

Random function

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1 random-Generates a random float number between 0.0 to 1.0

```
In [168]: from random import *
```

```
In [171]: for i in range(4):  
           print(random())
```

```
0.8627606672250178  
0.4446009573888279  
0.03625041304167498  
0.5060606972669259
```

2 randint()- Returns a random integer between the specified integers.

```
In [172]: print(randint(1,4))
```

```
4
```

```
In [173]: from random import *  
           for i in range(10):  
               print(randint(0,9)*6,sep=' ')
```

```
30  
54  
30  
6  
30  
36  
24  
30  
18  
18
```

```
In [ ]:
```

```
In [3]: from random import *
        for i in range(10):
            print(str(randint(0,9))*6,sep='')
```

```
666666
444444
000000
222222
222222
111111
888888
666666
777777
111111
```

```
In [4]: from random import *
        for i in range(10):
            print(randint(0,9),randint(0,9),randint(0,9),randint(0,9),randint(0,9),randint(0,9))
```

```
184041
712292
050283
127727
271022
924008
186403
319873
278310
171141
```

```
In [3]: #to generate OTP
        from random import *
        for i in range(10):
            print(randint(100000,999999),sep='')
```

```
287778
777975
703389
939640
497184
594759
780426
711123
127669
629695
```

```
In [248]: #to generate OTP
          from random import *
          for i in range(0,10):
              print(randint(000000,999999),sep='')
```

```
172442
366051
259387
141148
761836
725000
92872
599875
334334
221150
```

```
In [8]: from random import *
        list1=[]
        for i in range(0,6,2):
            print(randint(0,6))
```

```
0
3
6
```

3 random.randrange(): Returns a randomly selected element from the range created by the start, stop and step arguments

```
In [263]: print(randrange(1,100,11))
```

```
1
```

```
In [270]: for i in range(10):
           print(randrange(1,100,11))
```

```
23
78
12
34
23
1
67
12
1
1
```

4 random.shuffle(): This functions randomly reorders the elements in a list.

```
In [278]: list1=[87,423,457,89,234]
          shuffle(list1)
          list1
```

```
Out[278]: [87, 423, 89, 234, 457]
```

```
In [ ]:
```

5 random.choice()-Generate a random string of specific letters only

```
In [130]: import random
          #import string

          def get_alphaNumeric(stringLength):
              lettersAndDigits = string.ascii_letters + string.digits
              return ''.join((choice(lettersAndDigits) for i in range(stringLength)))

          print("First alphaNumeric Random String is ", get_alphaNumeric(6))
          print("Second alphaNumeric Random String is ", get_alphaNumeric(4))
          #print("Third alphaNumeric Random String is ", get_alphaNumeric(6))
```

```
First alphaNumeric Random String is  2aaoXc
Second alphaNumeric Random String is  Mwsp
```

```
In [145]: s='Priyanka'
          for i in range(6):
              print(choice(s))
```

```
a
a
P
y
i
a
```

```
In [165]: import random
          #import string

          def get_alphaNumeric(stringLength):
              lettersAndDigits = string.ascii_letters + string.digits
              for i in range(stringLength):
                  return choice(lettersAndDigits)
```

```

print("First alphaNumeric Random String is ", get_alphaNumeric(6))
print("Second alphaNumeric Random String is ", get_alphaNumeric(6))
print("Third alphaNumeric Random String is ", get_alphaNumeric(6))

```

```

First alphaNumeric Random String is  z
Second alphaNumeric Random String is  s
Third alphaNumeric Random String is  g

```

```

In [311]: list1=['Ram','Sham','Raj','Tam']
          #for i in range(5):
          print(choice(list1))

```

Tam

6 random sample()- When you don't want repeated characters in a random string use random.sample() function.

```

In [18]: import random
          import string

          # random string without repeating letters
          def randomString2(strlen=6):
              letters = string.ascii_uppercase
              return ''.join(sample(letters, strlen))

          print("Random String is ", randomString2(6))
          print("Random String is ", randomString2(6))

```

NameError Traceback (most recent call last)

```

<ipython-input-18-41addc9d83c8> in <module>
      7         return ''.join(sample(letters, strlen))
      8
----> 9 print("Random String is ", randomString2(6))
     10 print("Random String is ", randomString2(6))

<ipython-input-18-41addc9d83c8> in randomString2(strlen)
      5 def randomString2(strlen=6):
      6     letters = string.ascii_uppercase
----> 7     return ''.join(sample(letters, strlen))
      8
      9 print("Random String is ", randomString2(6))

```

```
NameError: name 'sample' is not defined
```

7 Generate a random password string with Special characters, letters, and digits

```
In [7]: import random
import string
```

```
def randomStringwithDigitsAndSymbols(stringLength):
    password_characters = string.ascii_letters + string.digits + string.punctuation
    return ''.join(random.choice(password_characters) for i in range(stringLength))

print("Generating Random String password with letters, digits and special characters ")
print ("First Random String ", randomStringwithDigitsAndSymbols(8) )
print ("Second Random String", randomStringwithDigitsAndSymbols(8) )
print ("Third Random String", randomStringwithDigitsAndSymbols(8) )
```

```
Generating Random String password with letters, digits and special characters
First Random String  ^9h,5(Ue
Second Random String _bh!u+~N
Third Random String V*]B?Acu
```

8 Generate a secure random string and password

9 Use the secrets module to generate a secure random string

```
In [12]: import string
import secrets
```

```
def random_secure_string(stringLength):
    secureStr = ''.join((secrets.choice(string.ascii_letters) for i in range(stringLength)))
    return secureStr

print("First secure random String is ", random_secure_string(6))
print("Second secure random String is ", random_secure_string(6))
```

```
First secure random String is  LEBXvR
Second secure random String is  YGaCdN
```

10 to generate CAPTCHA

ex: A2C4T7

```
In [36]: import random
        uppr=['A','B','C','D','E']
        lwr=['a','b','c','d']
        nos=[1,2,3,4,5]
        spl=['@','#','-','$','*']

        passwd=random.choice(uppr)+str(random.choice(nos))+random.choice(uppr)+str(random.choice(nos))
        print(passwd)
```

B3C5E5

```
In [40]: import random
        uppr=string.ascii_uppercase
        nos=string.digits

        passwd=random.choice(uppr)+str(random.choice(nos))+random.choice(uppr)+str(random.choice(nos))
        print(passwd)
```

Z5Z500

```
In [14]: import random
        import string
        uppr=string.ascii_uppercase
        nos=string.digits
        captcha=random.randint(0,27)
        print(captcha)
```

8