

## Developing Association Rules

	VWX
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1	acf
2	bce
3	acf
4	bce
5	ade
6	bde
7	ade
8	bde
9	ade
10	bcf
11	ade
12	bcf

An item is an attribute-value pair, such as  $V=a$ , or  $W=c$ . A combination of items is an item set, for example  $\{V=a, W=c\}$  is a 2-item set, and  $\{V=b\}$  is a 1-item set. Since the values are unique names, let's use the abbreviation "ac" for  $\{V=a, W=c\}$ , and similarly for other item sets. An example 3-item set is "ade". To limit the number of item sets, we only consider item sets with a support of 2, (the number of times the set occurs in the training data).

List all the one-item sets with the required support. Use the one-item sets to generate candidate 2-item sets and list all the 2-item sets. Similarly, use the 2-item sets to find the candidate 3-item sets and then check support, listing all the 3-item sets with required support.

Find all the rules assuming we require a support of 2 and 100% confidence (accuracy). The item sets will help you.