PYTHON LAB SOLUTIONS:

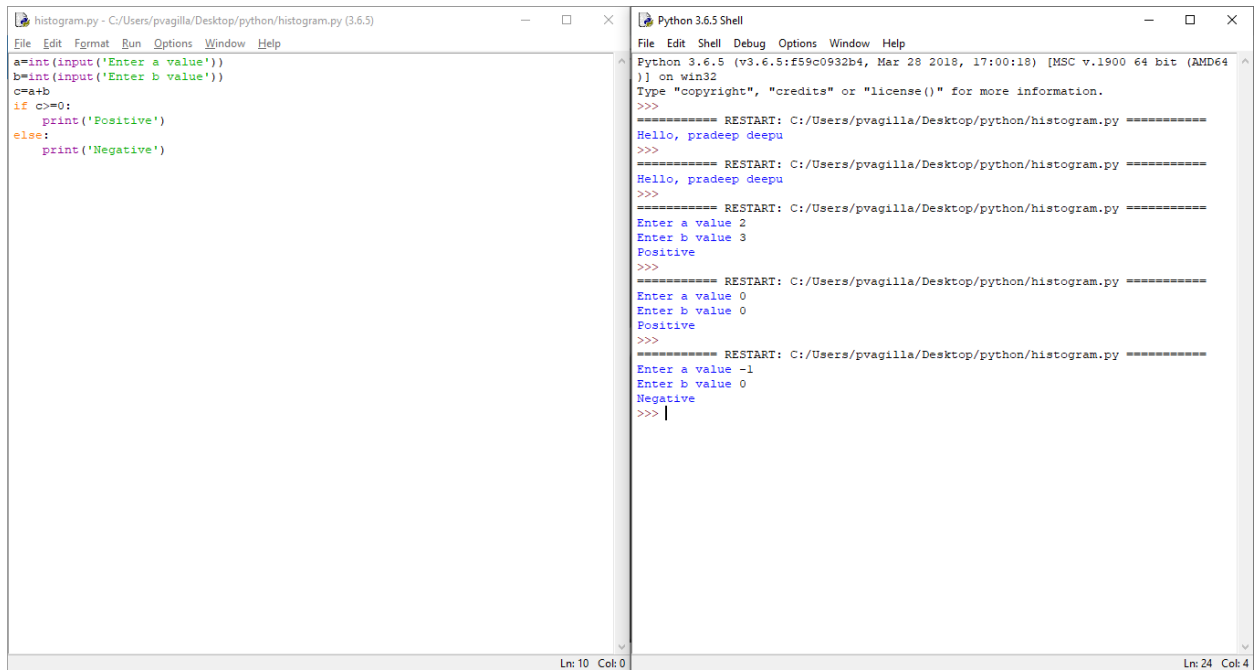## Day-1

1.

2.

```
a=int(input('Enter a value'))
b=int(input('Enter b value'))
c=a+b
if c>=0:
    print('Positive')
else:
    print('Negative')
```

```
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 17:00:18) [MSC v.1900 64 bit (AMD64
)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
=========== RESTART: C:/Users/pvagilla/Desktop/python/histogram.py ===========
Hello, pradeep deepu
>>>
=========== RESTART: C:/Users/pvagilla/Desktop/python/histogram.py ===========
Hello, pradeep deepu
>>>
=========== RESTART: C:/Users/pvagilla/Desktop/python/histogram.py ===========
Enter a value 2
Enter b value 3
Positive
>>>
=========== RESTART: C:/Users/pvagilla/Desktop/python/histogram.py ===========
Enter a value 0
Enter b value 0
Positive
>>>
=========== RESTART: C:/Users/pvagilla/Desktop/python/histogram.py ===========
Enter a value -1
Enter b value 0
Negative
>>>
```
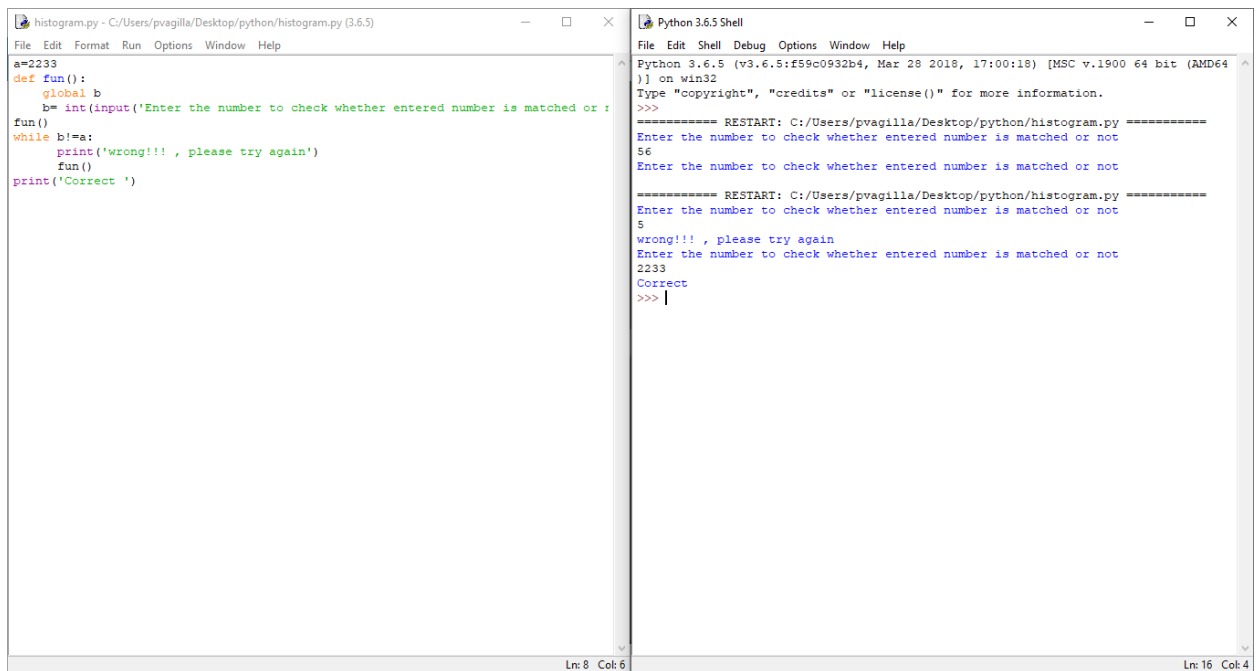
3.

```
a=2233
def fun():
    global b
    b= int(input('Enter the number to check whether entered number is matched or :
fun()
while b!=a:
    print('wrong!!! , please try again')
    fun()
print('Correct ')
```

```
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 17:00:18) [MSC v.1900 64 bit (AMD64
)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
=========== RESTART: C:/Users/pvagilla/Desktop/python/histogram.py ===========
Enter the number to check whether entered number is matched or not
56
Enter the number to check whether entered number is matched or not

=========== RESTART: C:/Users/pvagilla/Desktop/python/histogram.py ===========
Enter the number to check whether entered number is matched or not
5
wrong!!! , please try again
Enter the number to check whether entered number is matched or not
2233
Correct
>>>
```

4.

```
first_name=input('Enter your first_name\n')
last_name=input('Enter your last_name\n')
whole_name='{}{}'.format(first_name,last_name)
print(whole_name)
```

```
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 17:00:18) [MSC v.1900 64 bit (AMD64
)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
=========== RESTART: C:/Users/pvagilla/Desktop/python/histogram.py ===========
Enter your first_name
pradeep
Enter your last_name
goud
pradeepgoud
>>>
```

5.
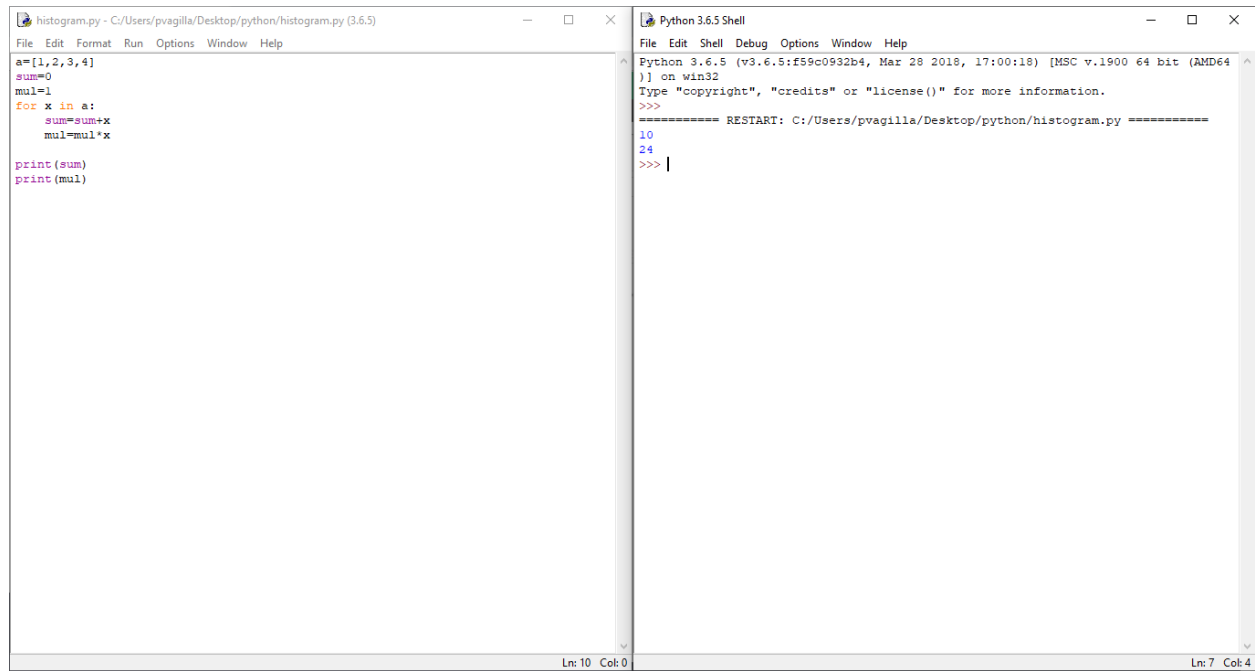
```
str=input('Enter a String\n')
togglestr=str.swapcase()
print(togglestr)
```

```
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 17:00:18) [MSC v.1900 64 bit (AMD64
)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
=========== RESTART: C:/Users/pvagilla/Desktop/python/histogram.py ===========
Enter a String
Hello, How Are You?
hELLO, hOW aRE yOU?
>>>
```

6.

```
histogram.py - C:/Users/pvagilla/Desktop/python/histogram.py (3.6.5)
File  Edit  Format  Run  Options  Window  Help

a=[1,2,3,4]
sum=0
mul=1
for x in a:
    sum=sum+x
    mul=mul*x

print(sum)
print(mul)
```
Ln: 10 Col: 0

```
Python 3.6.5 Shell
File  Edit  Shell  Debug  Options  Window  Help

Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 17:00:18) [MSC v.1900 64 bit (AMD64
)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
=========== RESTART: C:/Users/pvagilla/Desktop/python/histogram.py ===========
10
24
>>>
```
Ln: 7 Col: 4

7.

```
histogram.py - C:/Users/pvagilla/Desktop/python/histogram.py (3.6.5)
File  Edit  Format  Run  Options  Window  Help

a=[1,2,3,4,'a','b','c','d']
b=[2,7,6,'a','e','g']

f=False
for x in a:
    for y in b:
        if(x==y):
            f=True

print(f)
```
Ln: 2 Col: 10
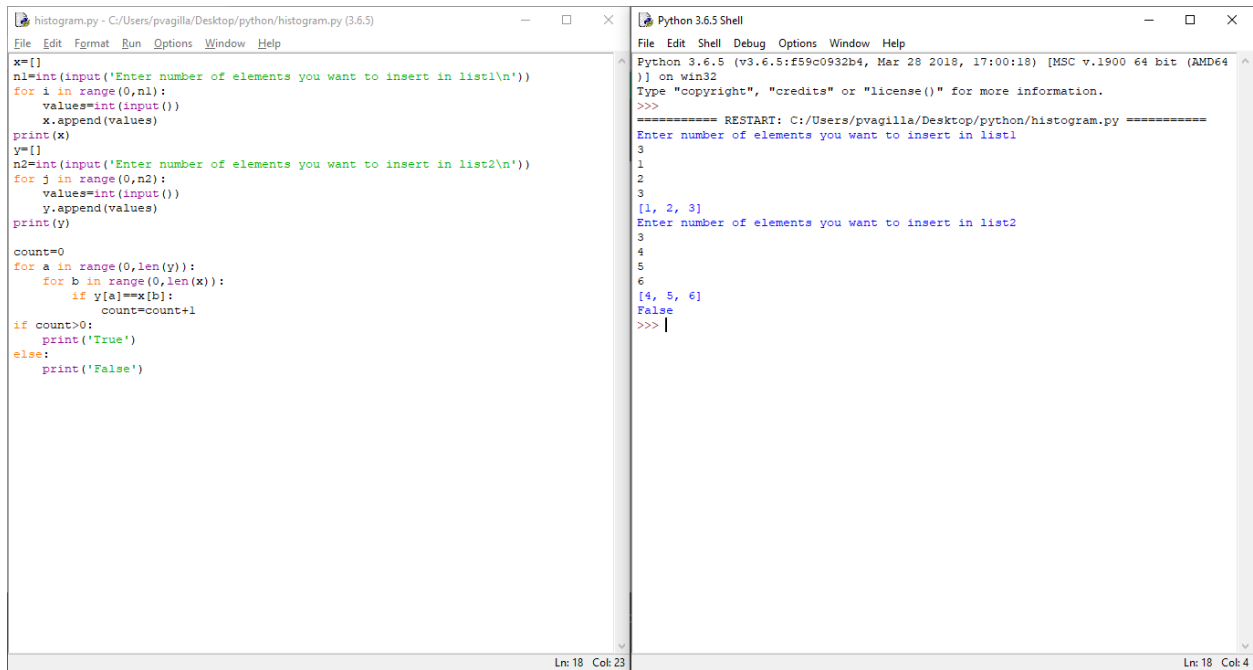
```
Python 3.6.5 Shell
File  Edit  Shell  Debug  Options  Window  Help

Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 17:00:18) [MSC v.1900 64 bit (AMD64
)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
=========== RESTART: C:/Users/pvagilla/Desktop/python/histogram.py ===========
True
>>>
```
Ln: 6 Col: 4

8.


```python
x=[]
n1=int(input('Enter number of elements you want to insert in list1\n'))
for i in range(0,n1):
    values=int(input())
    x.append(values)
print(x)
y=[]
n2=int(input('Enter number of elements you want to insert in list2\n'))
for j in range(0,n2):
    values=int(input())
    y.append(values)
print(y)

count=0
for a in range(0,len(y)):
    for b in range(0,len(x)):
        if y[a]==x[b]:
            count=count+1
if count>0:
    print('True')
else:
    print('False')
```
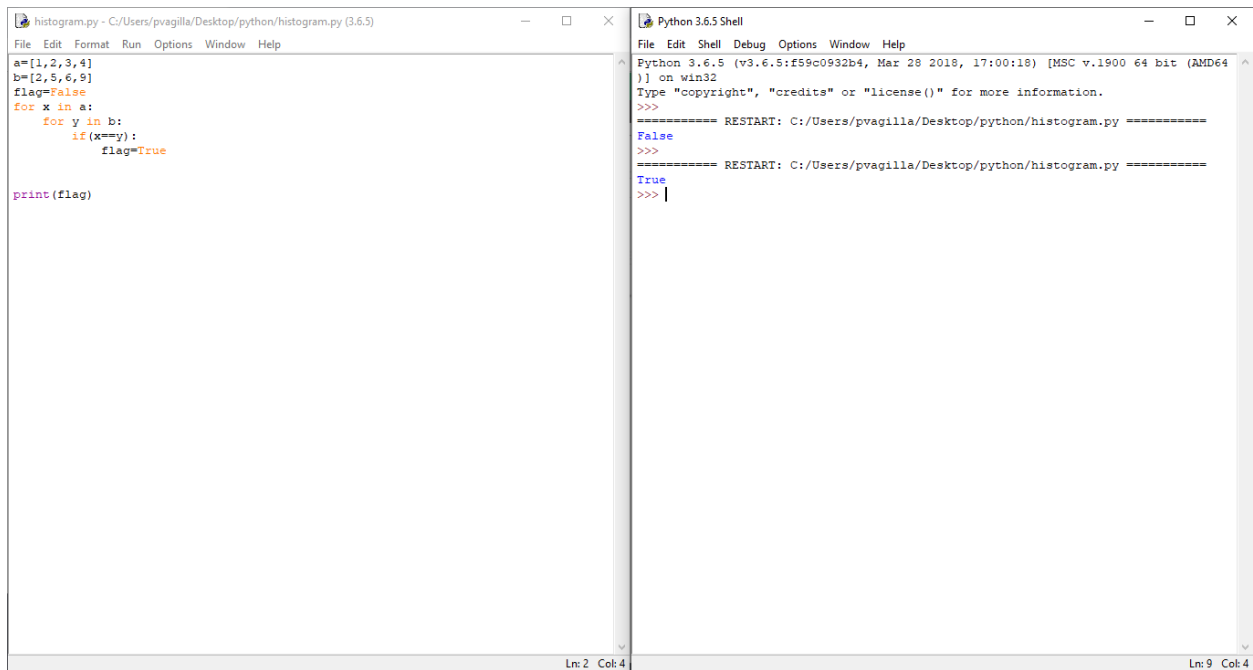
```
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 17:00:18) [MSC v.1900 64 bit (AMD64
)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
=========== RESTART: C:/Users/pvagilla/Desktop/python/histogram.py ===========
Enter number of elements you want to insert in list1
3
1
2
3
[1, 2, 3]
Enter number of elements you want to insert in list2
3
4
5
6
[4, 5, 6]
False
>>>
```

8. Model-2


```python
a=[1,2,3,4]
b=[2,5,6,9]
flag=False
for x in a:
    for y in b:
        if(x==y):
            flag=True


print(flag)
```
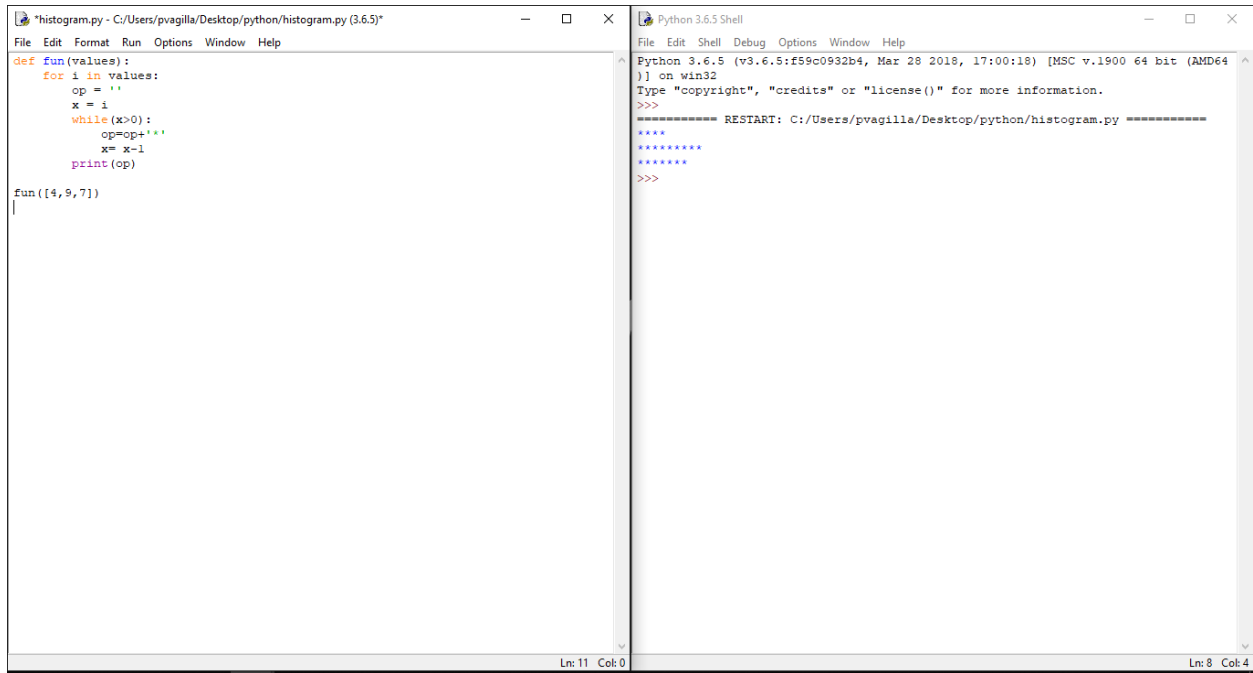
```
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 17:00:18) [MSC v.1900 64 bit (AMD64
)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
=========== RESTART: C:/Users/pvagilla/Desktop/python/histogram.py ===========
False
>>>
=========== RESTART: C:/Users/pvagilla/Desktop/python/histogram.py ===========
True
>>>
```

9.

```python
def fun(values):
    for i in values:
        op = ''
        x = i
        while(x>0):
            op=op+'*'
            x= x-1
        print(op)

fun([4,9,7])
```

```
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 17:00:18) [MSC v.1900 64 bit (AMD64
)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
=========== RESTART: C:/Users/pvagilla/Desktop/python/histogram.py ===========
****
*********
*******
>>>
```

Day-2

1.

Editor window title: `1.py - C:/Deepu/python/day2python/1.py (3.6.5)`

```python
def generate_n_chars(x,y):
    answer =""
    incorrect = 0
    while x > 0:
        answer += y
        answer += " "
        x -= 1
    return answer
a= int(input("How many times a word?\n "))
b= input("What word?\n")

y=generate_n_chars(a,b)
print(y)
```

Shell window:
```
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 17:00:18) [MSC v.1900 64 bit (AMD64
)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
================= RESTART: C:/Deepu/python/day2python/1.py =================
How many times a word?
 3
What word?
P
P P P
>>>
================= RESTART: C:/Deepu/python/day2python/1.py =================
How many times a word?
 9
What word?
Deepu
Deepu Deepu Deepu Deepu Deepu Deepu Deepu Deepu Deepu
>>>
```

2.

Editor window title: `2.py - C:/Deepu/python/day2python/2.py (3.6.5)`

```python
def max_number(list):
    result=0
    for i in list:
        if i > result:
            result = i
    return print("Maximum number from the list is {}".format(result))

a_list = []
num_nums = int(input("How many numbers?\n"))
for i in range(num_nums):
    num = int(input(" Enter a number:\n"))
    a_list.append(num)
y = max_number(a_list)
```

Shell window:
```
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 17:00:18) [MSC v.1900 64 bit (AMD64
)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
================= RESTART: C:/Deepu/python/day2python/2.py =================
How many numbers?
5
 Enter a number:
10
 Enter a number:
11
 Enter a number:
12
 Enter a number:
13
 Enter a number:
14
Maximum number from the list is 14
>>>
```

3.

```python
def len_of_words(list):
    lenwords = []
    for i in list :
        lenwords.append(len(i))
    return print(lenwords)

a_list = []
num_nums = int(input("How many numbers?\n"))
for i in range(num_nums):
    num =(input(" Enter a word:\n"))
    a_list.append(num)
y = len_of_words(a_list)
```

```
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 17:00:18) [MSC v.1900 64 bit (AMD64
)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
================= RESTART: C:/Deepu/python/day2python/3.py =================
How many numbers?
5
 Enter a word:
Pradeep
 Enter a word:
Deepu
 Enter a word:
Prem
 Enter a word:
abbas
 Enter a word:
abcdefghij
[7, 5, 4, 5, 10]
>>>
```

4.

```python
List = { 'Bangalore', 'Hyderabad','Pune', 'Chennai'}
a=len(sorted(List,key=lambda s:len(s))[-1])
print(a)
```
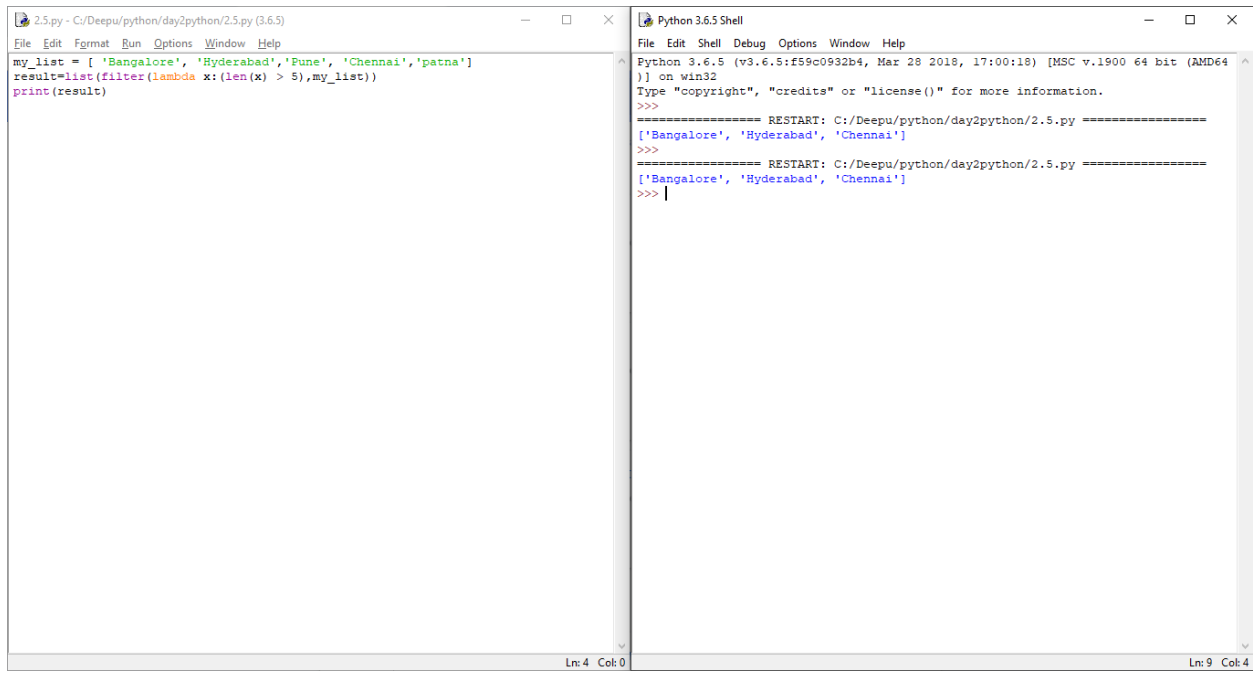
```
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 17:00:18) [MSC v.1900 64 bit (AMD64
)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
================= RESTART: C:/Deepu/python/day2python/4.py =================
9
>>>
```

5.
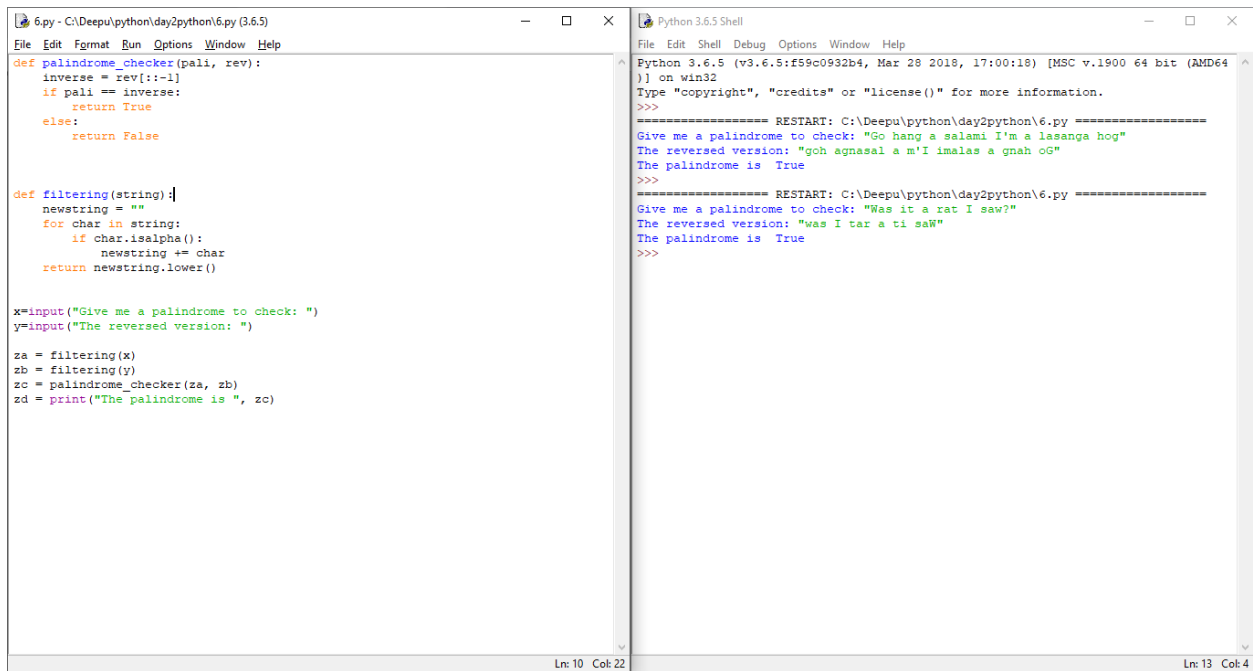
```
my_list = [ 'Bangalore', 'Hyderabad','Pune', 'Chennai','patna']
result=list(filter(lambda x:(len(x) > 5),my_list))
print(result)
```

```
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 17:00:18) [MSC v.1900 64 bit (AMD64
)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
================= RESTART: C:/Deepu/python/day2python/2.5.py =================
['Bangalore', 'Hyderabad', 'Chennai']
>>>
================= RESTART: C:/Deepu/python/day2python/2.5.py =================
['Bangalore', 'Hyderabad', 'Chennai']
>>>
```

6.

```
def palindrome_checker(pali, rev):
    inverse = rev[::-1]
    if pali == inverse:
        return True
    else:
        return False


def filtering(string):
    newstring = ""
    for char in string:
        if char.isalpha():
            newstring += char
    return newstring.lower()


x=input("Give me a palindrome to check: ")
y=input("The reversed version: ")

za = filtering(x)
zb = filtering(y)
zc = palindrome_checker(za, zb)
zd = print("The palindrome is ", zc)
```
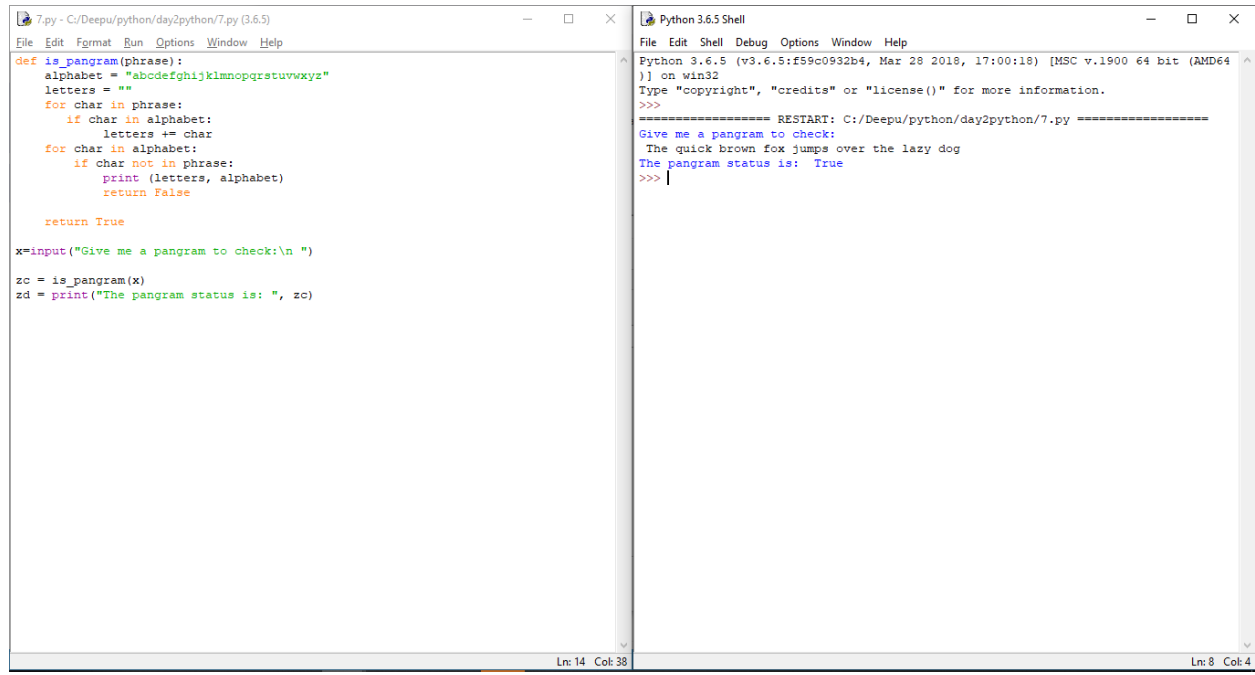
```
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 17:00:18) [MSC v.1900 64 bit (AMD64
)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
================= RESTART: C:\Deepu\python\day2python\6.py =================
Give me a palindrome to check: "Go hang a salami I'm a lasanga hog"
The reversed version: "goh agnasal a m'I imalas a gnah oG"
The palindrome is  True
>>>
================= RESTART: C:\Deepu\python\day2python\6.py =================
Give me a palindrome to check: "Was it a rat I saw?"
The reversed version: "was I tar a ti saW"
The palindrome is  True
>>>
```

7.

7.py - C:/Deepu/python/day2python/7.py (3.6.5)

File Edit Format Run Options Window Help

```python
def is_pangram(phrase):
    alphabet = "abcdefghijklmnopqrstuvwxyz"
    letters = ""
    for char in phrase:
        if char in alphabet:
            letters += char
    for char in alphabet:
        if char not in phrase:
            print (letters, alphabet)
            return False

    return True

x=input("Give me a pangram to check:\n ")

zc = is_pangram(x)
zd = print("The pangram status is: ", zc)
```
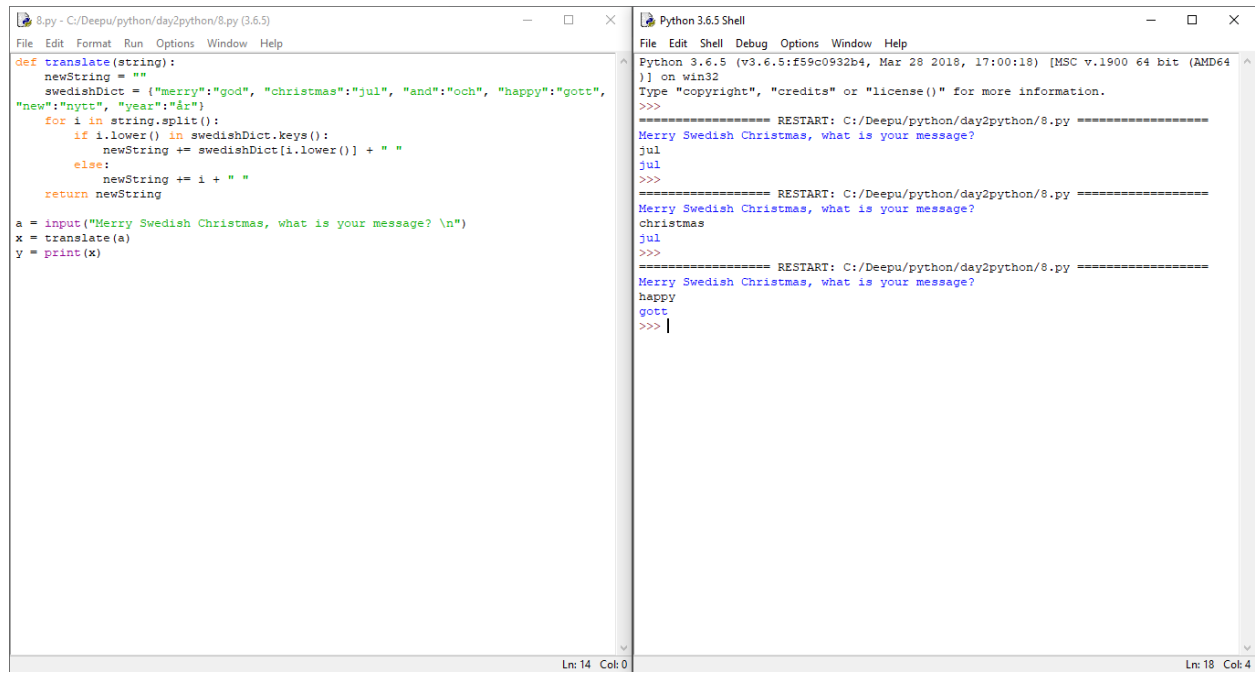
Ln: 14 Col: 38

Python 3.6.5 Shell

File Edit Shell Debug Options Window Help

```
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 17:00:18) [MSC v.1900 64 bit (AMD64
)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
================== RESTART: C:/Deepu/python/day2python/7.py ==================
Give me a pangram to check:
 The quick brown fox jumps over the lazy dog
The pangram status is:  True
>>>
```

Ln: 8 Col: 4

8.

8.py - C:/Deepu/python/day2python/8.py (3.6.5)

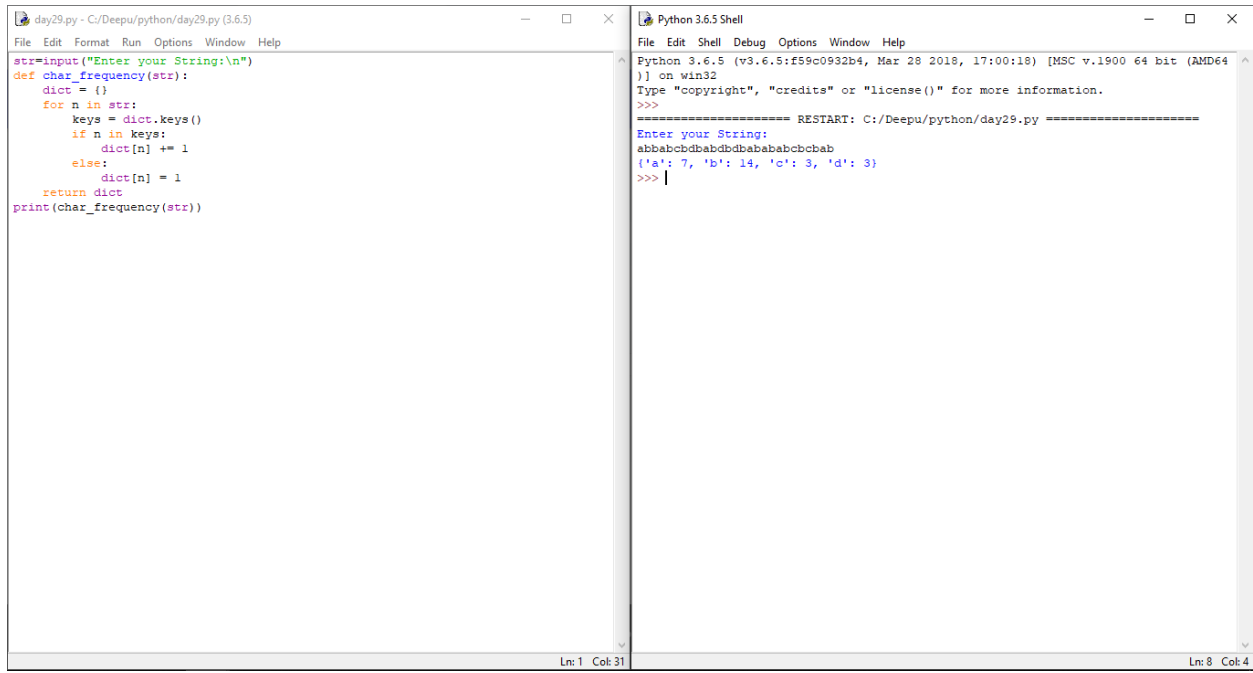File Edit Format Run Options Window Help

```python
def translate(string):
    newString = ""
    swedishDict = {"merry":"god", "christmas":"jul", "and":"och", "happy":"gott",
"new":"nytt", "year":"år"}
    for i in string.split():
        if i.lower() in swedishDict.keys():
            newString += swedishDict[i.lower()] + " "
        else:
            newString += i + " "
    return newString

a = input("Merry Swedish Christmas, what is your message? \n")
x = translate(a)
y = print(x)
```

Ln: 14 Col: 0

Python 3.6.5 Shell

File Edit Shell Debug Options Window Help

```
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 17:00:18) [MSC v.1900 64 bit (AMD64
)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
================== RESTART: C:/Deepu/python/day2python/8.py ==================
Merry Swedish Christmas, what is your message?
jul
jul
>>>
================== RESTART: C:/Deepu/python/day2python/8.py ==================
Merry Swedish Christmas, what is your message?
christmas
jul
>>>
================== RESTART: C:/Deepu/python/day2python/8.py ==================
Merry Swedish Christmas, what is your message?
happy
gott
>>>
```
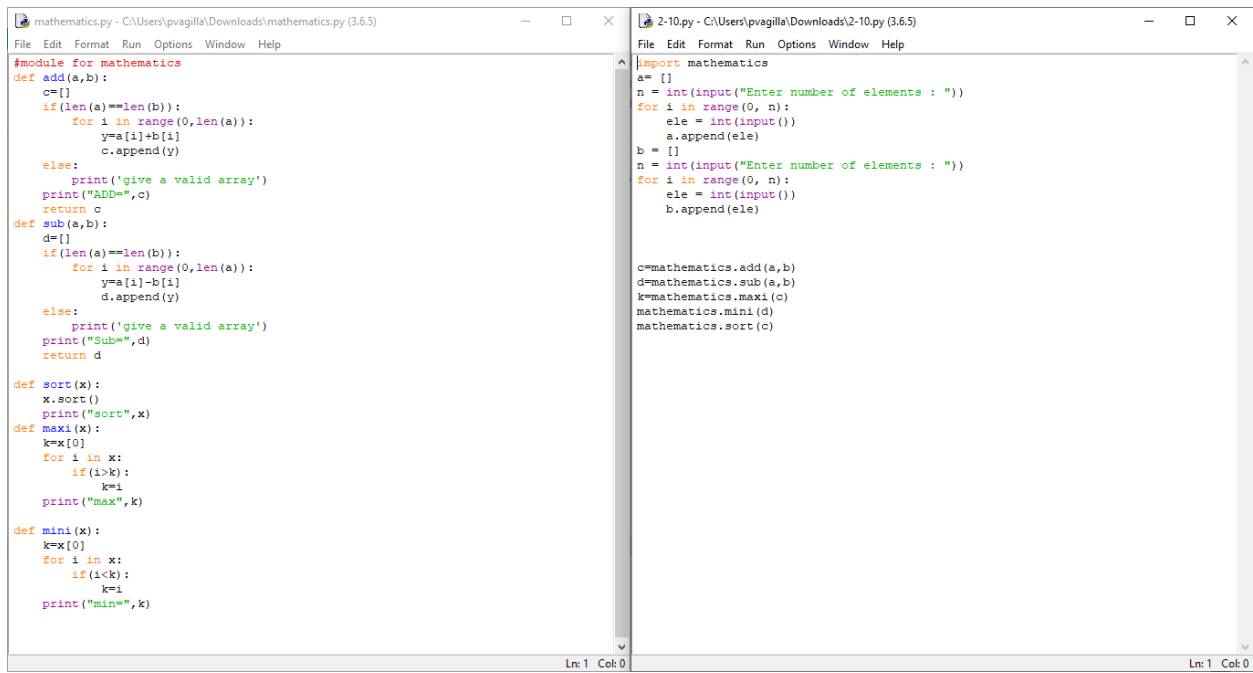
Ln: 18 Col: 4

9.

```
str=input("Enter your String:\n")
def char_frequency(str):
    dict = {}
    for n in str:
        keys = dict.keys()
        if n in keys:
            dict[n] += 1
        else:
            dict[n] = 1
    return dict
print(char_frequency(str))
```

```
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 17:00:18) [MSC v.1900 64 bit (AMD64
)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
==================== RESTART: C:/Deepu/python/day29.py ====================
Enter your String:
abbabcbdbabdbdbababbcbcbab
{'a': 7, 'b': 14, 'c': 3, 'd': 3}
>>>
```

10.

```
#module for mathematics
def add(a,b):
    c=[]
    if(len(a)==len(b)):
        for i in range(0,len(a)):
            y=a[i]+b[i]
            c.append(y)
    else:
        print('give a valid array')
    print("ADD=",c)
    return c
def sub(a,b):
    d=[]
    if(len(a)==len(b)):
        for i in range(0,len(a)):
            y=a[i]-b[i]
            d.append(y)
    else:
        print('give a valid array')
    print("Sub=",d)
    return d

def sort(x):
    x.sort()
    print("sort",x)
def maxi(x):
    k=x[0]
    for i in x:
        if(i>k):
            k=i
    print("max",k)

def mini(x):
    k=x[0]
    for i in x:
        if(i<k):
            k=i
    print("min=",k)
```

```
import mathematics
a= []
n = int(input("Enter number of elements : "))
for i in range(0, n):
    ele = int(input())
    a.append(ele)
b = []
n = int(input("Enter number of elements : "))
for i in range(0, n):
    ele = int(input())
    b.append(ele)




c=mathematics.add(a,b)
d=mathematics.sub(a,b)
k=mathematics.maxi(c)
mathematics.mini(d)
mathematics.sort(c)
```

```python
import mathematics
a= []
n = int(input("Enter number of elements : "))
for i in range(0, n):
    ele = int(input())
    a.append(ele)
b = []
n = int(input("Enter number of elements : "))
for i in range(0, n):
    ele = int(input())
    b.append(ele)


c=mathematics.add(a,b)
d=mathematics.sub(a,b)
k=mathematics.maxi(c)
mathematics.mini(d)
mathematics.sort(c)
```

```
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 17:00:18) [MSC v.1900 64 bit (AMD64
)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
=============== RESTART: C:\Users\pvagilla\Downloads\2-10.py ===============
Enter number of elements : 2
5
6
Enter number of elements : 2
4
9
ADD= [9, 15]
Sub= [1, -3]
max 15
min= -3
sort [9, 15]
>>>
```

11.


```
C:\Users\ragadt\Desktop>py array.py

Add two arrays
10

Maximum
19

Minimum
2

Sorting
[2, 3, 4, 19]

C:\Users\ragadt\Desktop>
```

```python
import mathematics

print("\n Add two arrays ")
print(mathematics.add_two([1,2],[3,4]))

print("\n Maximum ")
print(mathematics.maximum([19,2,3,4]))

print("\n Minimum ")
print(mathematics.minimum([19,2,3,4]))

print("\n Sorting ")
print(mathematics.sorting([19,2,3,4]))
```

12.

```
day2_11.py - C:/python lab/day2_11.py (3.6.5)

File  Edit  Format  Run  Options  Window  Help

import datetime
d=datetime.date(2019,9,12)
datetimeInstance=datetime.datetime.today()
dateInstance=datetimeInstance.date()
```

```
>>> print(d)
2019-09-12
>>> print(datetime.datetime(2019,9,12))
2019-09-12 00:00:00
>>> print(datetime.datetime(2019,9,12,10,11,20))
2019-09-12 10:11:20
>>> print(datetimeInstance)
2019-09-12 10:09:01.460841
>>> print(dateInstance)
2019-09-12
>>>
```
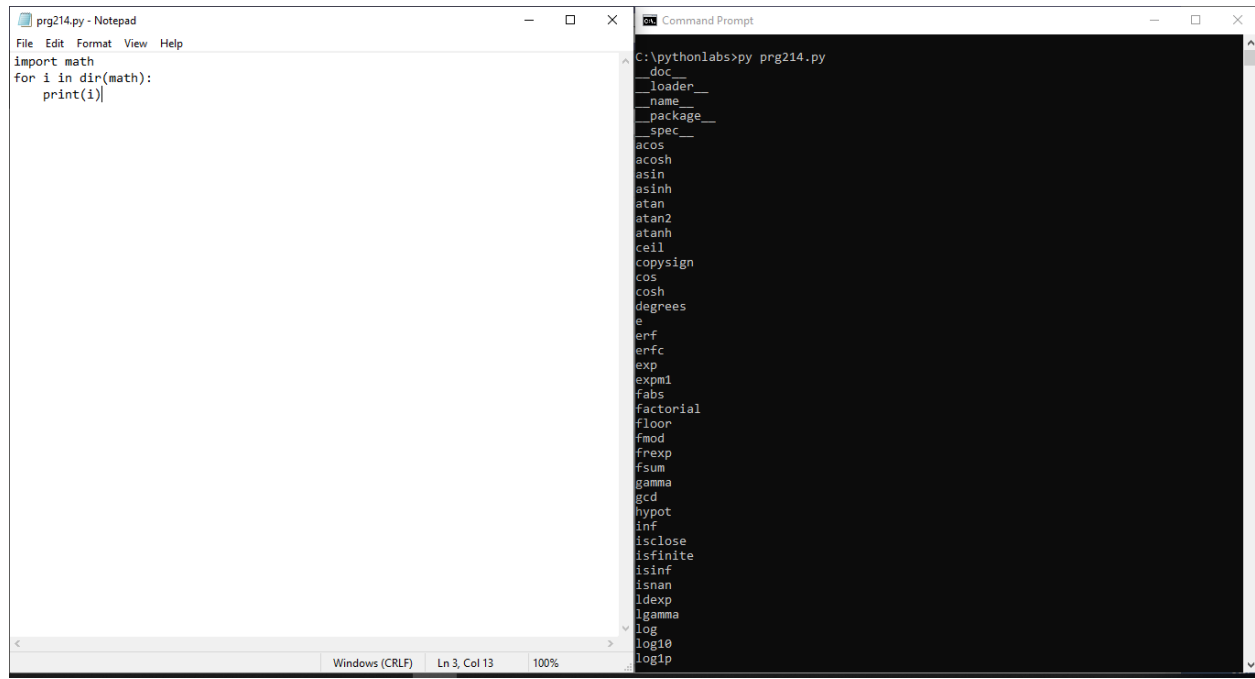
13.

```python
from shutil import copyfile;
print("Enter 'x' for exit.");
sourcefile = input("Enter source file name (copy from): ");
if sourcefile == 'x':
    exit();
else:
    destinationfile = input("Enter destination file name (copy to): ");
    copyfile(sourcefile, destinationfile);
    print("File copied successfully!");
    print("Want to display the content ? (y/n): ");
    check = input();
    if check == 'n':
        exit();
    else:
        c = open(destinationfile, "r");
        print(c.read());
        c.close();
```

```
C:\Users\ragadt\Desktop>py copies.py
Enter 'x' for exit.
Enter source file name (copy from): test.txt
Enter destination file name (copy to): out.txt
File copied successfully!
Want to display the content ? (y/n):
y
Hello world
This is Ragadharani....

C:\Users\ragadt\Desktop>
```
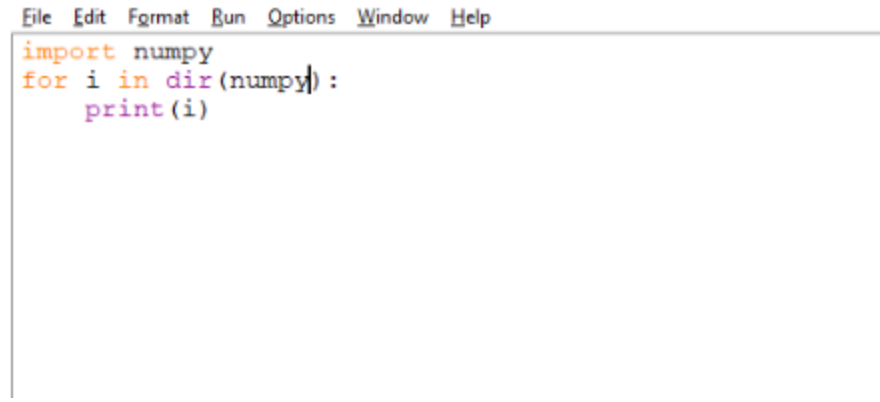
14.


```python
import math
for i in dir(math):
    print(i)
```

```
C:\pythonlabs>py prg214.py
__doc__
__loader__
__name__
__package__
__spec__
acos
acosh
asin
asinh
atan
atan2
atanh
ceil
copysign
cos
cosh
degrees
e
erf
erfc
exp
expm1
fabs
factorial
floor
fmod
frexp
fsum
gamma
gcd
hypot
inf
isclose
isfinite
isinf
isnan
ldexp
lgamma
log
log10
log1p
```

```python
import numpy
for i in dir(numpy):
    print(i)
```

```
typecodes
typename
ubyte
ufunc
uint
uint0
uint16
uint32
uint64
uint8
uintc
uintp
ulonglong
unicode
unicode_
union1d
unique
unpackbits
unravel_index
unsignedinteger
unwrap
ushort
vander
var
vdot
vectorize
version
void
void0
vsplit
vstack
warnings
where
who
zeros
zeros_like
>>>
```