

Statistics component.

This is a component (STATX service) that allows you some statistics operations. The operations in the statx service are:

DATA COLLECTION OPERATIONS

- AddItem(item) : adds the item to the sample set. \$status returns the item count
- AddList(list) : adds a list of sample to set . \$status returns the item count

MESURES OF CENTRAL TENDENCY OPERATIONS

- Average(value): returns in value the Arithmetic mean of all the items.
- HAverage(value): returns in value the Harmonic mean of all the items.
- Median(value): returns the median (central value) of the set
- Mode(value,freq): returns the mode (most repeated value) and its frequency

MESURES OF VARIABILITY OPERATIONS

- Range(value): returns in value the difference between the maxim and minimum values
- Max(value): returns in value the maxim value of the sample set
- Min(value): returns in value the minimum value of the sample set
- Variance(value): returns in value the sample variance
- PVariance(value): returns in value the population variance
- StDeviation(value): returns in value the sample standard deviation
- PstDeviation(value): returns in value the standard deviation for the population

MISCELANEOUS OPERATIONS

- Count(value): returns in value the number of samples
- Sum(value): returns in value the sum of samples
- Sum2(value): returns in value the sum of the sample²
- GetList(list): returns the list of items
- GetSortedList(list): returns the sorted list of items
- SaveDisable: Disable saving item list
- ChangeSortAlg({"Q"|"B"}). Set the Quicksort or BubbleSort as sorting algorithm (Q is the default)

HTML OPERATIONS

- HTMLTable(properties,table): returns a string with the HTML code of a table for representing a bar graph of sample using the specified properties.

The `properties` parameter is a list where you can specify:

ORDER	Y N If you want order by value or not the list (default Y)
HEADER	The text of the table header
HCOLOR	The background colour of the table header (default #FFFFCC)
IMAGE	The 1x1 pixel image to show as bar (default dot.gif included in this sample)
CCOLOR	The background colour of the columns (default #FFFFFF)
HEIGHT	The height of the table (default is the maxim value of the samples)
WIDTH	The table width (default is number of sample * 12)
VALUE	Y N If you want include the value of every column (default is N)
FOOT	Y N If you want include the sample position as table foot (default is Y)
FCOLOR	The background colour of the foot columns (default is #FFFFFF)

NOTE

\$status contains ≥ 0 if all is right and < 0 if there occurs an error (for instance there are no samples).

PERFORMANCE ISSUE.

If you don't need calculating the median, mode, arithmetic average you can use the SaveDisable operation in order to have a better performance.

Depending of the characteristics of your data and system you can use the ChangeSortAlg operation to change form QuickSort (recursive) to BubbleSort (non-recursive) algorithm.

The **statx.zip** file (présent dans la section Support du site) is composed by:

- The STATX service (in the statx.trx)
- The TESTSTATX form to test the STATX service (in the statx.zip)
- dot.gif is a image used as default for HTML table creation operation.

→ Original article from PUUU

→ Service de fonctions statistiques