Statistics Module

The statistics module provides functions to mathematical statistics of numeric data.

1. Mean

The mean() method calculates the arithmetic mean of the numbers in a list.

mean() method calculates the mean (average) of the given data set.

Mean = add up all the given values, then divide by how many values there are.

```
import statistics as st


a=st.mean([12,45,43,6])
print(a)
```

2. Median

The median() method returns the middle value of numeric data in a list.

median() method calculates the median (middle value) of the given data set.

This method also sorts the data in ascending order before calculating the median.

Tip: The mathematical formula for Median is: Median = {(n + 1) / 2}th value, where n is the number of values in a set of data. In order to calculate the median, the data must first be sorted in ascending order. The median is the number in the middle.

Note: If the number of data values is odd, it returns the exact middle value. If the number of data values is even, it returns the average of the two middle values.

```
import statistics as st

a=st.median([1,2,3,8,9,5])
print(a)
```

3. Mode() Method

mode() method calculates the mode (central tendency) of the given numeric or nominal data set.

The mode() function returns the most common data that occurs in the list.

```
import statistics as st

# declaring a simple data-set consisting of real valued positive integers.
dataset =[2, 4, 7, 7, 2, 2, 3, 6, 6, 8]
a=st.mode(dataset)
print(a)
```

4. Stdev() Method

The stdev() function is used to calculate the standard deviation on a given sample which is available in the form of the list.

```
import statistics as st

# creating a simple data - set
sample = [7, 8, 9, 10, 11]

a=st.stdev(sample)
print(a)
```