**Note:** Apriori only creates rules with one item in the RHS (Consequent)! The default value in '>APparameter for minlen is 1. This means that rules with only one item (i.e., an empty antecedent/LHS) like

{}=>{beer}

will be created. These rules mean that no matter what other items are involved, the item in the RHS will appear with the probability given by the rule's confidence (which equals the support). If you want to avoid these rules then use the argument parameter=list(minlen=2).

**Notes on run time and memory usage:** If the minimum support is chosen too low for the dataset, then the algorithm will try to create an extremely large set of itemsets/rules. This will result in very long run time and eventually the process will run out of memory. To prevent this, the default maximal length of itemsets/rules is restricted to 10 items (via the parameter element maxlen=10) and the time for checking subsets is limited to 5 seconds (via maxtime=5). The output will show if you hit these limits in the "checking subsets" line of the output. The time limit is only checked when the subset size increases, so it may run significantly longer than what you specify in maxtime. Setting maxtime=0 disables the time limit.

Interrupting execution with Control-C/Esc is not recommended. Memory cleanup will be prevented resulting in a memory leak. Also, interrupts are only checked when the subset size increases, so it may take some time till the execution actually stops.

* high support: should apply to a large amount of cases
* high confidence: should be correct often
* high lift: indicates it is not just a coincidence

Consider e.g. "rain" and "day". Assuming we live in a very unfortunate place at the Equator, where it is raining 50% of the time, and it is day 50% of the time, and these are independent of each other. I.e. in 25% of the time it is raining and it is day.

We then have a support of 25% - that is pretty high for most data sets. We also have a confidence of 50% - that is also pretty good. If 50% of my visitors buy a product I recommend I would be a billionaire. But the lift is just 1, i.e. no improvement.

Beware that on other data sets, you won't get anywhere near 25% support. Consider a supermarket with diverse prodcuts. How many % of customers do you think buy toilet paper?

Support: What is the probability of buying the RHS product out of all the product available for the particular brand?

Confidence: What is the probability when 2 product of LHS and RHS, are bought together?

Lift: high lift: indicates it is not just a coincidence. With the **lift value**, you can interpret the importance of **arule**. It is a measure for a **rule.**