Data-Warehouse-Technologien

Exercise sheet 9

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; Füllgrad 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.

 Good Luck!