

# FrequentItemset operator

This operator create frequent item sets from a given stream.

The result stream creates a tuple with 3 attributes:

- id: the number (a simple counter) of the pattern
- set: the frequent pattern, which is a list of tuples (a nested attribute  $\sim NF^2$ )
- support: the support of the pattern

## Parameter

- SUPPORT: The minimal support that defines what is frequent. This can be either a total number  $> 1.0$  or a double between 0.0 and 1.0. The double indicates the percent in terms of the number of transactions.
- TRANSACTIONS: A Number of transactions that should be investigated
  - A transaction is a snap-shot of a window. so each time when a window changes, there is a new transaction
- LEARNER: the algorithm that is used
  - Currently implemented: fpgrowth, Weka (which in turn has further algorithms)
- ALGORITHM: A set of options to describe the algorithm

## Example

This example uses FP-Growth for finding frequent item sets. it does not need any parameters in algorithm

### Operator

```
/// support is 3 out of 1000 transactions
fpm = FREQUENTPATTERN({support=3.0, transactions=1000, learner = 'fpgrowth'}, inputoperator)

/// support is 60% out of 1000 transactions, so it is equal to a support of 600.0
fpm = FREQUENTPATTERN({support=0.6, transactions=1000, learner = 'fpgrowth'}, inputoperator)
```