Random numbers generator

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It is going to generate random numbers and shows the mean, variance and standard deviation of the numbers.

Figure 1: This is a margin figure. Here is where you put the caption for your margin figure.

COMMAND LINE STUFF

Here are the explanation of the lines

" import random "- We have to use this code before we want to generates ramdom numbers.

There are different ways to do it, this is one of all.

" for i in range(20):
    a=a+[random.randint(0,100)] "- This is the way to generate 20 randoms numbers into the array.

" for i in range(len(a)):
    s=s+a[i]
    avg=s/len(a) "- This find the mean of the numbers.

" for i in range(len(a)):
    s1=s1+(a[i]-avg)**2
    var=s1/len(a) "- It finds the variance of the random numbers.

" stddev=var**(0.5) "- This is the formula to find the standard deviation.

THE PYTHON CODE

```
import random

a=[]

for i in range(20):
    a=a+[random.randint(0,100)]

print "The random numbers are "+str(a)

s=0.0

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

print "The mean is "+str(avg)

s1=0.0


for i in range(len(a)):
    s1=s1+(a[i]-avg)**2
    var=s1/len(a)

print "The variance is "+str(var)

stddev=var**(0.5)
print "The standard deviation is "+str(stddev)
```

note: "randint" can change to "uniform" to get decimal.

```
The random numbers are [75, 60, 75, 42, 40, 69, 21, 49, 29,
12, 62, 21, 41, 33, 63, 10, 88, 35, 86, 56]
The mean is 48.35
The variance is 533.6275
The standard deviation is 23.1003787848
```

Here is an example of the output of the program.