Tuesday, July 31, 2018

# When association classes are implicit (hidden), what becomes the definition of different join operations?

Let A’ denote a computed relation, AB is a primitive association-class relation, and B is a primitive relation. “Primitive” means a relation in the database.

### Join: A’B = (A’AB)B

### Left Semi Join: A’B = A’ABB) = A’ AB.

### (BAB)A’ = ABA’ (BAB) are the AB tuples that join with B. But that is just AB. OR A’B = A’AB

### Right Semi Join: A’B = (A’AB) B

### (A’AB) are the AB tuples that join with A’

### Left Anti Semi Join: A’ B = A’ AB (A’ AB) is the set of A’ that do not join with B tuples

### Right Anti Semi Join: A’B = B (ABA’) (ABA’) identifies the set of B tuples that join with A’ B (ABA’) is set of B tuples that don’t join with A’ OR A’B = (A’AB)B (A’AB) identifies the B tuples that join with A’; (A’AB)B is the set of B tuples that do NOT join with A’

### Left Outer Join A’B = A’ (ABB)

(ABB) is the set of A tuples paired with B tuple values

1. Right Outer Join A’B = (A’AB)B  
   (A’AB) is the set of A’ tuples paired with B tuple identifiers

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