

In [1]: *#Generating a Single Random Number*

```
import random
n = random.random()
print(n)
```

0.9300169154008225

In [3]: *#Generating Number in a Range*

```
import random
n = random.randint(0,22)
print(n)
```

5

In [5]: *#Generating a List of numbers Using For Loop*

```
import random
randomlist = []
for i in range(0,5):
    n = random.randint(1,30)
    randomlist.append(n)
print(randomlist)
```

[16, 7, 20, 30, 12]

In [6]: *#Using random.sample()*

```
import random
#Generate 5 random numbers between 10 and 30
randomlist = random.sample(range(10, 30), 5)
print(randomlist)
```

[13, 26, 15, 22, 16]

In [9]: *#choice(): This function can be used to generate one random number from a collection of numbers.*

```
print ("A random number from list : ",end="")
print (random.choice([1, 4, 6, 100, 31]))
```

A random number from list : 6

In [16]: *#randrange(beg, end, step)*

```
print ("A random number from range : ",end="")
print (random.randrange(2, 10, 3))
```

A random number from range : 8

```
In [17]: #random(): This function generates a float random number less than 1 and also greater than or equal to 0.
print ("A random number between 0 to 1 : ", end="")
print (random.random())
```

A random number between 0 to 1 : 0.20981984493071748

```
In [18]: #shuffle(): This function shuffle the list and randomly arrange them.
list = [1, 3, 5, 10, 4]
print (" list before shuffling : ", end="")
for j in range(0, len(list)):
    print (list[j], end=" ")
print("\r")
random.shuffle(list)
print ("list after shuffling : ", end="")
for j in range(0, len(list)):
    print (list[j], end=" ")
print("\r")
```

list before shuffling : 1 3 5 10 4
list after shuffling : 5
4
10
3
1

```
In [20]: #uniform(a, b): This function generates a floating point number randomly between the numbers mentioned in arguments.
# It takes two arguments, lower limit and upper limit.

print (" random floating point number between 6 and 11 is : ",end="")
print (random.uniform(6,11))
```

random floating point number between 6 and 11 is : 8.45527312954621

```
In [22]: #The random module in Numpy package contains many functions for generation of random numbers
#numpy.random.rand() - Create an array of the given shape and populate it with random samples
import numpy as np
np.random.rand(3,2)
```

```
Out[22]: array([[0.51524701, 0.52055669],
               [0.90471859, 0.19392054],
               [0.78227975, 0.90496241]])
```

```
In [23]: #numpy.random.randn() - Return a sample (or samples) from the "standard normal" distribution.
np.random.randn()
```

```
Out[23]: -0.9776689349707133
```

```
In [24]: #numpy.random.randint() - Return random integers from low (inclusive) to high (exclusive).  
np.random.randint(5, size=(2, 4))
```

```
Out[24]: array([[3, 1, 0, 2],  
               [0, 1, 1, 1]])
```

```
In [25]: #numpy.random.random() - Return random floats in the half-open interval [0.0, 1.0).  
np.random.random_sample()
```

```
Out[25]: 0.8201810572399324
```