Notes lecture 4

* The projection operator is used to **decompose** a relation

Ex.: = projection of relation R on the subset of attributes

* The natural join operator is used to **compose** relations ()

Ex.:

* A *decomposition* of relation *R* is **good** if
* **Composite attribute** = set of attributes with at least 2 attributes

e.g. the composite primary key from many-to-many relations

* **Repeating attributes** = can take multiple values for a record in the relation
* Avoid repeating attributes

A mathematical equation with black letters

Description automatically generated with medium confidence

, where K = key in

= repeating attribute

* **1NF** – if it doesn’t have any repeating attributes
* **Functional dependency:** attribute *a functionally determines attribute b*

every value of a is associated with exact 1 value of b

* + “”
  + a = *determinant*, b = *dependent*
  + if a value of a appears in multiple rows, then all these rows will contain the same value for b