Python Random Number Generator

Back-to-Basics Series

Python's Random Number

Random number or data generated by **Python's random** module is not **truly random**, it is pseudo-**random** (it is PRNG), i.e. deterministic. It produces the numbers from some value.

This value is nothing but a seed value. Numbers generated by the random module depend on the seed value.

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Generally, the seed value is the previous number generated by the generator. However, When the first time you use the generator, there is no previous value. So **by-default current system time is used as a seed value.** Using a custom seed value, we can initialize the pseudo-random number generator the way we want.

Let see how to use the random.seed() function.

Python's Random Number

```
seed(n)

random()

randint(a,b)

choice(seq) and choices(seq, k=n)

normalvariate(mean,sd)
```

1. Generate Random Number

Syntax:

```
from random import random
seed(30)              # optional
x = random()      # [0,1) : 0 included,
print(x)                        1 excluded
```

2. Generate Random Integer

Syntax:

```
from random import randint

x = randint(1,10)    # 1,10 inclusive

print(x)
```

3. Random Choice(s) From a List

Syntax:

```
from random import choice, choices

lst = ['Adam', 'Bob', 'Charles']

single = choice(lst)

pair = choices(lst, k=2)

print(single, pair)
```

4. Generate Normally Distributed Numbers

Syntax:

```
from random import normalvariate

lst = []

for i in range(1000):          # mean=50

    x = normalvariate(50,7)  # sd=7

    lst.append(x)

return lst
```

The End