

Program 1

Aim: Write a program to print the square of a number.

Source code:

```
# -*- coding: utf-8 -*-  
"""  
Created on Thu Jun 22 14:58:22 2023  
@author: it286  
"""  
num=int(input("Enter a number :"))  
y=str(num*num)  
print(y)
```

Output:

```
In [2]: runfile('Z:/II/python/1.py', wdir='Z:/II/python')  
  
Enter a number :5  
25
```

Program 2

Aim: Ask the user for a single complex number if the number entered was $1+2j$

1.Print 1 and 2.

2.Print the absolute value of this complex number

3.Print the complex number.

Source code:

```
# -*- coding: utf-8 -*-  
"""
```

```
Created on Thu Jun 22 14:52:31 2023
```

```
@author: it286
```

```
"""
```

```
z=input()  
z=complex(z)  
print(z.real,z.imag)  
print(abs(z))  
print(z.conjugate())
```

Output:

```
Python 3.6.5 |Anaconda, Inc.| (default, Mar 29 2018, 13:32:41) [MSC v.1900 64 bit (AMD64)]  
Type "copyright", "credits" or "license" for more information.
```

```
IPython 6.4.0 -- An enhanced Interactive Python.
```

```
In [1]: runfile('C:/Users/it286/.spyder-py3/2.py', wdir='C:/Users/it286/.spyder-py3')
```

```
1+2j  
1.0 2.0  
2.23606797749979  
(1-2j)
```

Program 3:**Aim:**Ask the user to enter an intefer(use an empty prompt)**Print true if the number is odd****Print False if the number is odd****Sourse code:**

-*- coding: utf-8 -*-

"""

Created on Thu Jun 22 15:06:44 2023

@author: it286

"""

x=int(input())

print(x%2==1)

Output:

In [3]: runfile('Z:/II/python/3.py', wdir='Z:/II/python')

56

False

In [4]: runfile('Z:/II/python/3.py', wdir='Z:/II/python')

57

True

Program 4

Aim: Ask the user to enter a name (use an empty prompt) print the name entered but in uppercase

Source code:

```
# -*- coding: utf-8 -*-  
"""
```

Created on Thu Jun 22 15:10:26 2023

```
@author: it286  
"""
```

```
n=input()  
print(n.upper())
```

Output:

```
In [5]: runfile('Z:/II/python/4.py', wdir='Z:/II/python')  
  
lokesh  
LOKESH
```

Program 5

Aim: Ask the user to enter a name and print it add an extension “.txt” to the name and print it. For example if the user enter ‘abc’ then print ‘abc.txt’.

Course Code:

```
# -*- coding: utf-8 -*-  
"""
```

Created on Thu Jun 22 15:14:10 2023

```
@author: it286  
"""
```

```
name=input()  
print(name+'.txt')
```

Output:

```
In [6]: runfile('Z:/II/python/5.py', wdir='Z:/II/python')  
  
file  
file.txt
```

Program 6

Aim: Ask the user to enter a string print the string without the

1.first character

2.last character

Print the string in reverse. Finally print every element character of the string starting from the last.

Source Code:

```
# -*- coding: utf-8 -*-  
"""
```

Created on Thu Jun 22 15:18:27 2023

```
@author: it286  
"""
```

```
name=input()  
print(name[1:])  
print(name[:-1])  
print(name[::-1])  
print(name[::-2])
```

Output:

```
In [7]: runfile('Z:/II/python/6.py', wdir='Z:/II/python')
```

```
Python Programming  
ython Programming  
Python Programin  
gnimmargorP nohtyP  
Pto rgann
```

Program 7

Aim: Ask the user to enter a string, count the number of vowels in the string, the code should be case-insensitive.

Source Code:

```
# -*- coding: utf-8 -*-  
"""
```

Created on Thu Jun 22 15:23:13 2023

```
@author: it286  
"""
```

```
x=input()  
x=x.lower()  
n=(x.count('a')+x.count('e')+x.count('i')+x.count('o')+x.count('u'))  
print(n)
```

Output:

```
In [8]: runfile('Z:/II/python/7.py', wdir='Z:/II/python')
```

```
lokesh  
2
```

```
In [9]: runfile('Z:/II/python/7.py', wdir='Z:/II/python')
```

```
aeioua  
6
```

Program 8

Aim: Ask the user to enter a string check if the substring 'abc' or 'def' exist in the string, if it does, print True else False.

Source Code:

```
# -*- coding: utf-8 -*-  
"""
```

Created on Thu Jun 22 14:52:31 2023

```
@author: it286  
"""
```

```
z=input()  
z=complex(z)  
print(z.real,z.imag)  
print(abs(z))  
print(z.conjugate())
```

Output:

```
In [10]: runfile('Z:/II/python/8.py', wdir='Z:/II/python')
```

```
abc  
True
```

```
In [11]: runfile('Z:/II/python/8.py', wdir='Z:/II/python')
```

```
lokesh  
False
```


Program 9

Aim: Given a 2 digit integer X, find the digits of the number, For example let us X=38
Find a way to get a=3 and b=8 using X print the digits one in each line.

Source code:

```
# -*- coding: utf-8 -*-  
"""
```

```
Created on Thu Jul 6 18:57:48 2023
```

```
@author: plope  
"""
```

```
x=int(input())  
a=x//10  
b=x%10  
print(a)  
print(b)
```

Output :

```
In [3]: runfile('Z:/IT/Y21AIT479/9.py', wdir='Z:/IT/Y21AIT479')
```

```
52
```

```
5
```

```
2
```

```
In [4]: runfile('Z:/IT/Y21AIT479/9.py', wdir='Z:/IT/Y21AIT479')
```

```
99
```

```
9
```

```
9
```


Program 10

Aim :Ask the user to enter an integer, if the number is positive ,print “positive”, if the number is negative print “negative of 10”, if the number is zero print “zero” finally print “done”.

Source code :

```
# -*- coding: utf-8 -*-  
"""
```

Created on Thu Jul 6 19:57:13 2023

```
@author: plope  
"""
```

```
x=int(input("Enter an integer :"))  
if x>0:  
    print("Positive")  
elif x<0:  
    print("Negative of",abs(x))  
else:  
    print("Zero")  
print("Done")
```

Output :

```
In [8]: runfile('Z:/IT/Y21AIT479/10.py', wdir='Z:/IT/Y21AIT479')  
Enter an integer :10  
Positive  
Done
```

```
In [9]: runfile('Z:/IT/Y21AIT479/10.py', wdir='Z:/IT/Y21AIT479')  
Enter an integer :-2569  
Negative of 2569  
Done
```

```
In [10]: runfile('Z:/IT/Y21AIT479/10.py', wdir='Z:/IT/Y21AIT479')  
Enter an integer :0  
Zero  
Done
```

Program 11

Aim : Ask the user to enter two integers one on each line say X and Y

If x is larger than y print “first” store the value of x in a variable highest, If y is larger than x print “second” store the value y in a variable highest, If they are equal print same store either as the highest. Finally print the square the number.

Source code :

```
# -*- coding: utf-8 -*-
"""
Created on Thu Jul  6 20:11:45 2023

@author: plope
"""
x=int(input("Enter 1st integer"))
y=int(input("Enter 2nd integer"))
if x<y:
    highest=y
elif x>y:
    highest=x
else:
    print("same")
    highest=x
print("Square of the number is:",highest*highest)
```

Output:

```
In [13]: runfile('Z:/IT/Y21AIT479/11.py', wdir='Z:/IT/Y21AIT479')
Enter 1st integer2
Enter 2nd integer3
Square of the number is: 9
```

```
In [14]: runfile('Z:/IT/Y21AIT479/11.py', wdir='Z:/IT/Y21AIT479')
Enter 1st integer19
Enter 2nd integer17
Square of the number is: 361
```

```
In [15]: runfile('Z:/IT/Y21AIT479/11.py', wdir='Z:/IT/Y21AIT479')
Enter 1st integer15
Enter 2nd integer15
same
Square of the number is: 225
```

Program 12

Aim : Python program to ask the user to enter integer separated by comma and print before and after sorting.

Source code :

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Thu Jul 6 20:25:15 2023
```

```
@author: plope
```

```
"""
```

```
x=input("Enter the integers separated by comma")
```

```
y=x.split(",")
```

```
print("Before sorting",y)
```

```
y.sort()
```

```
print("After sorting",y)
```

Output:

```
In [17]: runfile('Z:/IT/Y21AIT479/12.py', wdir='Z:/IT/Y21AIT479')
Enter the integers separated by comma10,25,12,05,23
Before sorting ['10', '25', '12', '05', '23']
After sorting ['05', '10', '12', '23', '25']
```

Program 13**Aim : Python program to sort the string and display 1st name name(string).****Source code :**

-*- coding: utf-8 -*-

"""

Created on Thu Jul 6 20:46:38 2023

@author: plope

"""

fri=['joseph','lokes','siva','anu']

fri.sort()

print(fri)

print(fri[1],)

Output:

```
In [18]: runfile('Z:/IT/Y21AIT479/13.py', wdir='Z:/IT/Y21AIT479')
['anu', 'joseph', 'lokes', 'siva']
joseph
```

Program 14

Aim : Write a python program to print the each letter in the string and count the each letter using for loop and while loop

Source code:

```
# -*- coding: utf-8 -*-  
"""
```

Created on Thu Jul 6 20:53:26 2023

@author: plope

```
"""
```

```
fruit='banana'
```

```
count=0
```

```
for letter in fruit:
```

```
    print(letter)
```

```
    count=count+1
```

```
print(count,"\n")
```

```
index=0
```

```
while index<len(fruit):
```

```
    letter=fruit[index]
```

```
    print(letter)
```

```
    index=index+1
```

Output:

```
In [23]: runfile('Z:/IT/Y21AIT479/14.py', wdir='Z:/IT/Y21AIT479')
```

```
b  
a  
n  
a  
n  
a  
6  
  
b  
a  
n  
a  
n  
a
```

Program 15**Aim : Write a python program to demonstrate the string slicing.****Source code:**

```
# -*- coding: utf-8 -*-  
"""
```

```
Created on Thu Jul 6 21:06:58 2023
```

```
@author: plope  
"""
```

```
s='MONTHLY PYTHON'  
print(s[0:4])  
print(s[6:7])  
print(s[6:20])  
print(s[:2])  
print(s[8:])  
print(s[:])
```

Output:

```
In [24]: runfile('Z:/IT/Y21AIT479/15.py', wdir='Z:/IT/Y21AIT479')  
MONT  
Y  
Y PYTHON  
MO  
PYTHON  
MONTHLY PYTHON
```

Program 16**Aim : Write a python program to sub string a string.****Source code:**

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Thu Jul 6 21:13:16 2023
```

```
@author: plope
```

```
"""
```

```
code='Banana'
```

```
fin=code.find('na')
```

```
print(fin)
```

```
aa=code.find('z')
```

```
print(aa)
```

```
print(code.find('a'))
```

Output:

```
In [25]: runfile('Z:/IT/Y21AIT479/16.py', wdir='Z:/IT/Y21AIT479')
```

```
2
```

```
-1
```

```
1
```


Program 17

Aim : Write a python program to count the number of odd numbers in a list.

Source code:

```
# -*- coding: utf-8 -*-  
"""
```

Created on Thu Jul 6 21:26:31 2023

```
@author: plope  
"""
```

```
list=[1,2,3,4,5,6,7,8,9]  
count=0  
for i in list:  
    if i%2==1:  
        count=count+1  
print(count)
```

Output:

```
In [27]: runfile('Z:/IT/Y21AIT479/17.py', wdir='Z:/IT/Y21AIT479')  
5
```

Program 18

Aim : Write python program to append string and integers into a list.

Source code:

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Thu Jul 6 21:30:37 2023
```

```
@author: plope
```

```
"""
```

```
stuff=[]
```

```
stuff.append('lok')
```

```
stuff.append('lok')
```

```
stuff.append(5)
```

```
print(stuff)
```

Output:

```
In [28]: runfile('Z:/IT/Y21AIT479/18.py', wdir='Z:/IT/Y21AIT479')
['lok', 'lok', 5]
```

Program 19

Aim : Write a python program to demonstrate the split function and perform operation on it.

Source code:

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Thu Jul 6 21:34:06 2023
```

```
@author: plope
```

```
"""
```

```
lst='file edit source run'
```

```
lst=lst.split()
```

```
print(lst)
```

```
print(len(lst))
```

```
print(lst[2])
```

```
for i in lst:
```

```
    print(i)
```

Output:

```
In [29]: runfile('Z:/IT/Y21AIT479/19.py', wdir='Z:/IT/Y21AIT479')
['file', 'edit', 'source', 'run']
4
source
file
edit
source
run
```

Program 20

Aim : Ask the user to enter an integer n store the square of all the odd number less than n in a list.

Source code:

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Thu Jul 6 21:40:10 2023
```

```
@author: plope
```

```
"""
```

```
n=int(input("Enter the integer"))
```

```
result=[]
```

```
for i in range(1,n,2):
```

```
    result.append(i*i)
```

```
print(result)
```

Output:

```
In [30]: runfile('Z:/IT/Y21AIT479/20.py', wdir='Z:/IT/Y21AIT479')
Enter the integer5
[1, 9]
```

```
In [31]: runfile('Z:/IT/Y21AIT479/20.py', wdir='Z:/IT/Y21AIT479')
Enter the integer10
[1, 9, 25, 49, 81]
```

Program 21

Aim : Ask the user to enter an inter n create a list of integer from 0 to n-1
Print the list.

Source code:

```
# -*- coding: utf-8 -*-  
"""
```

Created on Thu Jul 6 21:48:08 2023

```
@author: plope  
"""
```

```
n=int(input())  
x=list(range(n))  
print(x)
```

Output:

```
In [33]: runfile('Z:/IT/Y21AIT479/21.py', wdir='Z:/IT/Y21AIT479')  
10  
[0, 1, 2, 3, 4, 5, 6, 7, 8, 9]
```

Program 22

Aim: Ask the user to enter an integer $n(n \leq 1)$ store the first n numbers of the fibonacci series in a list, print the list.

Source code:

```
# -*- coding: utf-8 -*-  
"""  
Created on Thu Jul 6 22:01:59 2023  
  
@author: plope  
"""  
n=int(input("Enter number"))  
result=[0]  
a,b=0,1  
for i in range(n-1):  
    result.append(b)  
    a,b=b,a+b  
print(result)
```

Output:

```
In [35]: runfile('Z:/IT/Y21AIT479/22.py', wdir='Z:/IT/Y21AIT479')  
Enter number10  
[0, 1, 1, 2, 3, 5, 8, 13, 21, 34]
```

Program 23

Aim: Ask the user to enter a list of integers separated by spaces convert this into a list of integers by square each integer print list

Source code:

```
# -*- coding: utf-8 -*-  
"""  
Created on Thu Jul 6 22:45:25 2023  
  
@author: plope  
"""  
  
txt=input("Enter integers seperated by spaces")  
res=[]  
for i in txt.split():  
    x=int(i)  
    res.append(x)  
print(res)
```

Output:

```
In [41]: runfile('Z:/IT/Y21AIT479/23.py', wdir='Z:/IT/Y21AIT479')  
Enter integers seperated by spaces1 2 3 4  
[1, 2, 3, 4]
```


Program 24

Aim: Python program to insert two string as a group

Source code:

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Thu Jul 6 23:07:32 2023
```

```
@author: plope
```

```
"""
```

```
dt=[('lokes', 'peddimsetti'), ('peddimsetti', 'lokes')]
```

```
for x,y in dt:
```

```
    print(x,y)
```

Output:

```
In [42]: runfile('Z:/IT/Y21AIT479/24.py', wdir='Z:/IT/Y21AIT479')
lokes peddimsetti
peddimsetti lokes
```

Program 25

Aim: Python program to sort a given string by the user.

Source code:

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Thu Jul 6 23:14:08 2023
```

```
@author: plope
```

```
"""
```

```
n= input('enter a string :')
```

```
list=[]
```

```
for i in n:
```

```
    list.append(i)
```

```
list.sort()
```

```
print(list)
```

Output:

```
In [44]: runfile('Z:/IT/Y21AIT479/25.py', wdir='Z:/IT/Y21AIT479')
enter a string :hello
['e', 'h', 'l', 'l', 'o']
```

Program 26

Aim: Python program to demonstrate the dictionary function function .

Source code:

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Thu Jul 6 23:17:12 2023
```

```
@author: plope
```

```
"""
```

```
purse=dict()
```

```
purse['money']=2
```

```
purse['candy']=3
```

```
purse['tissue']=44
```

```
print(purse)
```

```
print(purse['candy'])
```

```
print(purse)
```

Output:

```
In [45]: runfile('Z:/IT/Y21AIT479/26.py', wdir='Z:/IT/Y21AIT479')
```

```
{'money': 2, 'candy': 3, 'tissue': 44}
```

```
3
```

```
{'money': 2, 'candy': 3, 'tissue': 44}
```

Program 27

Aim: Python program to demonstrate simple bus ticket booking program with dict() function.

Source code:

```
# -*- coding: utf-8 -*-
"""
Created on Thu Jul 6 23:31:39 2023

@author: plope
"""

import datetime
lst={'vizag':0,'rajahmundry':250,'amalapuram':320,'vijayawada':560,'bapatla':630}
src=input("Enter source")
dst=input("Enter destination")
distance=lst[src]-lst[dst]
if distance<0:
    distance*=-1
cost=distance*1.5
print('Date and time',datetime.datetime.now())
print('Amount',cost)
print("***Happy Journey***")
```

Output:

```
In [50]: runfile('Z:/IT/Y21AIT479/27.py', wdir='Z:/IT/Y21AIT479')
Enter sourcevizag
Enter destinationamalapuram
Date and time 2023-07-06 23:44:31.741884
Amount 480.0
***Happy Journey***
```

```
In [51]: runfile('Z:/IT/Y21AIT479/27.py', wdir='Z:/IT/Y21AIT479')
Enter sourceamalapuram
Enter destinationvizag
Date and time 2023-07-06 23:44:51.438573
Amount 480.0
***Happy Journey***
```

Program 28

Aim: Python program to check the occurrence of a string in a list.

Source code:

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Thu Jul 6 23:31:54 2023
```

```
@author: plope
```

```
"""
```

```
counts=dict()
```

```
names=['csev','cwen','csev','zqian','cwen']
```

```
for i in names:
```

```
    if i not in counts:
```

```
        counts[i]=1
```

```
    else:
```

```
        counts[i]+=1
```

```
print(counts)
```

Output:

```
In [48]: runfile('Z:/IT/Y21AIT479/28.py', wdir='Z:/IT/Y21AIT479')
{'csev': 2, 'cwen': 2, 'zqian': 1}
```

Program 29

Aim : Python program to insert a string in a dictionary by using get() function.

Source code:

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Thu Jul 6 23:35:26 2023
```

```
@author: plope
```

```
"""
```

```
counts=dict()
```

```
names=['csev','cwen','csev','zqian','cwen']
```

```
for i in names:
```

```
    counts[i]=counts.get(i,0)+1
```

```
print(counts)
```

Output:

```
In [49]: runfile('Z:/IT/Y21AIT479/29.py', wdir='Z:/IT/Y21AIT479')
{'csev': 2, 'cwen': 2, 'zqian': 1}
```

Program 30

Aim: Python program to count the no. of words given by the user separated by spaces.

Source code:

```
# -*- coding: utf-8 -*-  
"""  
Created on Thu Jul 6 23:47:32 2023
```

```
@author: plope  
"""  
  
count=dict()  
line=input("Enter a line of text")  
words=line.split()  
print("words :",words)  
print("counting...")  
for word in words :  
    count[word]=count.get(word,0)+1  
  
print("counts",count)
```

Output:

```
In [53]: runfile('Z:/IT/Y21AIT479/30.py', wdir='Z:/IT/Y21AIT479')  
Enter a line of textlokesh srinivas bhaskar  
words : ['lokesh', 'srinivas', 'bhaskar']  
counting...  
counts {'lokesh': 1, 'srinivas': 1, 'bhaskar': 1}
```

```
In [54]: runfile('Z:/IT/Y21AIT479/30.py', wdir='Z:/IT/Y21AIT479')  
Enter a line of textlok lok lok  
words : ['lok', 'lok', 'lok']  
counting...  
counts {'lok': 3}
```


Program 31

Aim: Python program to ask the number as input and store that number along with their squares.

Source code:

```
# -*- coding: utf-8 -*-  
"""  
Created on Fri Jul 7 09:22:26 2023  
  
@author: plope  
"""  
text=input("Enter the number separated by spaces").split()  
d={}  
for i in text:  
    x=int(i)  
    d[x]=x*x  
print(d)
```

Output:

```
In [2]: runfile('Z:/IT/Y21AIT479/31.py', wdir='Z:/IT/Y21AIT479')  
Enter the number separated by spaces2 3 5  
{2: 4, 3: 9, 5: 25}
```

Program 32

Aim: Create a mapping from 3 character month name to month number

Hint : for ex {'jan':1,'feb':2}

Source code:

```
# -*- coding: utf-8 -*-  
  
Created on Fri Jul 7 09:31:02 2023  
  
@author: plope  
  
list=['jan','feb','mar','apr','may','jun','july','aug','sep','oct','nov','dec']  
d={}  
j=1  
for i in list:  
    d[i]=list.index(i)+1  
m=input("Enter month")  
m=m.lower()  
m=m[0:3]  
print(d[m])
```

Output:

```
In [3]: runfile('Z:/IT/Y21AIT479/32.py', wdir='Z:/IT/Y21AIT479')  
Enter monthfebruary  
2
```

```
In [4]: runfile('Z:/IT/Y21AIT479/32.py', wdir='Z:/IT/Y21AIT479')  
Enter monthdecember  
12
```

Program 33

Aim: Ask the user to enter a string ,convert this to lower case,count the the number of occurrence of each character in the string.

Source code:

```
# -*- coding: utf-8 -*-
"""
Created on Fri Jul 7 10:06:07 2023
@author: plope
"""
d=dict()
n=[]
inp=input('Enter a string')
inp=inp.lower()
for i in inp:
    n.append(i)
for i in n:
    if i not in d:
        d[i]=1
    else:
        d[i]=d[i]+1
print(d)
print(sorted(d))
```

Output:

```
In [5]: runfile('Z:/IT/Y21AIT479/33.py', wdir='Z:/IT/Y21AIT479')
Enter a stringhello
{'h': 1, 'e': 1, 'l': 2, 'o': 1}
['e', 'h', 'l', 'o']

In [6]: runfile('Z:/IT/Y21AIT479/33.py', wdir='Z:/IT/Y21AIT479')
Enter a stringsrinivas
{'s': 2, 'r': 1, 'i': 2, 'n': 1, 'v': 1, 'a': 1}
['a', 'i', 'n', 'r', 's', 'v']
```

Program 34

Aim: Ask the user to enter a integer and print the multiplication table of that integer.

Source code:

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Fri Jul 7 10:22:11 2023
```

```
@author: plope
```

```
"""
```

```
n=int(input("Enter a number"))
```

```
i=1
```

```
while i<=10:
```

```
    print(n,'*',i,"=",i*n)
```

```
    i+=1
```

Output:

```
In [1]: runfile('Z:/IT/Y21AIT479/34.py', wdir='Z:/IT/Y21AIT479')
Enter a number5
5 * 1 = 5
5 * 2 = 10
5 * 3 = 15
5 * 4 = 20
5 * 5 = 25
5 * 6 = 30
5 * 7 = 35
5 * 8 = 40
5 * 9 = 45
5 * 10 = 50
```

Program 35

Aim: To write a python program to add two numbers using recursion.

Source code:

```
# -*- coding: utf-8 -*-  
"""  
Created on Fri Jul 7 10:35:15 2023  
  
@author: plope  
"""  
  
def add(a,b):  
    c=a+b  
    return c  
a=4  
print("Addition of two nos is",add(5,5))  
print(add(a,6))
```

Output:

```
In [2]: runfile('Z:/IT/Y21AIT479/35.py', wdir='Z:/IT/Y21AIT479')  
Addition of two nos is 10  
10
```

Program 36

Aim: To write a python program to define a function called power2() which takes no.arguments it should return a function which takes a single argument x but return 2^x

Source code:

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Fri Jul 7 10:46:06 2023
```

```
@author: plope
```

```
"""
```

```
def power2():
```

```
    def f(x):
```

```
        print(2**x)
```

```
        f(x)
```

```
x=int(input("Enter x value"))
```

```
print(pow(2,x))
```

Output:

```
In [4]: runfile('Z:/IT/Y21AIT479/36.py', wdir='Z:/IT/Y21AIT479')
```

```
Enter x value4
```

```
16
```

```
In [5]: runfile('Z:/IT/Y21AIT479/36.py', wdir='Z:/IT/Y21AIT479')
```

```
Enter x value0
```

```
1
```

Program 37

Aim: Write a python program to print fibonnic series upto n terms by taking n value by user, using a function

Source code:

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Fri Jul 7 10:49:28 2023
```

```
@author: plope
```

```
"""
```

```
def fib(n):
```

```
    a,b=0,1
```

```
    result=[0]
```

```
    for i in range(n-1):
```

```
        result.append(b)
```

```
        a,b=b,a+b
```

```
    print(result)
```

```
n=int(input("Enter a number"))
```

```
fib(n)
```

Output:

```
In [13]: runfile('Z:/IT/Y21AIT479/37.py', wdir='Z:/IT/Y21AIT479')
```

```
Enter a number5
```

```
[0, 1, 1, 2, 3]
```


Program 38

Aim: Write a python program called to_lower .It should be a single value of strings. The function should return list of strings but all in lower case.

Source code:

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Fri Jul 7 11:00:07 2023
```

```
@author: plope
```

```
"""
```

```
def to_lower(data):
```

```
    result=[]
```

```
    for x in data:
```

```
        result.append(x.lower())
```

```
    print(result)
```

```
d=(input("Enter list of strings separated by comma"))
```

```
a=d.split(",")
```

```
to_lower(a)
```

Output:

```
In [16]: runfile('Z:/IT/Y21AIT479/38.py', wdir='Z:/IT/Y21AIT479')
Enter list of strings separated by comma guntur,ponnur,bapatla,chirala,ongole
['guntur', 'ponnur', 'bapatla', 'chirala', 'ongole']
```

Program 39

Aim: Write a python program to read two numbers and perform addition on them

Source code:

```
# -*- coding: utf-8 -*-  
"""  
Created on Fri Jul 7 11:08:36 2023  
  
@author: plope  
"""  
a=int(input("enter any value"))  
b=int(input("enter other value"))  
print("addition of two numbers is",a+b)
```

Output:

```
In [34]: runfile('Z:/IT/Y21AIT479/39.py', wdir='Z:/IT/Y21AIT479')  
enter any value5  
enter other value10  
addition of two numbers is 15
```

Program 40

Aim: Write a python program to add 2 numbers using default arguments.

Source code:

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Fri Jul 7 11:08:36 2023
```

```
@author: plope
```

```
"""
```

```
def add(a=7,b=8):
```

```
    sum=a+b
```

```
    print("sum:",sum)
```

```
add(2,3)
```

```
add(a=2)
```

```
add()
```

Output:

```
In [18]: runfile('Z:/IT/Y21AIT479/40.py', wdir='Z:/IT/Y21AIT479')
```

```
sum: 5
```

```
sum: 10
```

```
sum: 15
```

Program 41

Aim: Write a python program to add two numbers using positional arguments

Source code:

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Fri Jul 7 12:08:09 2023
```

```
@author: plope
```

```
"""
```

```
def add(a,b):
```

```
    sum=a+b
```

```
    print("sum:",sum)
```

```
t=5
```

```
p=10
```

```
add(25,15)
```

```
add(t,p)
```

Output:

```
In [19]: runfile('Z:/IT/Y21AIT479/41.py', wdir='Z:/IT/Y21AIT479')
```

```
sum: 40
```

```
sum: 15
```

Program 42

Aim: Write a python program to print values using keyboard arguments

Source code:

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Fri Jul 7 12:10:45 2023
```

```
@author: plope
```

```
"""
```

```
def add(a,b,c,d,e):
```

```
    print(c,d,e)
```

```
add(d=9,c=2,a=7,b=2,e=8)
```

Output:

```
In [20]: runfile('Z:/IT/Y21AIT479/42.py', wdir='Z:/IT/Y21AIT479')
2 9 8
```

Program 43

Aim: Write a python program to perform average on three numbers.

Source code:

```
# -*- coding: utf-8 -*-  
"""  
Created on Fri Jul 7 15:24:30 2023  
  
@author: plope  
"""  
  
a=int(input("enter any value"))  
b=int(input("enter second value"))  
c=int(input("enter third value"))  
print("average of three numbers is",(a+b+c)/3)
```

Output:

```
In [35]: runfile('Z:/IT/Y21AIT479/43.py', wdir='Z:/IT/Y21AIT479')  
enter any value15  
enter second value10  
enter third value16  
average of three numbers is 13.666666666666666
```

Program 44

Aim: Write a python program to accept string count 20 no,of uppercase character program

Source code:

```
# -*- coding: utf-8 -*-  
"""  
Created on Fri Jul 7 11:37:42 2023  
@author: plope  
"""  
def fun(str1):  
    c,l=0,0  
    for i in str1:  
        if i.isupper():  
            c+=1  
        elif i.islower():  
            l+=1  
    print("No.of upper case characters",c)  
    print("No.of upper case characters",l)  
str=input("enter any string")  
fun(str)
```

Output:

```
In [22]: runfile('Z:/IT/Y21AIT479/44.py', wdir='Z:/IT/Y21AIT479')  
enter any stringLOKESH peddimsetti  
No.of upper case characters 6  
No.of upper case characters 11
```


Program 45

Aim: Write a python program to define function called message which contains 2 positional arguments,1 keyword argument ,function should print a message i.e types of arguments given in function.

Source code:

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Fri Jul 7 12:42:34 2023
```

```
@author: plope
```

```
"""
```

```
def greet(name,message='Hello'):
```

```
    return message+name
```

```
name=input("Enter name")
```

```
print(greet(name,'hi'))
```

```
print(greet(name))
```

Output:

```
In [23]: runfile('Z:/IT/Y21AIT479/45.py', wdir='Z:/IT/Y21AIT479')
Enter nameLokesh
hiLokesh
HelloLokesh
```

Program 46

Aim: Write a python program to demonstrate user define module.

Source code:

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Fri Jul 7 12:47:05 2023
```

```
@author: plope
```

```
"""
```

```
def dispaly_into(first_name,last_name):
```

```
    print('first_name:',first_name)
```

```
dispaly_into(last_name="peddimsetti",first_name="lokesh")
```

Output:

```
In [25]: runfile('Z:/IT/Y21AIT479/46.py', wdir='Z:/IT/Y21AIT479')  
first_name: lokesh
```

Program 47

Aim: Write a python program to add numbers using arbitrary arguments

Source code:

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Fri Jul 7 12:50:54 2023
```

```
@author: plope
```

```
"""
```

```
def sum(*numbers):
```

```
    result=0
```

```
    for num in numbers:
```

```
        result=result+num
```

```
    print("sum=",result)
```

```
sum(1,3,2)
```

```
sum(4,5)
```

Output:

```
In [26]: runfile('Z:/IT/Y21AIT479/47.py', wdir='Z:/IT/Y21AIT479')
sum= 6
sum= 9
```

Program 48

Aim: Write a python program to demonstrate user defined modules.

Source code:

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Fri Jul 7 13:32:24 2023
```

```
@author: plope
```

```
"""
```

```
def add(a,b):
```

```
    c=a+b
```

```
    return c
```

```
def sub(a,b):
```

```
    c=a-b
```

```
    return c
```

```
def mul(a,b):
```

```
    c=a*b
```

```
    return c
```

```
def div(a,b):
```

```
    c=a/b
```

```
    return c
```

```
def mod(a,b):
```

```
    c=a%b
```

```
    return c
```

```
# -*- coding: utf-8 -*-
```

```
"""
```

Created on Fri Jul 7 13:21:57 2023

@author: plope

```
"""
```

```
from arithmetic import *  
print("addition 10,10 is ",add(10,10))  
print("Subtraction of 20,5 is",sub(20,5))  
print("Multiplication of 10,5 is ",div(10,5))  
print("Module of 81,9 is",mod(81,9))
```

Output:

```
In [29]: runfile('Z:/IT/Y21AIT479/48.py', wdir='Z:/IT/Y21AIT479')  
addition 10,10 is  20  
Subtraction of 20,5 is 15  
Multiplication of 10,5 is  2.0  
Module of 81,9 is 0
```

Program 49

Aim: Write a python program to get current data and time.

Source code:

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Fri Jul 7 14:17:56 2023
```

```
@author: plope
```

```
"""
```

```
import datetime
```

```
t=datetime.datetime.now()
```

```
print(t)
```

Output:

```
In [31]: runfile('Z:/IT/Y21AIT479/49.py', wdir='Z:/IT/Y21AIT479')  
2023-07-07 14:19:48.007236
```

Program 50

Aim: write a python program to convert given string into datetime object.

Source code:

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Fri Jul 7 14:23:16 2023
```

```
@author: plope
```

```
"""
```

```
from datetime import datetime
```

```
d=input("Enter any time")
```

```
a=datetime.strptime(d,"%Y-%m-%d")
```

```
print(a)
```

Output:

```
In [33]: runfile('Z:/IT/Y21AIT479/50.py', wdir='Z:/IT/Y21AIT479')
Enter any time2023-03-12
2023-03-12 00:00:00
```


Program 51

Aim: Write a python program to subtract a week from given date.

Source code:

```
# -*- coding: utf-8 -*-  
"""  
  
Created on Fri Jul 7 15:28:56 2023  
  
@author: plope  
"""  
  
from datetime import datetime,timedelta  
d=datetime(2023,4,19)  
r=d-timedelta(days=7)  
print("subtract seven days from a given date is",r)
```

Output:

```
In [36]: runfile('Z:/IT/Y21AIT479/51.py', wdir='Z:/IT/Y21AIT479')  
subtract seven days from a given date is 2023-04-12 00:00:00
```

Program 52

Aim: Write a python program to add 10 days and 12 hrs to given day.

Source code:

```
# -*- coding: utf-8 -*-  
"""  
Created on Fri Jul 7 15:32:49 2023  
  
@author: plope  
"""  
  
from datetime import datetime,timedelta  
d=input("enter date(dd,mm,yyyy)")  
a=datetime.strptime(d,"%d %m %Y")  
print(a)  
r=a+timedelta(days=10,hours=12)  
print("After adding 10days and 12 hours",r)
```

Output:

```
In [37]: runfile('Z:/IT/Y21AIT479/52.py', wdir='Z:/IT/Y21AIT479')  
enter date(dd,mm,yyyy)06 07 2023  
2023-07-06 00:00:00  
After adding 10days and 12 hours 2023-07-16 12:00:00
```

Program 53

Aim: Write a python program to print fabinocci series by while loop.

Source code:

```
# -*- coding: utf-8 -*-  
"""  
Created on Fri Jul 7 15:37:15 2023  
  
@author: plope  
"""  
  
while True:  
    n=int(input("enter any value:"))  
    a,b=0,1  
    print(a,b)  
    c=a+b  
    while c<=n:  
        print(c,end=" ")  
        a=b  
        b=c  
        c=a+b  
        n+=1  
    ch=input("do you want to continue:Y/N")  
    if ch=='Y' or ch=='y':  
        continue  
    else:  
        break
```

Output:

```
In [67]: runfile('Z:/IT/Y21AIT479/53.py', wdir='Z:/IT/Y21AIT479')  
enter any value:3  
0 1  
1 2 3 5 do you want to continue:Y/Ny  
enter any value:10  
0 1  
1 2 3 5 8 13 do you want to continue:Y/N|
```

Program 54

Aim: Write a python program to print the dates from the given date to present date with a difference of 20 dates.

Source code:

```
# -*- coding: utf-8 -*-  
"""  
Created on Fri Jul 7 19:50:58 2023  
  
@author: plope  
"""  
  
from datetime import datetime,timedelta,date  
start_date=input("enter first date:(dd-mm-yyyy)")  
d=datetime.strptime(start_date,"%d %m %Y")  
for i in range(12):  
    r=d+timedelta(days=20*i)  
    result=r.strftime("%Y-%m-%d")  
    print(result)
```

Output:

```
In [46]: runfile('Z:/IT/Y21AIT479/54.py', wdir='Z:/IT/Y21AIT479')  
enter first date:(dd-mm-yyyy)30 01 2023  
2023-01-30  
2023-02-19  
2023-03-11  
2023-03-31  
2023-04-20  
2023-05-10  
2023-05-30  
2023-06-19  
2023-07-09  
2023-07-29  
2023-08-18  
2023-09-07
```

Program 55

Aim: Write a python program to calculate your age based on your date of birth.

Source code:

```
# -*- coding: utf-8 -*-  
"""  
Created on Fri Jul 7 22:10:12 2023  
  
@author: plope  
"""  
  
from datetime import datetime,date  
a=input("enter date of birth:(dd-mm-yyyy)")  
d=datetime.strptime(a,"%d-%m-%Y")  
print("dob is:",d)  
a1=input("enter current date:(dd-mm-yyyy)")  
d1=datetime.strptime(a1,"%d-%m-%Y")  
print("current date is:",d1)  
a2=((d1-d)/365).days  
print("your age is:",a2)
```

Output:

```
In [66]: runfile('Z:/IT/Y21AIT479/55.py', wdir='Z:/IT/Y21AIT479')  
enter date of birth:(dd-mm-yyyy)25-06-2004  
dob is: 2004-06-25 00:00:00  
enter current date:(dd-mm-yyyy)07-07-2023  
current date is: 2023-07-07 00:00:00  
your age is: 19
```

Program 56

Aim: Write a python program to print random date between 2 given dates.

Source code:

```
# -*- coding: utf-8 -*-  
"""  
Created on Fri Jul 7 20:07:15 2023  
  
@author: plope  
"""  
  
import random,datetime  
d1=input("enter 1st date(dd-mm-yyyy):")  
d2=input("enter 2nd date(dd-mm-yyyy):")  
d1=datetime.datetime.strptime(d1,"%d-%m-%Y")  
d2=datetime.datetime.strptime(d2,"%d-%m-%Y")  
if d1>d2:  
    d=d2  
    d3=d1-d2  
else:  
    d=d1  
    d3=d2-d1  
d3=(d3.days)+1  
d3=int(d3)  
print(random.randint(0,d3))
```

Output:

```
In [49]: runfile('Z:/IT/Y21AIT479/56.py', wdir='Z:/IT/Y21AIT479')  
enter 1st date(dd-mm-yyyy):23-06-2023  
enter 2nd date(dd-mm-yyyy):30-06-2023  
4
```

Program 57

Aim: Write a python program find all occurrences of 'a' in a given string.

Source code:

```
# -*- coding: utf-8 -*-
```

```
"""
```

Created on Fri Jul 7 20:13:39 2023

@author: plope

```
"""
```

```
import re
```

```
str="hi this is lokesh iam pursuing my B.Tech in bapatla engineering college"
```

```
l=re.findall("a",str)
```

```
print(l)
```

Output:

```
In [50]: runfile('Z:/IT/Y21AIT479/57.py', wdir='Z:/IT/Y21AIT479')  
['a', 'a', 'a', 'a']
```


Program 58

Aim: Write a python program to filter all elements that contains all elements a or w.

Source code:

```
# -*- coding: utf-8 -*-  
"""  
Created on Fri Jul 7 20:25:20 2023  
  
@author: plope  
"""  
  
import re  
n=input("enter list of strings seperated by comma")  
l=n.split(",")  
m=[]  
for s in l:  
    if re.search(r'a',s) or re.search(r'w',s):  
        m.append(s)  
print(m)
```

Output:

```
In [54]: runfile('Z:/IT/Y21AIT479/58.py', wdir='Z:/IT/Y21AIT479')  
enter list of strings seperated by comma lokesh,srinivas,bhaskar,fashion  
['srinivas', 'bhaskar', 'fashion']
```

Program 59

Aim: Write a python program to check if given strings b or not, then display no. of strings that with b.

Source code:

```
# -*- coding: utf-8 -*-  
"""
```

Created on Fri Jul 7 20:34:04 2023

```
@author: plope  
"""
```

```
import re  
n=input("enter the given string")  
l=n.split(",")  
cnt=0  
m=[]  
for s in l:  
    if re.search(r'^b',s):  
        cnt+=1  
print(cnt)  
for s in l:  
    if re.search(r'^b',s):  
        m.append(s)  
print(m)
```

Output:

```
In [55]: runfile('Z:/IT/Y21AIT479/59.py', wdir='Z:/IT/Y21AIT479')  
enter the given stringapple,banana,grapes  
1  
['banana']
```

Program 60

Aim: Write a python program to replace all occurances of 5 with five for given string.

Source code:

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Fri Jul 7 21:37:06 2023
```

```
@author: plope
```

```
"""
```

```
import re
```

```
n=input("enter any string")
```

```
print(re.sub(r'5',"five",n))
```

Output:

```
In [56]: runfile('Z:/IT/Y21AIT479/60.py', wdir='Z:/IT/Y21AIT479')
```

```
enter any stringthere 5 apples in that 1st room
```

```
there five apples in that 1st room
```

Program-61

Aim: Write a python program to generate a random integer between 1 to 100.

Source code:

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Fri Jul 14 12:02:06 2023
```

```
@author: plope
```

```
"""
```

```
import random
```

```
print(random.randint(1,100))
```

Output:

```
In [1]: runfile('Z:/IT/Y21AIT479/61.py', wdir='Z:/IT/Y21AIT479')
60
```

```
In [2]: runfile('Z:/IT/Y21AIT479/61.py', wdir='Z:/IT/Y21AIT479')
96
```

Program-62

Aim: write a python program to generate a five random integers from a given list of integers

Source code:

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Fri Jul 14 12:06:07 2023
```

```
@author: plope
```

```
"""
```

```
l=[22,4,23,3,10,11,12,88,99]
```

```
import random
```

```
print(random.sample(l,5))
```

Ouput:

```
In [3]: runfile('Z:/IT/Y21AIT479/63.py', wdir='Z:/IT/Y21AIT479')  
[23, 99, 12, 11, 10]
```

Program-63

Aim: Write a python program to generate a 6 digit a random integer

Source Code:

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Fri Jul 14 12:08:33 2023
```

```
@author: plope
```

```
"""
```

```
import random
```

```
print(random.randrange(100000,1000000))
```

Output :

```
In [4]: runfile('Z:/IT/Y21AIT479/64.py', wdir='Z:/IT/Y21AIT479')
607982
```

Program-64

Aim: Write a python program to generate random integer between -50 to 50 excluding 50, random integer between 5 to 50 excluding 50, random integers between 5 to 50 with step of 3.

Source code:

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Fri Jul 14 12:11:13 2023
```

```
@author: plope
```

```
"""
```

```
import random
```

```
print(random.randrange(-40,50))
```

```
print(random.randrange(4,50))
```

```
print(random.randrange(6,50,3))
```

Output:

```
In [6]: runfile('Z:/IT/Y21AIT479/65.py', wdir='Z:/IT/Y21AIT479')
15|
27|
9
```


Program-65

Aim:Write a python program to generate a random value from the string and list

Source Code:

```
# -*- coding: utf-8 -*-
```

```
"""
```

Created on Fri Jul 14 12:30:57 2023

@author: plope

```
"""
```

```
import random
```

```
print(random.choice("Lokesh"))
```

```
print(random.choice([1,3,5,7,9]))
```

Output:

```
In [9]: runfile('Z:/IT/Y21AIT479/66.py', wdir='Z:/IT/Y21AIT479')
```

```
s
```

```
7
```

```
In [10]: runfile('Z:/IT/Y21AIT479/66.py', wdir='Z:/IT/Y21AIT479')
```

```
h
```

```
9
```

Program-66

Aim:Write a python program to generate a random value from the list.

Source Code:

```
# -*- coding: utf-8 -*-  
"""  
  
Created on Fri Jul 14 12:34:28 2023  
  
@author: plope  
"""  
  
import random  
n=input("Enter any string separeted by commas:")  
l=n.split(",")  
print(random.sample(range(0,9),5))
```

Output:

```
In [14]: runfile('Z:/IT/Y21AIT479/67.py', wdir='Z:/IT/Y21AIT479')  
Enter any string separeted by commas:5,6,56,23  
[0, 1, 6, 2, 4]
```

Program-67

Aim: Write a python program to create a class named person,with firstname and lastname properites and a printname method

Source Code:

```
# -*- coding: utf-8 -*-  
"""  
Created on Fri Jul 14 12:41:16 2023  
  
@author: plope  
"""  
  
class person:  
    def __init__(self,fname,lname):  
        self.firstname=fname  
        self.lastname=lname  
    def printname(self):  
        print(self.firstname,self.lastname)  
x=person("Lokesh","Peddinsetti")  
x.printname()
```

Output:

```
In [15]: runfile('Z:/IT/Y21AIT479/68.py', wdir='Z:/IT/Y21AIT479')  
Lokesh Peddimsetti
```

Program-68

Aim: Write a python program to replace all occurrences of spaces, commas with underscore

Source Code:

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Fri Jul 14 12:46:47 2023
```

```
@author: plope
```

```
"""
```

```
import re
```

```
n=input("Enter a string separated by commas and spaces")
```

```
s=re.sub("[,]", "_", n)
```

```
print(s)
```

Output:

```
In [17]: runfile('Z:/IT/Y21AIT479/69.py', wdir='Z:/IT/Y21AIT479')
```

```
Enter a string separated by commas and spacesl,o,k,e,s,h
```

```
l_o_k_e_s_h
```

Program-69

Aim: Write a python program to find all five character word in a given paragraph

Source Code:

```
# -*- coding: utf-8 -*-  
"""
```

Created on Fri Jul 14 12:49:34 2023

@author: plope

```
"""
```

```
import re  
n=input("Enter a string")  
l=re.findall("[A-Za-z0_9]{5}",n)  
print(l)
```

Output:

```
In [18]: runfile('Z:/IT/Y21AIT479/untitled11.py', wdir='Z:/IT/Y21AIT479')  
Enter a stringlokes lokes srinivas  
['lokes', 'lokes', 'srini']
```

Program-70

Aim: Write a python program that matches a string has 'a' followed by 0 or more d's.

Source code:

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Fri Jul 14 12:54:41 2023
```

```
@author: plope
```

```
"""
```

```
import re
```

```
n=input("enter any string")
```

```
if re.search("ad*",n):
```

```
    print("match is found")
```

```
else:
```

```
    print("match is not found")
```

Output:

```
In [19]: runfile('Z:/IT/Y21AIT479/70.py', wdir='Z:/IT/Y21AIT479')
enter any stringadvance
match is found
```

```
In [20]: runfile('Z:/IT/Y21AIT479/70.py', wdir='Z:/IT/Y21AIT479')
enter any stringlokesk
match is not found
```