Technische Universität Dresden

Prof. Dr. Sebastian Rudolph

Formal Concept Analysis

Exercise Sheet 8, Winter Semester 2014/15

Exercise 1 (association rules)

We regard the context of transactions of a supermarket. Determine

(*a*) the *support* and the *confidence* for the association rules

- {tv magazine} → {beer},
- {chips} → {tv magazine, beer} and
- {tv magazine, beer} → {chips}

(*b*) as well as at least two further association rules with a minimal support of 25% and a minimal confidence of 66%.

	apples (a)	beer (b)	chips (c)	tv magazine (d)	toothpaste (e)
t_1	×	×	×		
t_2			×	×	
t_3		×	×	×	
t_4	×	×			×
t_5			×		×
t_6		×	×	×	
t_7	×	×			
t_8			×	×	

Exercise 2 (computing the stem base with Next Closure)

Determine the stem base for this context using the Next Closure algorithm. Use the following table as help:

	Mobil (1)	Telefon (2)	Fax (3)	Fax m. N.-Adapter (4)
Sinus 44 (a)		×		
Nokia 6110 (b)	×	×		
T-Fax 301 (c)			×	×
T-Fax 360 PC (d)			×	

A	i	$A+i$	$\mathcal{L}^\bullet(A+i)$	$A<_i\mathcal{L}^\bullet(A+i)?$	$(\mathcal{L}^\bullet(A+i))''$	$\mathcal{L}$	intents