Relational Model Vocabulary

Relation = Table = Record

* Rows and Columns
  + Rows = Observations and Instances
  + Columns = Variables/Attributes

Attribute

1. Domain – limit the values the attribute may have
2. Set – list these values (d1, d2, d3, …, dn), no duplicates

Cross Product

D1 x D2 x D3 …. x Dn = {(d1, d2, d3, … dn) | d1 is an element of D1, d2 is an element of D2, …., dn is an element of DN}

Mathematical definition of a relation

Constraints

-Domain Constraint

-NULL

-Entity Constraint

-Method to distinguish my instances from each other

-Primary Key (No nulls are allowed in the fields that constitute your primary key)

-Candidate Keys (NeuID, Email)

-Foreign Key

-Super Keys – more information in the key then you need

-Referential Constraint

* Referencing an existing object
* Ensure all fields associated with the foreign key has a value, OR NONE have a value

Relation Properties

1. Name has to be distinct
2. Each cell value needs to be atomic
3. Attribute names must be distinct for the relation
4. All values within an attribute must be from the same domain
5. Order of the attributes does not matter
6. Order of the rows does not matter