

Step 1: Data in the database

Step 2: Calculate the [support/frequency](#) of all items

Step 3: Discard the items with minimum support less than 2

Step 4: Combine two items

Step 5: Calculate the support/frequency of all items

Step 6: Discard the items with minimum support less than 2

Step 6.5: Combine three items and calculate their support.

Step 7: Discard the items with minimum support less than 2

Result:

Only one itemset is frequent (Eggs, Tea, Cold Drink) because this itemset has minimum support 2

Example 2 of Apriori Algorithm

Let's see another example of the Apriori Algorithm.

Minimum Support :3

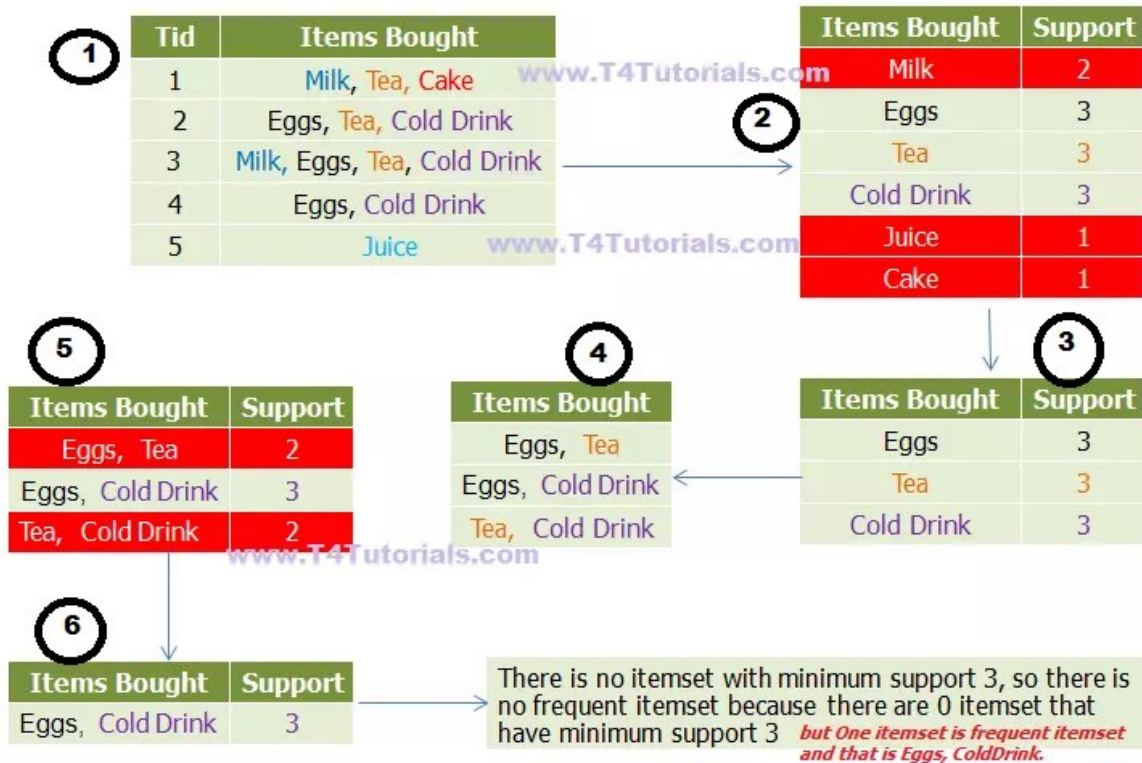


Figure: Examples of the apriori algorithm

Step 1: Data in the database

Step 2: Calculate the support/frequency of all items

Step 3: Discard the items with minimum support less than 3

Step 4: Combine two items

Step 5: Calculate the support/frequency of all items

Step 6: Discard the items with minimum support less than 3

Step 6.5: Combine three items and calculate their support.

Step 7: Discard the items with minimum support of less than 3. So all itemsets are excluded except "Eggs, Cold drink" because this

itemset has the support of 3.

Result:

There is no frequent itemset because all itemsets have minimum support of less than 3.

Advantages of Apriori Algorithm

Apriori Algorithm is the simplest and easy to understand the algorithm for mining the frequent itemset.

Apriori Algorithm is fully [supervised](#).

Apriori Algorithm is fully supervised so it does not require labeled data.

Apriori Algorithm is an exhaustive algorithm, so it gives satisfactory results to mine all the rules within specified confidence and sport.

Apriori principles

[Downward closure property](#) of frequent patterns

[Downward closure property](#) of frequent patterns, means that All subset of any frequent itemset must also be frequent.

Example of Downward closure property

If **Notebook, Pencil, School Bag** is a frequent itemset, then we can say that all of the following itemsets are [frequent](#);

- Notebook
- Pencil
- School Bag