Random Module

In [5]:

```python
import random
#randint(a,b) gives ramdom number which ranges between a and b
random_integer = random.randint(1,10)
print(random_integer)
```

4

In [7]:

```python
#random() gives a decimal number between (0.0, 1.0)  by default
random_float = random.random()
print(random_float)
```

0.5263103349215588

In [8]:

```python
#random()*x gives random decimal number lies between (0.0, x.0)
random_float_5 = random.random()*5
print(random_float_5)
```

4.410377157282309

Task

To write a virtual coin task program. It will randomly tell the user "Heads or Tails"

Important

The first letter should be Capital.

Generate a random number 0/1 and use 0 as Heads and 1 as Tails

In [19]:

```python
import random
print("..WELCOME TO VIRTUAL TOSS..")      #label

toss = random.randint(0,1)                #generating a random number
if toss == 1:                             #mapping 1 as Tails
    print("Tails")
else:                                     #mapping 0 as Heads
    print("Heads")
```

```
..WELCOME TO VIRTUAL TOSS..
Heads
```

Lists

In [21]:

```python
tamilnadu = ['chennai','coimbatore','madurai']   #list
print(tamilnadu)
```

```
['chennai', 'coimbatore', 'madurai']
```

In [22]:

```python
# .append(x) adds x to the list
# x may be any datatype
tamilnadu.append('salem')
print(tamilnadu)
```

```
['chennai', 'coimbatore', 'madurai', 'salem']
```

In [23]:

```python
# .insert(i,x) adds x to the list at the 'i' th index
# .remove(x) removes x in the list
```

In [24]:

```python
# list[i] gives the 'i'th element in the list
tamilnadu[2]
```

Out[24]:

```
'madurai'
```

Task

To write a code which will select a random name from a list of names. The person seleccted will have to pay for everybody's food bill.

Hint

1. Get everybody's name seperated by a comma and space (", ")
2. Use .split(", ") to convert the string into a list which seperates by identifying the cheracters given in the brackets

In [30]:

```python
# getting everybody's name as single string
names_string = input("Enter everyone's names seperated by ',' and ' ' :")
# converting the string into list
name_list = names_string.split(", ")
print(f"List of peoples are ==> {name_list}")

# random selection
import random
# random.sample(list, x) gives random "x" no of elements in the "list"
random_person = random.sample(name_list,1)
print(random_person[0],"should pay the bill for all")
```

```
Enter everyone's names seperated by ',' and ' ' :aswin, hritick, karthi
List of peoples are ==> ['aswin', 'hritick', 'karthi']
karthi should pay the bill for all
```

In [31]:

```python
# list inside a list is known as nested list
fruits = ['apple','banana','cucumber']    # list 1
vegetables = ['onion','brinjal']          # list 2
# combining 2 lists we get nested list
list_nest = [fruits, vegetables]
print(list_nest)
```

```
[['apple', 'banana', 'cucumber'], ['onion', 'brinjal']]
```

Task

To write a program which will mark a spot with an 'x'.

The map is made of 3 rows of 0s

[0,0,0]

[0,0,0]

[0,0,0]

The program should allow you to enter the position of the treasure using a two-digit system.

The first digit is the horizontal column and the seccond digit is the Vertical row number.

In [33]:

```python
# don't change this code below
row1 = [0,0,0]
row2 = [0,0,0]
row3 = [0,0,0]
map = [row1,row2,row3]
print("map",f"\n{row1}\n{row2}\n{row3}")
position = input("where do you need to keep the treasure:?")
print(f"the position of the treasure that you need is {position}")
# don't change this code above
# your code
column = int(position[0])-1          # -1 because programming counts from 0
row = int(position[1])-1
map[column][row] = 'X'
print("the map containing treasure",f"\n{row1}\n{row2}\n{row3}")
```

```
map
[0, 0, 0]
[0, 0, 0]
[0, 0, 0]
where do you need to keep the treasure:?32
the position of the treasure that you need is 32
the map containing treasure
[0, 0, 0]
[0, 0, 0]
[0, 'X', 0]
```