

Exercises for DW & DM

Sheet 9 (until 18.06.2008)

Please note that you need **50%** of all exercise points to be admitted for the final exams. Exercises have to be turned in until **Thursday** before the next lecture and should be completed in teams of two students each. Write both names and “Matrikelnummer” on each page. If you have multiple pages, staple them together! Please hand in your solutions on **paper** into the mailbox at the IFIS floor or to our secretary (Mühlenpfordtstraße 23, 2nd floor). You may answer in either German or English.

Exercise 1 (3P)

1. Enumerate and give an example for each of the **functionalities of data mining** presented in the lecture. (2P)
2. Define association rules. (1P)

Exercise 2 (9P)

1. Simulate the functionality of the Multiple Minimum Supports mining algorithm on the transactions provided in Annex 1, presenting each of the 2 steps, as well as the initialization, $k=2$ and generalization phases for step 1. Minimum support values are also provided in the annex 1. $\varphi = 20\%$ and $\text{minconf} = 60\%$. (15P)

Annex 1

Item	MIS %	Transactions
1	70	1, 4, 6
2	17	1
3	15	1, 5, 6
4	30	1, 6
5	30	4, 6
6	35	1, 2, 3, 5
		1, 2, 3, 5
		6
		1
		1, 6