Python Arrays

Lawrence To

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This assignment is for finding the random numbers, finding the average of numbers, and finding the various of numbers. In the 1st case, the python code can be use for lottery. In the 2nd case, teacher can use the python code to find the average grade that the class got and in order to curve it. In fact, the main reason for us to create the python code is to make people's life easier!

RANDOM NUMBERS/ AVERAGE OF NUMBERS/ VARIOUS

```
import random
for i in range(20):
    print random.uniform(0.0,100.0)
```

First we set the range of 20 is i. Then, we set i in the range of 100 and then print i. If the code is right, we should get 20 random numbers that is from 0 to 100.

```
20 random numbers(the result will never be the same)
```

20 randoms number from 0 to 100.

```
import random
a=[]

for i in range(20):
    a=a+[random.uniform(0.0,100.0)]

print sum(a)/20
```

The same method as the last code. First, we set i in the same range and divide it into 20 parts. Consequently, we can get the avg of the 20 random numbers.

```
The result is around 50
```

The avg of the numbers in my own method.

```
s=0.0
for i in range(len(a)):
    s=s+a[i]
avg=s/len(a)

print avg
```

The same method as last code. We set i and divide into 20 parts. However, in this method, we put the length of the array at the bottom of the ratio instead of 20.

```
The result is around 50
```

The avg of the numbers.

```
s1=0.0
for i in range(len(a)):
    s1=s1+a[i]*a[i]

avgS=s1/len(a)

var=avgS-avg*avg

print var

stddev=var**(0.5)

print stddev
```

We find the avg of 20 numbers and then we want to find the various of the 20 numbers as well. Because Var=Avg-Avg*Avg, we put the avg we found in to the equation then we can find out the various of the 20 numbers.

```
The result will be around 20 to 30
```

The various of the numbers.

REFERENCES