

Function

```
In [5]: def test1():  
        print(4)
```

```
In [7]: def test1():  
        print("this is my first function in python")  
        test1()  
  
this is my first function in python
```

```
In [9]: test1()  
  
this is my first function in python
```

```
In [ ]: a = 1
```

```
In [10]: b = test1()  ## variable name is given  
  
this is my first function in python
```

```
In [11]: b  ## calling b will not give you test1 () result
```

```
In [12]: print(b)  
  
None
```

```
In [13]: type(b)  ## type is none type bcz test1() is not defined  
  
Out[13]: NoneType
```

```
In [14]: def test2():  
        return(5)
```

```
In [15]: test2()  
  
Out[15]: 5
```

```
In [18]: type(test2)  
  
Out[18]: function
```

```
In [21]: def test3():  
        print("this is my print return")  
        test3()  
  
this is my print return
```

```
In [19]: type(test3)  
  
Out[19]: function
```

```
In [22]: e = test3()  
  
this is my print return
```

```
In [23]: e + "sudh"
```

```
-----  
TypeError                                Traceback (most recent call last)  
Input In [23], in <cell line: 1>()  
----> 1 e + "sudh"  
  
TypeError: unsupported operand type(s) for +: 'NoneType' and 'str'
```

because the variable are different str + none type

```
In [27]: def test4():  
        return("jyoti")  
  
p=test4()
```

```
In [28]: test4()
```

```
Out[28]: 'jyoti'
```

```
In [26]: p + "verma"
```

```
Out[26]: 'jyotiverma'
```

```
In [29]: def test5():  
        print("this is my python code")  
        test5()
```

```
this is my python code
```

```
In [33]: def test6():  
        return 1,3,[3,4,5,"sudh"],(3,4,5,6)  
        test6()
```

```
Out[33]: (1, 3, [3, 4, 5, 'sudh'], (3, 4, 5, 6))
```

```
In [35]: type(test6())
```

```
Out[35]: tuple
```

```
In [36]: test6()[1]
```

```
Out[36]: 3
```

```
In [37]: test6()[3]
```

```
Out[37]: (3, 4, 5, 6)
```

```
In [38]: def test7():  
        return 1,3,[3,4,5,"sudh"],(3,4,5,6)  
        test7()
```

```
Out[38]: (1, 3, [3, 4, 5, 'sudh'], (3, 4, 5, 6))
```

```
In [39]: a,b,c,d = test7() ## declairing a variable
```

```
In [40]: a
```

Out[40]: 1

In [41]: b

Out[41]: 3

In [42]: c

Out[42]: [3, 4, 5, 'sudh']

In [43]: d

Out[43]: (3, 4, 5, 6)

```
In [44]: def test8():  
         a= 4*5+8  
         return a
```

In [45]: test8()

Out[45]: 28

In [46]: test8() + 8

Out[46]: 36

In [47]: type(test8())

Out[47]: int

```
In [49]: l = [2,3,4,5,6,7,8,9]
```

```
a=0  
for i in l:  
    a = i + a  
print(a)
```

44

```
In [58]: def test9():  
         l = [2,3,4,5,6,7,8,9]  
         a=0  
         for i in l:  
             if type(i) == int:  
                 a = i + a  
         return a
```

In [53]: test9()

Out[53]: 44

```
In [55]: l1 = [4,5,6,7,7,8 , " kumar",4.56]
```

l1

Out[55]: [4, 5, 6, 7, 7, 8, ' kumar', 4.56]

```
In [59]: def test10(l):  
         l = [2,3,4,5,6,7,8,9]
```

```
a=0
for i in l:
    if type(i) == int:
        a = i + a
return a
```

In [60]: test10(l1)

Out[60]: 44

```
In [61]: def test11 (a,b):
         return a+b
```

In [62]: test11("jyoti","verma")

Out[62]: 'jyotiverma'

In [63]: test11(12,34)

Out[63]: 46

```
In [64]: l = [3,4,5,6,7,8, "sudh", 5,6,7,"kumar", "ineuron"]
         l
```

Out[64]: [3, 4, 5, 6, 7, 8, 'sudh', 5, 6, 7, 'kumar', 'ineuron']

```
In [72]: def test12(l):
         l1 = []
         for i in l:
             if type(i)==str:
                 l1.append(i)
         return l1
```

In [73]: test12(l)

Out[73]: ['sudh', 'kumar', 'ineuron']

```
In [74]: l2 = ["anchal", 5,6,7,"kumar", "ineuron"]
```

In [75]: l2

Out[75]: ['anchal', 5, 6, 7, 'kumar', 'ineuron']

In [76]: test12(l2)

Out[76]: ['anchal', 'kumar', 'ineuron']

1. write a function which will try to find out length of a string without using inbuilt len function

2. write a function which will be able to print an index of list element without using an index

function

3. write a function which will be able to print an ip address of your system
4. write a function which will shutdown your system
5. write a function which will take a input as a list with any kind of numeric value and give an out as a

multiplication of all the numeric data l = [3.5,6.56, "sudh", "ineuron" ,"fsda boot camp 2.0"]

6. write a function which will be able to read all the mails
7. write a function which will be able to send a mail to anyone
8. write a function which will be able to read doc/word file from your system

Solutions

1. write a function which will try to find out length of a string without using inbuilt len function

```
In [77]: def test(s):  
          count=0  
          for i in s:  
              if type (i) == str:  
                  count = count + 1  
          return count  
  
          test("jyoti")
```

Out[77]: 5

2. write a function which will be able to print an index of list element without using an index function

```
In [78]: l = [1,2,3,4,"jyoti", "verma"]
```

```
In [79]: def test1(li):  
         for i in range(0,len(li)):  
             print(li[i],":", i)
```

```
In [81]: test1(l)
```

```
1 : 0  
2 : 1  
3 : 2  
4 : 3  
jyoti : 4  
verma : 5
```

3. write a function which will be able to print an ip address of your system

```
In [82]: import socket  
         socket.gethostname(socket.gethostname())
```

```
Out[82]: '192.168.29.119'
```

```
In [83]: def test2():  
         ip = socket.gethostname(socket.gethostname())  
         return ip  
  
         test2()
```

```
Out[83]: '192.168.29.119'
```

4. write a function which will shutdown your system

```
In [ ]: import os  
  
         os.system()
```

```
In [84]: #the meaning of /s - shutdown  
         # the meaning of /r - restart  
         # the meaning of /t1 - timer
```

```
In [85]: ## command os.system ("shutdown /r /t4 ") shutdown the system in 4 sec
```

5. write a function which will take a input as a list with any kind of numeric value and give an out as a multiplication of all the numeric data l = [3.5,6.56, "sudh", "ineuron", "fsda boot camp 2.0"]

```
In [87]: l = [3.5,6.56, 4,5,"sudh", "ineuron", "fsda boot camp 2.0"]
```

```
In [88]: def test3(l):
          mul = 1
          for i in l:
              if type(i) == int or type(i) == float :
                  mul = mul*i
          return mul

          test3(l)
```

```
Out[88]: 459.19999999999993
```

6. write a function which will be able to read all the mails

```
In [ ]: #import smtplib
import time
import imaplib
import email
ORG_EMAIL = "@gmail.com"
FROM_EMAIL = 'sskumar9876@gmail.com'
FROM_PWD = 'rlplfdcoiqrugn'
SMTP_SERVER = "imap.gmail.com"
SMTP_PORT = 993
imaplib._MAXLINE = 400000000

#def read_email_from_gmail():
#    try:
        mail = imaplib.IMAP4_SSL(SMTP_SERVER)
        mail.login(FROM_EMAIL, FROM_PWD)
        mail.select('inbox')

        data = mail.search(None, 'ALL')
        mail_ids = data[1]
        id_list = mail_ids[0].split()
        first_email_id = int(id_list[0])
        latest_email_id = int(id_list[-1])

        # for i in range(latest_email_id, first_email_id, -1):
            data = mail.fetch(str(i), '(RFC822)')
            for response_part in data:
                arr = response_part[0]
                if isinstance(arr, tuple):
                    msg = email.message_from_string(str(arr[1], 'utf-8'))
                    email_subject = msg['subject']
```

```

        email_from = msg['from']
        print('From : ' + email_from + '\n')
        print('Subject : ' + email_subject + '\n')

    except Exception as e:
        traceback.print_exc()
        print(str(e))

read_email_from_gmail()

=====

import docx2txt
!pip install docx2txt

a = docx2txt.process('testword.docx')
print(a)

```

In []: *##Un comment all the code lines and you can run the code*

In []: *## when you will run the code you will be given error so
first you need to create app password in google account security section
you can craete any number of password
use google generated password inpassword section not your gamil account password*

7. write a function which will be able to send a mail to anyone

In []: `import smtplib ,ssl` *## simple mail transfer protocol Library*

In []: *## import smtplib , ssl*
`port = 465` *# For SSL*
`smtp_server = "smtp.gmail.com"`
`sender_email = "sskumar9876@gmail.com"` *# Enter your address*
`receiver_email = "sudhanshu@ineuron.ai"` *# Enter receiver address*
`#password = 'rlplfdcoiqruagn'`
`password = 'fdafasfas'`
`message = """this is my message from python code """`

`context = ssl.create_default_context()`
`with smtplib.SMTP_SSL(smtp_server, port, context=context) as server:`
 `server.login(sender_email, password)`
 `server.sendmail(sender_email, receiver_email, message)`

In [91]: *## these kind of codes you can copy or search from google you dodnot need to Learn

when you will run the code you will be given error so
first you need to create app password in google account security section
you can craete any number of password
use google generated password inpassword section not your gamil account password*

8. write a function which will be able to read doc/word file from your system

```
In [ ]: # import docx2txt if these libraries are not available in the system download by p
```

```
In [ ]: # a = doc2txt.process("testword.docx")  
  
# print(a)
```

```
In [ ]: # first create word doc file then upload the file in jupyter then run the above con
```

```
In [ ]:
```