



Association Rules

- Retail shops are often interested in associations between different items that people buy.
 - Someone who buys bread is quite likely also to buy milk
 - A person who bought the book *Database System Concepts* is quite likely also to buy the book *Operating System Concepts*.
- Associations information can be used in several ways.
 - E.g. when a customer buys a particular book, an online shop may suggest associated books.
- **Association rules:**

bread \Rightarrow *milk* *DB-Concepts, OS-Concepts* \Rightarrow *Networks*

- Left hand side: **antecedent**, right hand side: **consequent**
- An association rule must have an associated **population**; the population consists of a set of **instances**
 - E.g. each transaction (sale) at a shop is an instance, and the set of all transactions is the population