In [1]:
```
from random import seed
```

In [4]:
```
from random import seed, sample
seed(1009) # use a random seed for replicability
ran_list1  = sample(range(0, 100, 1), 50)
print(ran_list1)
# Here I used numbers from 0 to 100, counting one by one, and extracted 50 randomly pi
```

```
[23, 1, 62, 9, 94, 66, 61, 21, 64, 30, 27, 35, 11, 4, 26, 25, 74, 96, 63, 20, 65, 12,
73, 43, 59, 98, 79, 17, 45, 72, 70, 58, 89, 54, 2, 92, 68, 29, 19, 93, 69, 13, 85, 9
9, 91, 55, 77, 28, 34, 75]
```

In [6]:
```
import random
random.seed(1009)
ran_list2 = []
for i in range(1, 50):
    ran_list2.append(random.randint(0, 100))

print(ran_list2)
```

```
[23, 1, 62, 9, 94, 66, 61, 21, 64, 98, 98, 30, 27, 35, 11, 4, 26, 25, 74, 9, 86, 63,
20, 65, 95, 12, 73, 43, 59, 1, 65, 17, 76, 45, 80, 17, 17, 88, 81, 58, 99, 27, 54, 2,
100, 21, 58, 58, 38]
```

In [7]:
```
# Calculating the mean value for the list by looping through its elements.
# Here I calculated the mean value for the all values from the list.
# By default, the mean value is the sum of all values divided by the total number of v
import statistics
list = [23, 1, 62, 9, 94, 66, 61, 21, 64, 98, 98, 30, 27, 35, 11, 4, 26, 25, 74, 9, 86
list_avg = statistics.mean(list)
print('The average of the numbers in the list is: ', list_avg)
```

```
The average of the numbers in the list is:  48.08163265306123
```

In [ ]:
```
# The above result for the mean value indicates that 48.08163265306123
# represents the average value of the selected list of numbers.
```

In [8]:
```
# Calculating the variance of the list.
# Variance is a measure of dispersion that takes into account the spread of all data p
# Basically, arince
list = [23, 1, 62, 9, 94, 66, 61, 21, 64, 98, 98, 30, 27, 35, 11, 4, 26, 25, 74, 9, 86
mean = sum(list) / len(list)
res = sum((i - mean) ** 2 for i in list) / len(list)
print("The variance of list is : " + str(res))
```

```
The variance of list is : 949.5035401915865
```

In [ ]:
```
# The above result for the variance indicates that 949.5035401915865
# is our measure of how data points (from the list) differ from the mean value.
```

In [ ]:
```
# These results in Jupiter Notebook will be saved in pdf version and uploaded on GitHu
```