The `random` module

Another commonly used module is the `random` module

In [2]:

```
'''
The random() function in the random module generates a pseudorandom floating point number between
0 ≤ x < 1.
'''
from random import random
for j in range(5):
    for i in range(5):
        print(random())
    print()
```

```
0.6114589377753683
0.8205015419456114
0.5641102730766103
0.4896192413215571
0.09130744758773612

0.23162662504147502
0.24194193090559124
0.19267331687954503
0.2671388674184336
0.19891798291283092

0.03979980021284257
0.10823232927130344
0.005970106658606311
0.33570757174349686
0.15771105376567174

0.3879191424651862
0.823572523359328
0.4050205910548019
0.27783247044230475
0.287329357626255

0.6409150673500316
0.09785419530881856
0.12140113694957311
0.7255148682299323
0.9239560157651879
```

In [5]:

```
'''
The randrange() function accepts two integer values, x and y, as arguments.  The function will ret
urns a pseudorandom integer
value within the specified range. The return value is a number between x and y. x is optional and
defaults to 0.
'''
from random import randrange # We first import the randrange function from the random module
for i in range(26):          # This statements defines the loop
    print(randrange(10, 21)) # This statement generates a random number between 10 and 20
(inclusive)
    print(randrange(12))     # This statement generates a random number between 0 and 11
(inclusive)
```

```
14
6
16
2
15
7
15
2
```

```
12
5
10
1
13
1
20
11
20
6
15
3
13
5
16
5
19
7
20
8
10
9
17
5
15
5
12
4
17
10
14
2
19
4
10
11
20
6
20
10
14
9
18
6
```

In [3]:

```
'''
The seed() function sets the random number seed.  In the example below, we generate 3 groups of ra
ndom numbers
with each group containing 3 random numbers.  Since we start with the same seed for each group, ea
ch group will contain
the same 3 random numbers.
'''
from random import seed, random
for i in range(3): # This is the loop for each group
    seed(352) #  The seed is the same each time
    for j in range(3): #This is the loop for generating a random number
        print(random())
    print()
```

```
0.8883999756302563
0.14332137064663464
0.06340687470740514

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0.14332137064663464
0.06340687470740514

0.8883999756302563
0.14332137064663464
0.06340687470740514
```

In [4]:

```
'''
The seed() function sets the random number seed.  In the example below, we generate 3 groups of ra
ndom numbers
with each group containing 3 random numbers.  In this cell we start with a different seed each tim
e and therefore,
the random numbers across the groups will not be the same.
'''
from random import seed, random
for i in range(3):
    seed(i*352) #  The seed is different each time
    for j in range(3):
        print(random())
    print()
```

```
0.8444218515250481
0.7579544029403025
0.420571580830845

0.8883999756302563
0.14332137064663464
0.06340687470740514

0.8408946664827249
0.37294523207786356
0.7401939076674109
```

In [1]:

```
'''
The choice() function randomly selects one element from a collection of elements
'''
from random import choice
for i in range(10):
    print(choice(['one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight', 'nine', 'ten']))
```

```
three
one
ten
four
two
three
four
two
two
three
```