

# Data-Warehouse-Technologien

## Exercise sheet 8

**Assignment 1:** What is vertical and horizontal partitioning of database tables? What is the difference regarding allocation?

**Assignment 2:** Given the following dates, compare the different requirements for storing the cube in MOLAP- or ROLAP:

1. 1 fact; 3 dimensions with each 1000 values; filling degree 20%;  
1 attribute = 8 bytes
2. 1 fact; 5 dimensions with each 1000 values; filling degree 20%;  
1 attribute = 8 bytes
3. 1 fact; 3 dimensions with each 1000 values; filling degree 50%;  
1 attribute = 8 bytes
4. 1 fact; 5 dimensions with each 1000 values; filling degree 50%;  
1 attribute = 8 bytes

**Assignment 3:** Create the dwarf for the following example data:

Region	Customer	Product	Price
Saxony-Anhalt	Müller	Mobile phone	30
Saxony	Schmidt	TV	30
Saxony-Anhalt	Schneider	TV	20
Saxony	Fischer	Mobile phone	45

Which advantages do dwarfs have?

**Assignment 4:** Discuss important properties of row- and column-stores concerning the following aspects:

1. Usability for Online Analytical Processing
2. Compression techniques
3. Query execution

**Assignment 5: Given is the following SQL-query:**

```
SELECT shipdate, linenum  
FROM lineitem  
WHERE shipdate = '12-30-1995' AND linenum = 12
```

**Based on this query, discuss the different materialization strategies for Column-Stores.**