1. Into

Definition uses algebraic structures for modeling data and defining queries on it with a well founded semantics.

Main purpose is to define operators which accepts one or more relations and produces another relation

1.1. Operators

1.1.1. Set operators

1. Selection - filter
2. Projection - select only
3. Cartesian product - join. (relations must not have same attribute names). Produces flattened tuple.(not (A, B), (B, A))
4. Union(relations must be union compatible)
5. Difference(relations must be union compatible)
6. Rename
7. Θ-join. (a F b)
8. Semijoin or restriction (same as join, but as “exists”. without selecting from B attributes)
9. Antijoin (not exists)
10. Outer joins

“relations must be union compatible” = relations must have the same attributes

1.2. Algebraic structure

Algebraic structure consists of non-empty set domain and a collection of operations A and finite set of identities.

Identity - equality relating one mathematical expression A to another mathematical expression B in all valid inputs(variables).