

# Types of attributes and methods of the class TransactionSet

## Notation

- $T$  denotes the number of transactions.
- $N$  denotes the number of names associated with the transactions.
- + denotes public attributes and methods (i.e. exported attributes and methods).
- – denotes private attributes and methods (i.e. non-exported attributes and methods).

## Attributes

+ **data**: list(named list)

\$transaction1

|          |        |
|----------|--------|
| name 1   | vector |
| name 2   | vector |
| ...      | ...    |
| name $N$ | vector |

\$transaction2

|          |        |
|----------|--------|
| name 1   | vector |
| name 2   | vector |
| ...      | ...    |
| name $N$ | vector |

...

\$transactionT

|          |        |
|----------|--------|
| name 1   | vector |
| name 2   | vector |
| ...      | ...    |
| name $N$ | vector |

+ **names**: vector(character)

+ **item\_key**: character

+ **year\_key**: character

## Methods

+ **transaction.set**(**data**: see attribute **data**, **item\_key**: see attribute **item\_key**,  
**year\_key**: see attribute **year\_key**, **names**: see attribute **names**): TransactionSet

+ **as**(**Class**: "data.frame"): data.frame

+ **as**(**Class**: "transactions"): transactions (class from the package arules)

+ **subset**(**indices**: vector(numeric) or vector(logical), **keep\_names**: logical): TransactionSet

+ **reorder**(**permutation**: vector(numeric) or vector(character)): TransactionSet

+ **export**(...)

+ **get\_all\_items**(): vector

+ **get\_itemsets**(): list(vector)

- + **get\_items\_from\_info**(info: named list, **presence**: character, **additional**: vector(character)): vector or named list
- + **get\_info\_from\_items**(items: vector, **info\_names**: vector(character), **presence**: character): vector or named list
  
- + **get\_complex\_trx**(as\_indices: logical): TransactionSet or named vector(numeric)
- + **get\_simple\_trx**(as\_indices: logical): TransactionSet or named vector(numeric)
- + **get\_trx\_from\_items**(items: vector, **presence**: character, **as\_indices**: logical): TransactionSet or named vector(numeric)
- + **get\_trx\_from\_info**(info: named list, **presence**: character, **as\_indices**: logical): TransactionSet or named vector(numeric)
  
- + **complexity\_ratio**(items: vector): named vector(numeric)
- + **complexity\_index**(items: vector): named vector(numeric)
- + **co\_occurrence\_matrix**(items: vector): named matrix(numeric)
  
- + **itemset\_chart**(identifiers: character, **length\_one**: logical, **jitter**: logical, **under**: character, **over**: character, **title**: character, **path**: character, **name**: character): TransactionSet
- **prepare\_itemset\_chart**(identifiers: character, **length\_one**: logical, **under**: character, **order**: character): list
- [[ "transactions" ]]: TransactionSet
- [[ "itemsets" ]]: list(vector)
- [[ "items" ]]: data.frame
 

| item                 | label                |
|----------------------|----------------------|
| character or numeric | character or numeric |
- [[ "under" ]]: vector(character)
- [[ "over" ]]: vector(character)
  
- + **co\_occurrence\_chart**(items: vector, **min\_occ**: numeric, **max\_occ**: numeric, **vertex\_size**: numeric, **vertex\_alpha**: numeric, **vertex\_margin**: numeric, **label\_size**: numeric, **label\_margin**: numeric, **edge\_looseness**: numeric, **edge\_alpha**: numeric, **palette**: character or numeric, **palette\_direction**: numeric): ggplot2 graph
  
- **has\_temporal\_data**() : logical
- **get\_items**(items: character or vector): vector