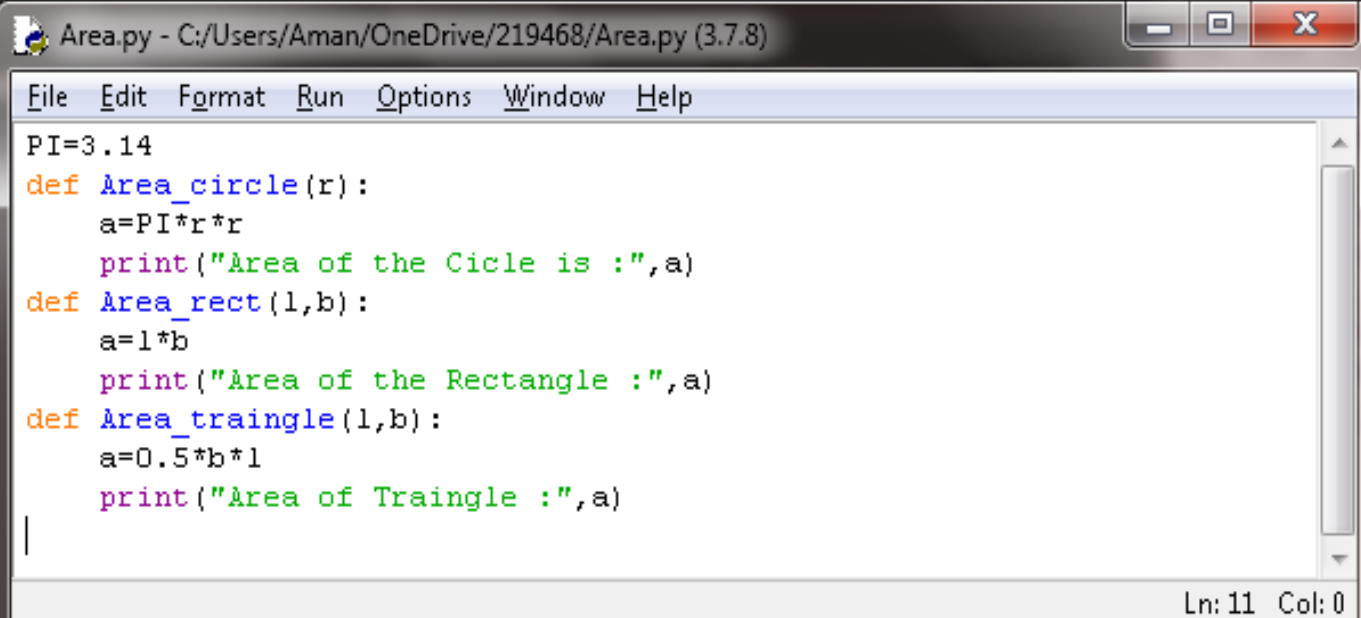
```
class employee():
    def __init__(self):
        self.getdata()
    def getdata(self):
        self.id=int(input("Enter Employee id:"))
        self.n=input("Enter Employee name:")
        self.d=input("Enter Employee Designation:")
    def showdata(self):
        print("My name is ",self.n,"and My Id is",self.id,"and My designation is ",self.d)
class engineer(employee):
    def printdesignation(self):
        self.showdata()
class manager(employee):
    def printdesignation(self):
        self.showdata()
n=int(input("number of sets of Employee:"))
L=list()
for i in range(n):
    e=engineer()
    e.getdata()
    e.printdesignation()
    m=manager()
    m.printdesignation()
```

The status bar at the bottom right shows 'Ln: 21 Col: 24'.

Practical no 7

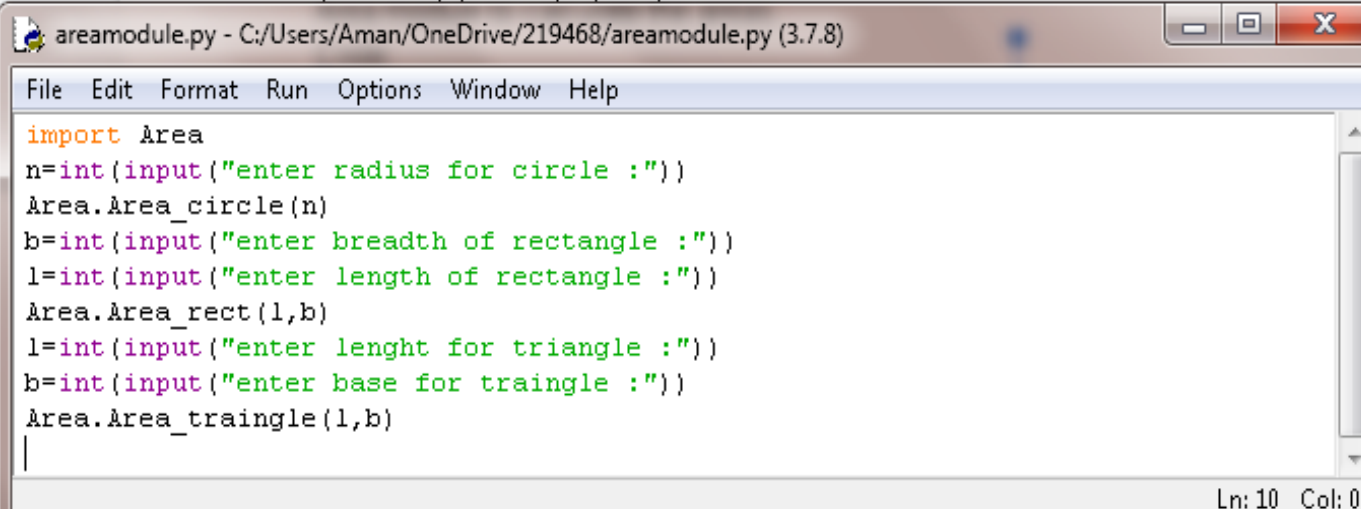
1. Create a module "Area.py" with function Area_Circle(), Area_Traingle() And Area_Rect(). Create new file use the Area_Circle(), Area_Traingle() and Area_Rect() from the Area module to calculate the areas.

Code:



```
Area.py - C:/Users/Aman/OneDrive/219468/Area.py (3.7.8)
File Edit Format Run Options Window Help
PI=3.14
def Area_circle(r):
    a=PI*r*r
    print("Area of the Cicle is :",a)
def Area_rect(l,b):
    a=l*b
    print("Area of the Rectangle :",a)
def Area_traingle(l,b):
    a=0.5*b*l
    print("Area of Traingle :",a)
|
```

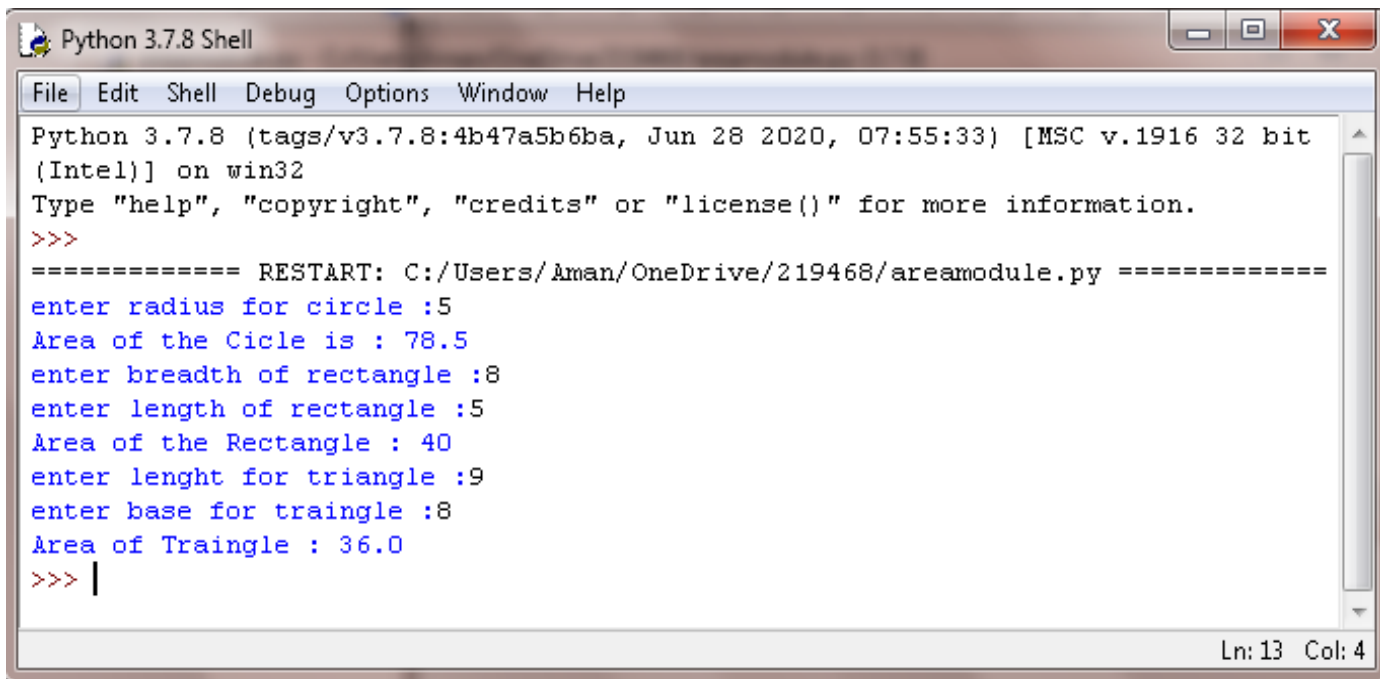
Ln: 11 Col: 0



```
areamodule.py - C:/Users/Aman/OneDrive/219468/areamodule.py (3.7.8)
File Edit Format Run Options Window Help
import Area
n=int(input("enter radius for circle :"))
Area.Area_circle(n)
b=int(input("enter breadth of rectangle :"))
l=int(input("enter length of rectangle :"))
Area.Area_rect(l,b)
l=int(input("enter lenght for triangle :"))
b=int(input("enter base for traingle :"))
Area.Area_traingle(l,b)
|
```

Ln: 10 Col: 0

Output:



Python 3.7.8 Shell

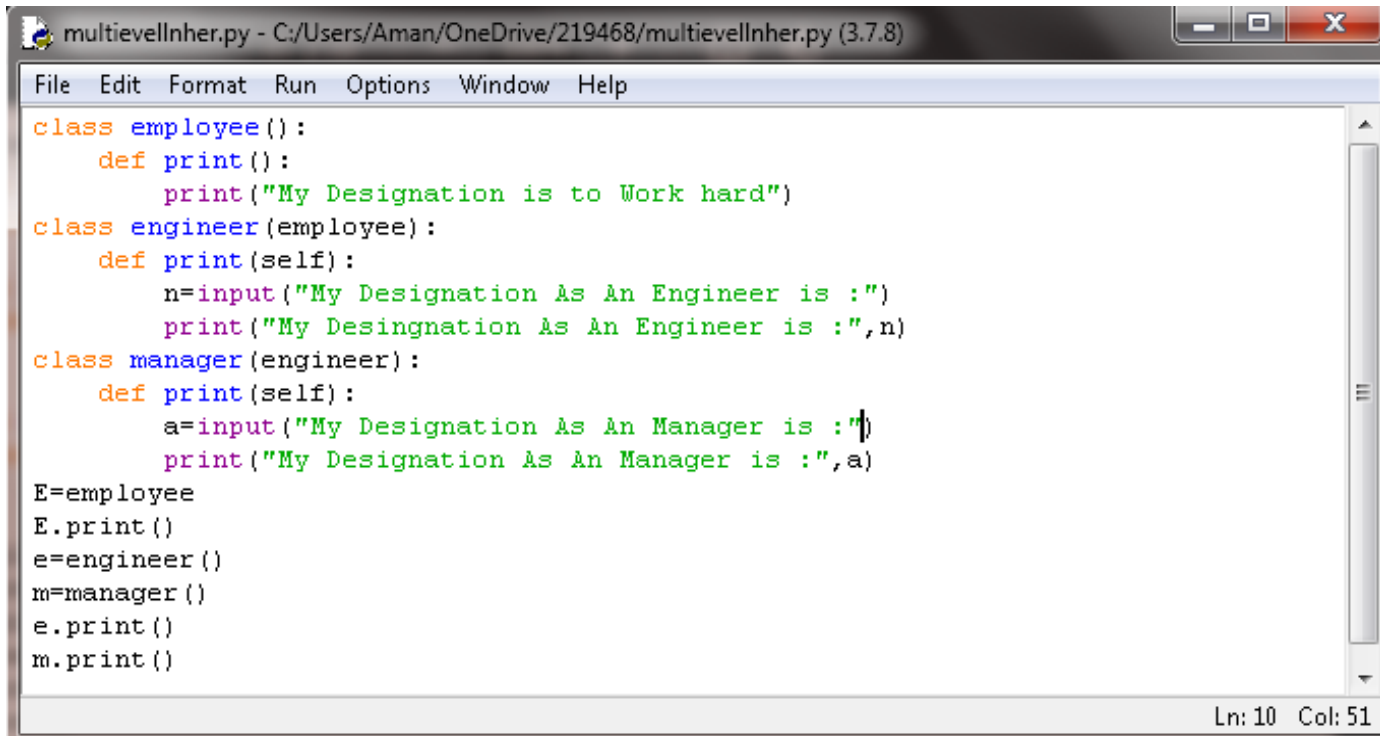
File Edit Shell Debug Options Window Help

Python 3.7.8 (tags/v3.7.8:4b47a5b6ba, Jun 28 2020, 07:55:33) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/Aman/OneDrive/219468/areamodule.py =====
enter radius for circle :5
Area of the Circle is : 78.5
enter breadth of rectangle :8
enter length of rectangle :5
Area of the Rectangle : 40
enter lenght for triangle :9
enter base for traingle :8
Area of Traingle : 36.0
>>> |

Ln: 13 Col: 4

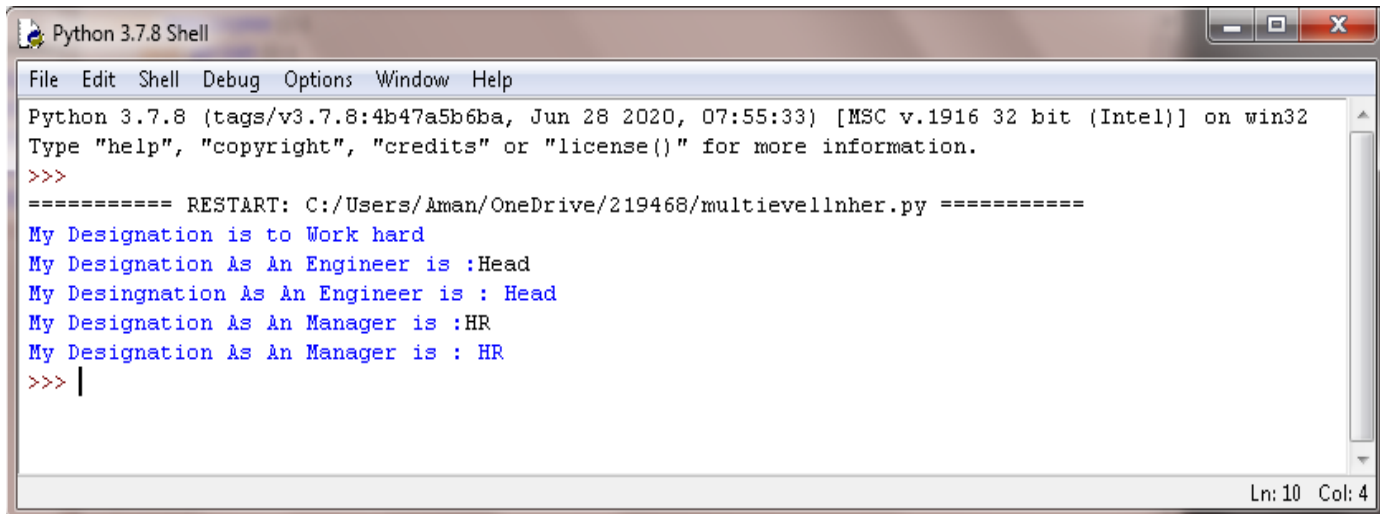
2.Implement the concept of multilevel inheritance using python

Code:

A screenshot of a Python IDE window titled 'multievellnher.py - C:/Users/Aman/OneDrive/219468/multievellnher.py (3.7.8)'. The window has a menu bar with 'File', 'Edit', 'Format', 'Run', 'Options', 'Window', and 'Help'. The code defines three classes: 'employee' with a 'print' method that prints 'My Designation is to Work hard'; 'engineer' inherits from 'employee' and has a 'print' method that takes user input 'n' and prints 'My Desingnation As An Engineer is :',n'; 'manager' inherits from 'engineer' and has a 'print' method that takes user input 'a' and prints 'My Designation As An Manager is :',a'. Below the class definitions, there are three instances: 'E=employee', 'e=engineer()', and 'm=manager()', each followed by a call to their respective 'print' methods. The status bar at the bottom right shows 'Ln: 10 Col: 51'.

```
class employee():
    def print():
        print("My Designation is to Work hard")
class engineer(employee):
    def print(self):
        n=input("My Designation As An Engineer is :")
        print("My Desingnation As An Engineer is :",n)
class manager(engineer):
    def print(self):
        a=input("My Designation As An Manager is :")
        print("My Designation As An Manager is :",a)
E=employee
E.print()
e=engineer()
m=manager()
e.print()
m.print()
```

Output:

A screenshot of a Python 3.7.8 Shell window. The window has a menu bar with 'File', 'Edit', 'Shell', 'Debug', 'Options', 'Window', and 'Help'. The output shows the execution of the code from the previous screenshot. It starts with the Python version and build information. Then, it shows the execution of the code, including the 'RESTART' message. The output of the 'print' methods is displayed: 'My Designation is to Work hard', 'My Designation As An Engineer is :Head', 'My Desingnation As An Engineer is : Head', 'My Designation As An Manager is :HR', and 'My Designation As An Manager is : HR'. The status bar at the bottom right shows 'Ln: 10 Col: 4'.

```
Python 3.7.8 (tags/v3.7.8:4b47a5b6ba, Jun 28 2020, 07:55:33) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/Aman/OneDrive/219468/multievellnher.py =====
My Designation is to Work hard
My Designation As An Engineer is :Head
My Desingnation As An Engineer is : Head
My Designation As An Manager is :HR
My Designation As An Manager is : HR
>>> |
```

3.Implement the concept of single inheritance using python.

Code:

```
singleLEVELINhere.py - C:/Users/Aman/OneDrive/219468/singleLEVELINhere.py (3.7.8)
File Edit Format Run Options Window Help
class PC():
    def print1(self):
        print("I Like My Computer")
class type(PC):
    def print2(self):
        self.n=input("My PC type is:")
        print("My PC TYPE:",self.n)
class Specs(PC):
    def print3(self):
        self.a=input("MY PC Specs Are:")
        print("MY PC Specs Are:",self.a)
o=int(input("No. of PC You OWN:"))
L=list()
for i in range(o):
    P=PC
    t=type()
    s=Specs()
    t.print1()
    t.print2()
    s.print3()
Ln: 7 Col: 29
```

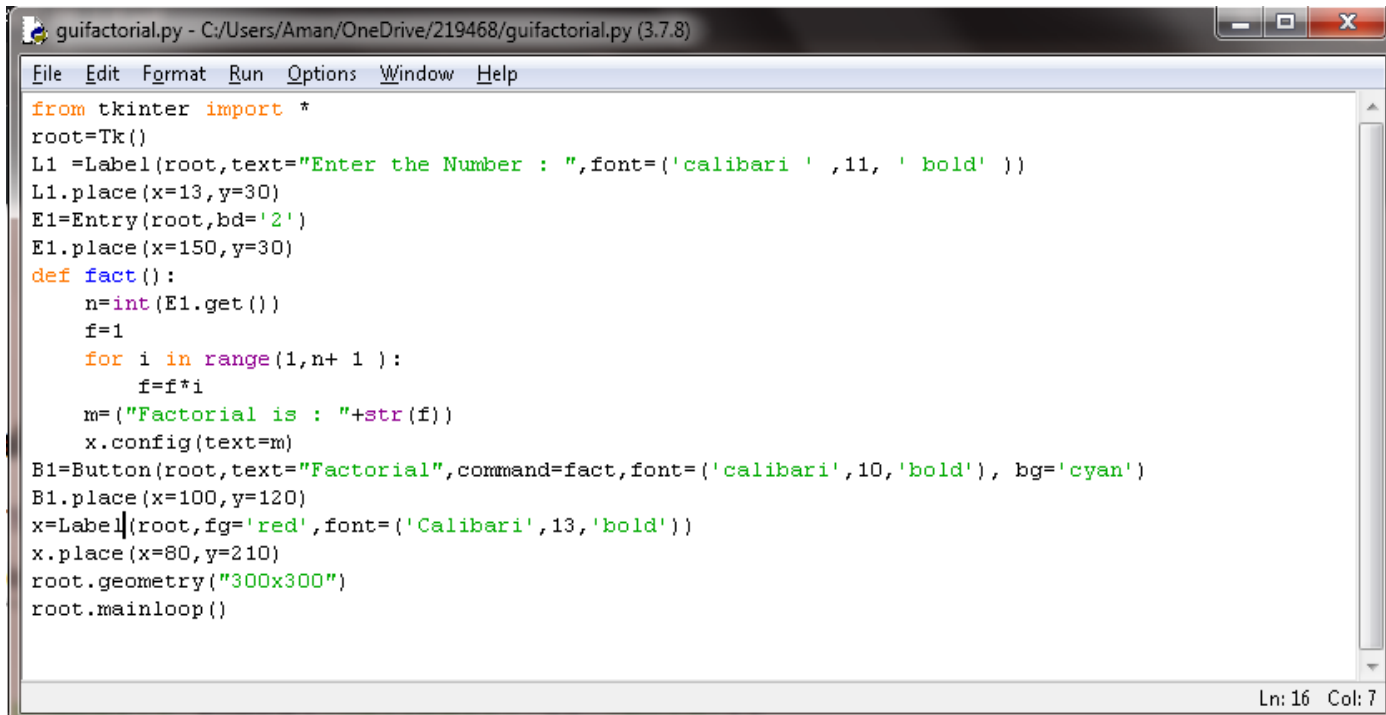
Output:

```
Python 3.7.8 Shell
File Edit Shell Debug Options Window Help
Python 3.7.8 (tags/v3.7.8:4b47a5b6ba, Jun 28 2020, 07:55:33) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/Aman/OneDrive/219468/singleLEVELINhere.py =====
No. of PC You OWN:2
I Like My Computer
My PC type is:Gaming
My PC TYPE: Gaming
MY PC Specs Are:300 gb
MY PC Specs Are: 300 gb
I Like My Computer
My PC type is:Work
My PC TYPE: Work
MY PC Specs Are:1 TB ssd
MY PC Specs Are: 1 TB ssd
>>>
Ln: 16 Col: 4
```

Practical no 8

1. Write a Python GUI code to calculate the factorial of a number.

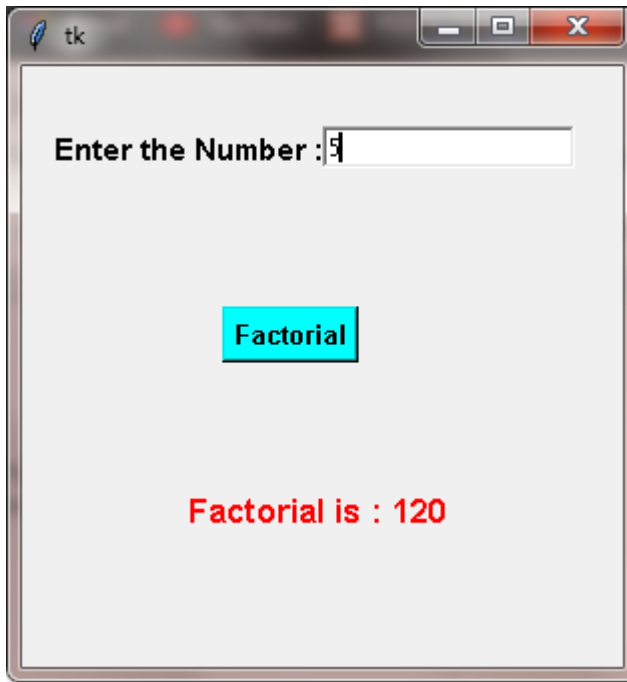
Code:

A screenshot of a Python IDE window titled 'guifactorial.py - C:/Users/Aman/OneDrive/219468/guifactorial.py (3.7.8)'. The window contains a menu bar with 'File', 'Edit', 'Format', 'Run', 'Options', 'Window', and 'Help'. The code is written in Python 3.7.8 and uses Tkinter to create a GUI. It includes a label for input, an entry field, a button to calculate the factorial, and a label to display the result. The code is as follows:

```
from tkinter import *
root=Tk()
L1 =Label(root,text="Enter the Number : ",font=('calibari' , 11, ' bold' ))
L1.place(x=13,y=30)
E1=Entry(root,bd='2')
E1.place(x=150,y=30)
def fact():
    n=int(E1.get())
    f=1
    for i in range(1,n+ 1 ):
        f=f*i
    m="Factorial is : "+str(f)
    x.config(text=m)
B1=Button(root,text="Factorial",command=fact,font=('calibari',10,'bold'), bg='cyan')
B1.place(x=100,y=120)
x=Label(root,fg='red',font=('Calibari',13,'bold'))
x.place(x=80,y=210)
root.geometry("300x300")
root.mainloop()
```

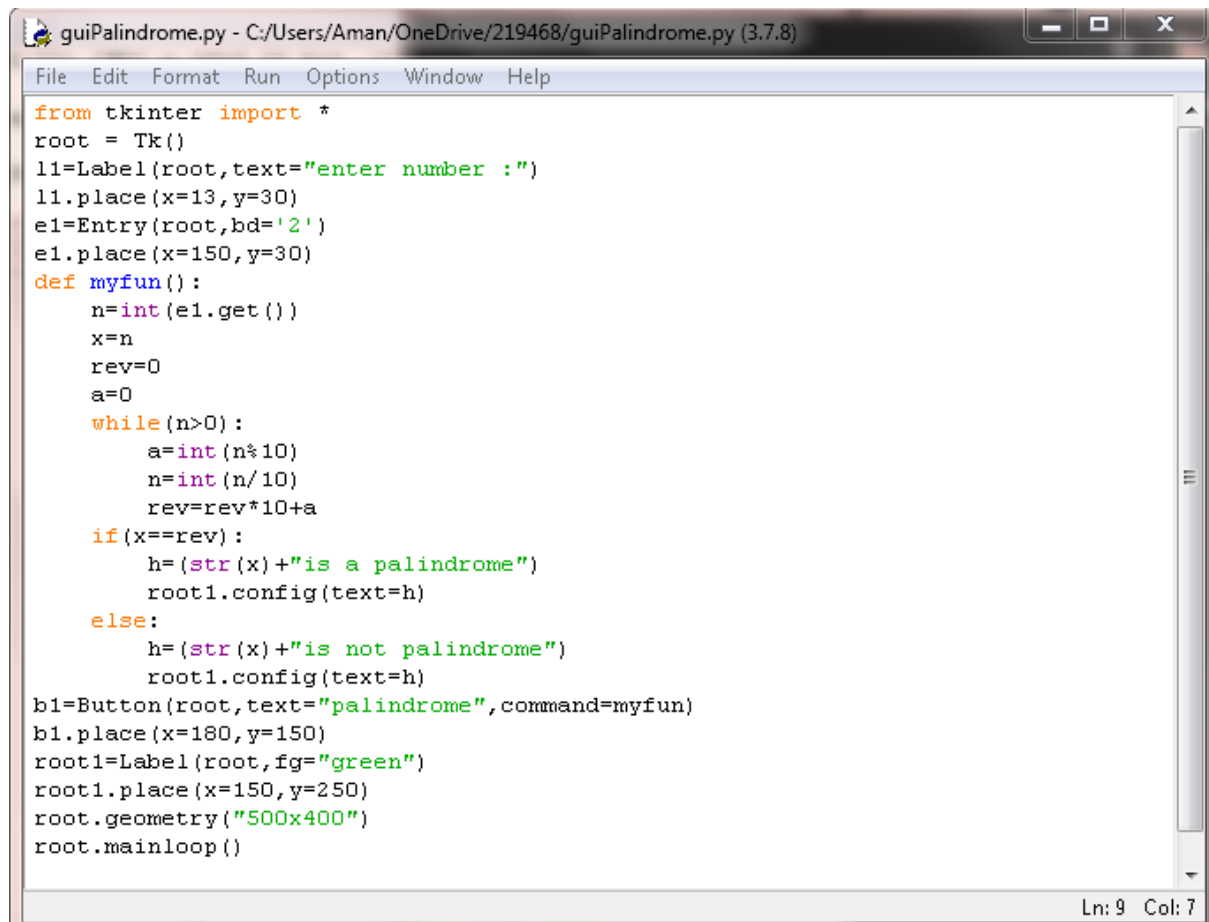
The status bar at the bottom right shows 'Ln: 16 Col: 7'.

Output:



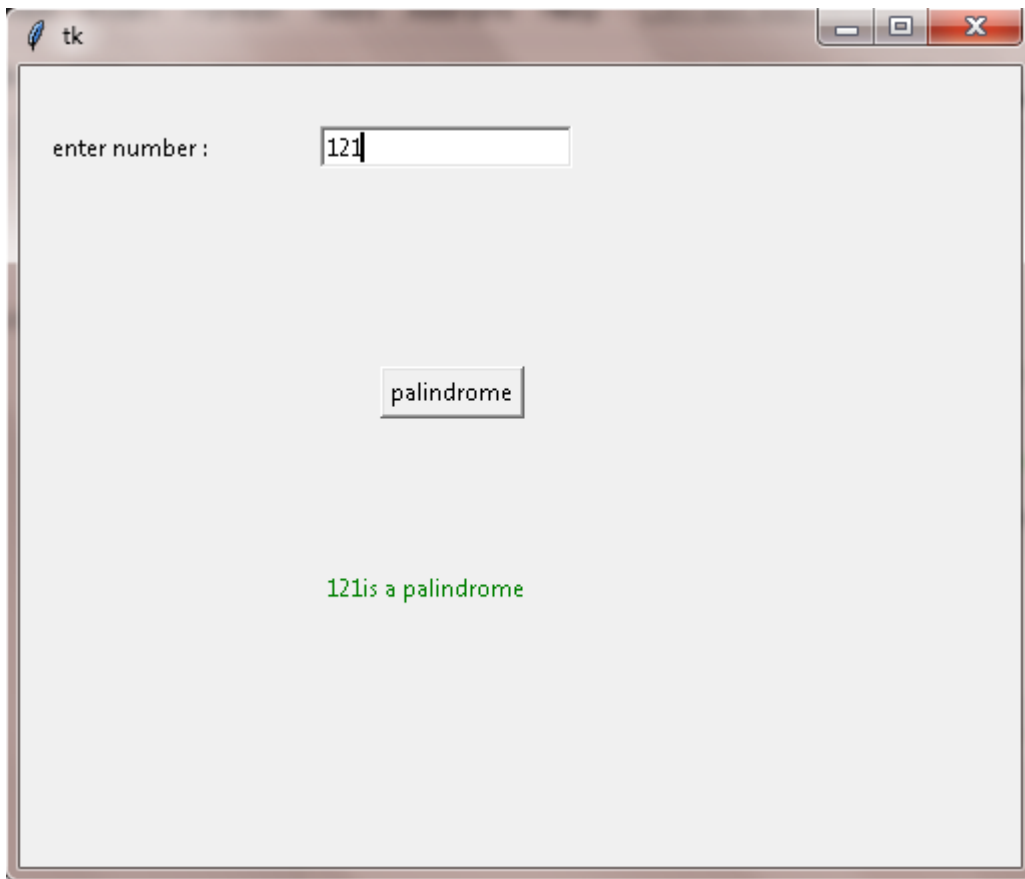
2. Write a Python GUI code to check whether the number is palindrome or not.

Code:

A screenshot of a Python IDE window titled 'guiPalindrome.py - C:/Users/Aman/OneDrive/219468/guiPalindrome.py (3.7.8)'. The window has a menu bar with 'File', 'Edit', 'Format', 'Run', 'Options', 'Window', and 'Help'. The code is written in a light blue font on a white background. It uses Tkinter to create a GUI with a label for input, an entry field, a button labeled 'palindrome', and a label for the output. The 'myfun' function calculates the reverse of the input number and compares it to the original number to determine if it is a palindrome. The status bar at the bottom right shows 'Ln: 9 Col: 7'.

```
from tkinter import *
root = Tk()
l1=Label(root,text="enter number :")
l1.place(x=13,y=30)
e1=Entry(root,bd='2')
e1.place(x=150,y=30)
def myfun():
    n=int(e1.get())
    x=n
    rev=0
    a=0
    while(n>0):
        a=int(n%10)
        n=int(n/10)
        rev=rev*10+a
    if(x==rev):
        h=(str(x)+"is a palindrome")
        root1.config(text=h)
    else:
        h=(str(x)+"is not palindrome")
        root1.config(text=h)
b1=Button(root,text="palindrome",command=myfun)
b1.place(x=180,y=150)
root1=Label(root,fg="green")
root1.place(x=150,y=250)
root.geometry("500x400")
root.mainloop()
```

Output:



3. Design a simple GUI calculator in python.

Code:



```
guicalculator.py - C:/Users/Aman/OneDrive/219468/guicalculator.py (3.7.8)
File Edit Format Run Options Window Help
import tkinter
top = tkinter.Tk()
l1=tkinter.Label(top,text="value 1:")
l1.pack(side=tkinter.LEFT)
l1.place(x=15,y=40)
e1=tkinter.Entry(top,bd=8)
e1.pack(side=tkinter.RIGHT)
e1.place(x=80,y=40)
l2=tkinter.Label(top,text="value 2:")
l2.pack(side=tkinter.LEFT)
l2.place(x=15,y=120)
e2=tkinter.Entry(top,bd=8)
e2.pack(side=tkinter.RIGHT)
e2.place(x=80,y=120)
top.geometry("400x400")
from tkinter import messagebox
def add():
    c=int(e1.get())+int(e2.get())
    a=("Addition is: ", str(c))
    msg=messagebox.showinfo("Calculator",a)
B=tkinter.Button(top, text="+", command = add )
B.place(x=50, y=200)
def sub():
    c=int(E1.get ())-int (E2.get())
    s=("Subtraction is: ", str (c))
    msg=messagebox.showinfo('Calculator', s)
B=tkinter.Button (top, text="-", command=sub)
B.place (x=110, y=200)
def mul():
    c=int (e1.get ()) * int(e2.get())
    a=("multiplication is: ", str (c))
    msg=messagebox.showinfo ("Calculator", a)
B=tkinter.Button(top, text="x", command = mul )
B.place(x=170, y=200)
def div():
    c=int(E1.get ()) /int (E2.get())
    s=("division is: ", str (c))
    msg=messagebox.showinfo('Calculator', s)
B=tkinter.Button (top, text="/", command=div)
B.place (x=230, y=200)
top.mainloop()
```

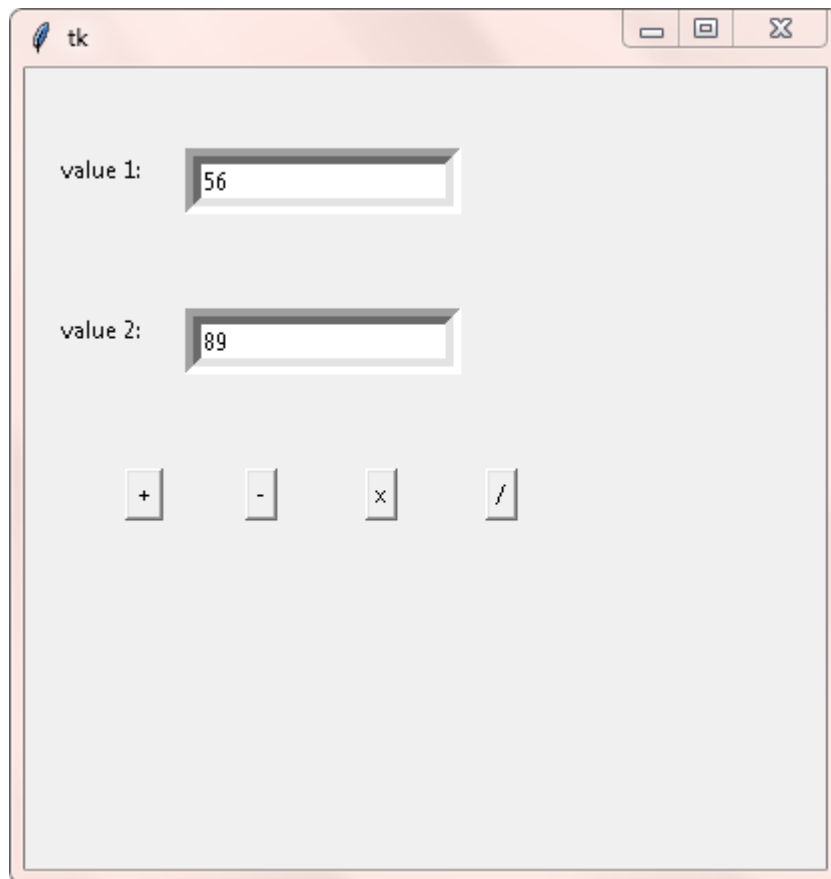
Ln: 7 Col: 27

```

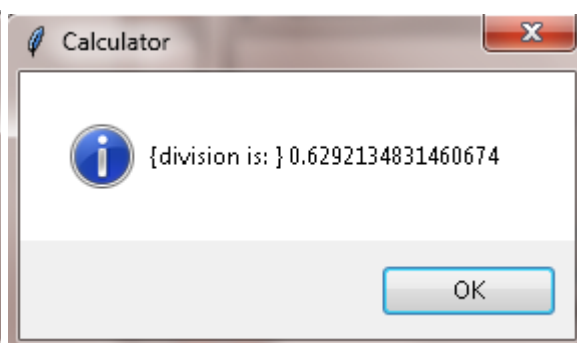
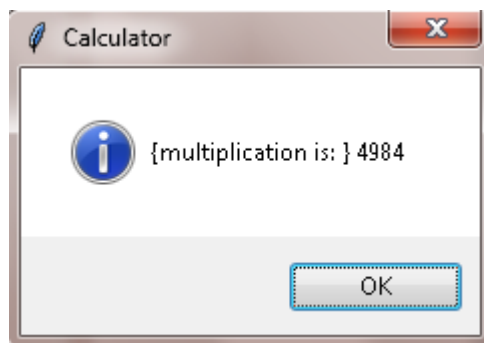
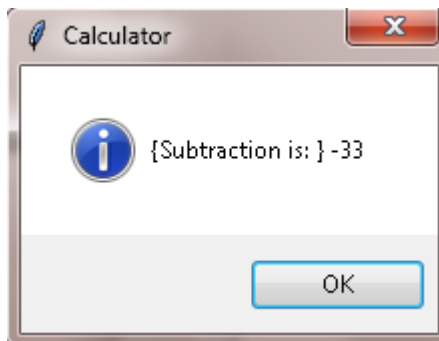
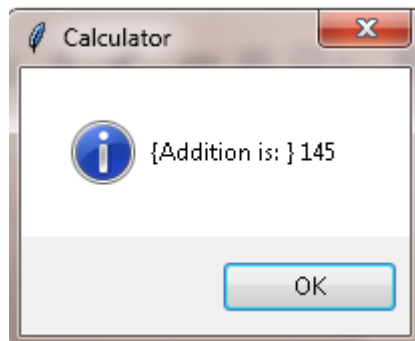
    c=int (e1.get ()) * int(e2.get())
    a=("multiplication is: ", str (c))
    msg=messagebox.showinfo ("Calculator", a)
B=tkinter.Button(top, text="x", command = mul )
B.place(x=170, y=200)
def div():
    c=int(E1.get ()) /int (E2.get())
    s=("division is: ", str (c))
    msg=messagebox.showinfo('Calculator', s)
B=tkinter.Button (top, text="/", command=div)
B.place (x=230, y=200)
top.mainloop()
```

Ln: 16 Col: 30

Output:



A Tkinter window titled 'tk' with a standard macOS-style title bar (red, yellow, green buttons). The window contains two labels, 'value 1:' and 'value 2:', each followed by a text entry field. The first entry field contains the number '56' and the second contains '89'. Below these fields are four buttons representing arithmetic operators: '+', '-', 'x', and '/'. The buttons are arranged horizontally and have a simple, slightly 3D appearance.



4. Design a biodata form using Python GUI.

Code:

```
biodata.py - C:/Users/Aman/OneDrive/219468/biodata.py (3.7.8)
File Edit Format Run Options Window Help
from tkinter import*
from tkinter import messagebox
root=Tk()
root.configure(background="cyan")
root.geometry("700x700")
L=Label(root,text="COLLEGE NAME: Mulund Collage Of Commerce",font=("Times",15),fg="black",relief="groove",bd=3,bg="pink")
L.grid(row=0,column=0)
L0=Label(root,text="COLLEGE Address:Mulund West Mumbai-80",font=("Times",15),fg="black",relief="groove",bd=3,bg="pink")
L0.grid(row=1,column=0,pady=5)
Label(text="*****").grid(row=2,column=0)
Label(text="*****").grid(row=2,column=1)
L1=Label(root,text="fisrt Name:",font=('calibari',11,'bold'),height=1,width=20,relief="sunken",bd=3,bg="magenta")
L1.grid(row=3,column=0,pady=5)
E1=Entry(root,bd='2')
E1.grid(row=3,column=1,padx=1)
L2=Label(root,text="Last Name:",font=('calibari',11,'bold'),height=1,width=20,relief="sunken",bd=3,bg="magenta")
L2.grid(row=4,column=0,pady=5)
E2=Entry(root,bd='2',relief="groove")
E2.grid(row=4,column=1,padx=1)
L3=Label(root,text="Gender:",font=('calibari',11,'bold'),height=2,width=20,relief="sunken",bd=3,bg="magenta")
L3.grid(row=5,column=0,pady=5)
x=IntVar()
R1=Radiobutton(root,text="Male",variable=x,value=1,relief="groove",height=2,width=5).grid(row=5,column=1,pady=5)
R2=Radiobutton(root,text="Female",variable=x,value=2,relief="groove",height=2,width=5).grid(row=5,column=2,pady=5)
L4=Label(root,text="Age:",font=('calibari',11,'bold'),height=1,width=20,relief="sunken",bd=3,bg="magenta")
L4.grid(row=6,column=0,pady=3)
s=Spinbox(root,from_=0,to=100,width=15).grid(row=6,column=1,pady=3,padx=1)
L5=Label(root,text="Hobbies:",font=('calibari',11,'bold'),height=1,width=20,relief="sunken",bd=3,bg="magenta")
L5.grid(row=7,column=0,pady=3)
a1=IntVar()
a2=IntVar()
a3=IntVar()
a4=IntVar()
c1=Checkbutton(text="Singing",font=('calibari',11,'bold'),variable=a1,offvalue=0,onvalue=1,bg="yellow")
c1.grid(row=8,column=0)
c2=Checkbutton(text="Swimming",font=('calibari',11,'bold'),variable=a2,offvalue=0,onvalue=1,bg="yellow")
c2.grid(row=8,column=1)
```

Ln: 9 Col: 30

```

c2=Checkbutton(text="Swimming",font=('calibari',11,'bold'),variable=a2,offvalue=0,onvalue=1,bg="yellow")
c2.grid(row=8,column=1)
c3=Checkbutton(text="Dancing",font=('calibari',11,'bold'),variable=a3,offvalue=0,onvalue=1,bg="yellow")
c3.grid(row=9,column=0,pady=3)
c4=Checkbutton(text="Reading",font=('calibari',11,'bold'),variable=a4,offvalue=0,onvalue=1,bg="yellow")
c4.grid(row=9,column=1,pady=3)
L6=Label(root,text="Address:",font=('calibari',11,'bold'),height=1,width=20,relief="sunken",bd=3,bg="magenta")
L6.grid(row=10,column=0,pady=3)
E3=Text(root,bd='2',relief="groove",height=1,width=20)
E3.grid(row=10,column=1,padx=1)
L7=Label(root,text="Select ur favourite programming language!!!",font=('calibari',11,'bold'),height=1,width=35,relief="sunken")
L7.grid(row=11,column=0,pady=3)
b1=IntVar()
b2=IntVar()
b3=IntVar()
b4=IntVar()
C1=Checkbutton(text="C",font=('calibari',11,'bold'),variable=b1,offvalue=0,onvalue=1,bg="yellow")
C1.grid(row=12,column=0)
C2=Checkbutton(text="C++",font=('calibari',11,'bold'),variable=b2,offvalue=0,onvalue=1,bg="yellow")
C2.grid(row=12,column=1)
C3=Checkbutton(text="JAVA",font=('calibari',11,'bold'),variable=b3,offvalue=0,onvalue=1,bg="yellow")
C3.grid(row=13,column=0,pady=2)
C4=Checkbutton(text="PYTHON",font=('calibari',11,'bold'),variable=b4,offvalue=0,onvalue=1,bg="yellow")
C4.grid(row=13,column=1,pady=2)
def mess():
    m=messagebox.showinfo("BIODATA","Thank u visiting my Form!!")
B2=Button(root,text="SUBMIT",font=('calibari',10,'bold'),bg='green',command=mess,height=2,width=7,relief="ridge")
B2.grid(row=14,column=0,pady=5,padx=3)
root.mainloop()

```

Ln: 9 Col: 30

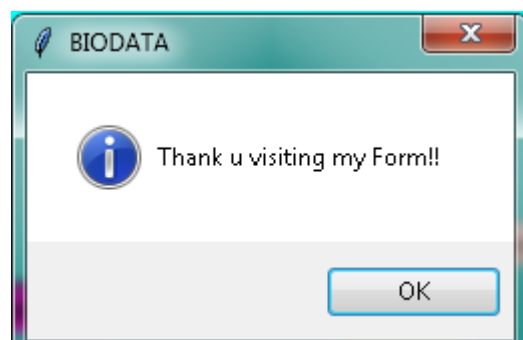
Output:

tk

COLLEGE NAME: Mulund Collage Of Commerce

COLLEGE Address: Mulund West Mumbai-80

| | |
|---|--|
| first Name: | AmanKumar |
| Last Name: | Yadav |
| Gender: | <input checked="" type="radio"/> Male <input type="radio"/> Female |
| Age: | 20 |
| Hobbies: | |
| <input checked="" type="checkbox"/> Singing | <input checked="" type="checkbox"/> Swimming |
| <input checked="" type="checkbox"/> Dancing | <input checked="" type="checkbox"/> Reading |
| Address: | Indira Nagar (Thane) |
| Select ur favourite programming language!!! | |
| <input checked="" type="checkbox"/> C | <input checked="" type="checkbox"/> C++ |
| <input checked="" type="checkbox"/> JAVA | <input checked="" type="checkbox"/> PYTHON |
| <input type="button" value="SUBMIT"/> | |



5. Design an advanced calculator using Python GUI.

Code:

```

guiadvancedcal2.py - C:/Users/Aman/OneDrive/219468/guiadvancedcal2.py (3.7.8)
File Edit Format Run Options Window Help
from tkinter import *
from tkinter import messagebox
top = Tk()
top.resizable("false","false")
top.title("Calculator")
n1=0
n2=0
i=0
opr=""
E1 = Entry(top, bd =4,font=("calibari",16,"bold"),bg="powder blue")
E1.pack(side = RIGHT)
E1.place(x=120,y=20)
top.geometry("400x400")
def add() :
    global n1
    global opr
    n1=int(E1.get())
    opr="+"
    E1.delete(0,END)
B1=Button(top, text = " + ", relief=RIDGE, bd=2,command =add,padx=20,bg="yellow",font= ("calibari",15,"bold") )
B1.place(x=20,y=160)
def sub() :
    global n1
    global opr
    n1=int(E1.get())
    opr="-"
    E1.delete(0,END)
B2=Button(top, text = " - ",relief=RIDGE, bd=2, command = sub,padx=22,bg="yellow",font= ("calibari",15,"bold") )
B2.place(x=110,y=160)
def mul() :
    global n1
    global opr
    n1=int(E1.get())
    opr="*"
    E1.delete(0,END)
B3=Button(top, text = " * ",relief=RIDGE, bd=2, command = mul, padx=22, bg="yellow", font= ("calibari",15,"bold") )
B3.place(x=200,y=160)
def div() :
    global n1
    global opr
    n1=int(E1.get())
    opr="/"
    E1.delete(0,END)
B4=Button(top, text = " / ", relief=RIDGE,bd=2, command = div , padx=23,bg="yellow",font= ("calibari",15,"bold"))
B4.place(x=290,y=160)
def one(t):
    global i
    E1.insert(i,t)
    i=i+1
def clear() :
    E1.delete(0,END)
def equal() :
    n2=int(E1.get())
    if opr=="+":
        n=n1+n2
    if opr=="-":
        n=n1-n2
    if opr=="*":
        n=n1*n2
    if opr=="/":
        n=n1/n2
    E1.delete(0,END)
    E1.insert(0,str(n))
B5=Button(top, text = " 1 ", relief=RIDGE,bd=2 , command=lambda t="1":one(t), padx=22, fg="white", bg="grey",font= ("calibari",15,"bold"))
B5.place(x=20,y=215)
B6=Button(top, text = " 2 ",relief=RIDGE, bd=2, command=lambda t="2":one(t) , padx=22, fg="white", bg="grey",font= ("calibari",15,"bold"))
B6.place(x=110,y=215)
B7=Button(top, text = " 3 ", relief=RIDGE,bd=2, command=lambda t="3":one(t) , padx=22, fg="white", bg="grey",font= ("calibari",15,"bold"))
B7.place(x=200,y=215)
B8=Button(top, text = " 4 ",relief=RIDGE, bd=2, command=lambda t="4":one(t) , padx=21, fg="white", bg="grey",font= ("calibari",15,"bold"))
B8.place(x=290,y=215)
B9=Button(top, text = " 5 ",relief=RIDGE, bd=2, command=lambda t="5":one(t) , padx=22, fg="white", bg="grey",font= ("calibari",15,"bold"))
B9.place(x=20,y=265)
B10=Button(top, text = " 6 ",relief=RIDGE, command=lambda t="6":one(t), bd=2 , padx=22, fg="white", bg="grey",font= ("calibari",15,"bold"))

```



```

B10=Button(top, text = " 6 ",relief=RIDGE, command=lambda t="6":one(t), bd=2 , padx=22, fg="white", bg="grey",font=("calibari",15,"bold"))
B10.place(x=110,y=265)
B11=Button(top, text = " 7 ",relief=RIDGE, command=lambda t="7":one(t), bd=2 , padx=22, fg="white", bg="grey",font=("calibari",15,"bold"))
B11.place(x=200,y=265)
B12=Button(top, text = " 8 ",relief=RIDGE, command=lambda t="8":one(t), bd=2 , padx=22, fg="white", bg="grey",font=("calibari",15,"bold"))
B12.place(x=290,y=265)
B13=Button(top, text = " 9 ",relief=RIDGE, command=lambda t="9":one(t), bd=2 , padx=22, fg="white", bg="grey",font=("calibari",15,"bold"))
B13.place(x=20,y=315)
B14=Button(top, text = " C ",relief=RIDGE, command=clear, bd=2 , padx=22, fg="white", bg="grey",font=("calibari",15,"bold"))
B14.place(x=110,y=315)
B16=Button(top, text = " 0 ",relief=RIDGE, command=lambda t="0":one(t), bd=2 , padx=22, fg="white", bg="grey",font=("calibari",15,"bold"))
B16.place(x=200,y=315)
B15=Button(top, text = " = ", relief=RIDGE, command=equal,bd=2 , padx=22, fg="black", bg="light green",font=("calibari",15,"bold"))
B15.place(x=290,y=315)
top.mainloop()

```

Output :

