



Database Modifications

CIS 4301

Lecture Notes

Lecture 19 - 3/30/2006

Recall Join Expressions



- Cartesian Product: Multiple relations in the FROM clause
- Join: Specify join condition in WHERE clause
- Remember, when specifying join condition, only tuples which satisfy join condition will be selected
- Example `R NATURAL JOIN S`
 - If a tuple t from R does not match any tuple s from S , all trace of t will disappear from result
 - Could pose problems – when?



Outer Join

- Differs from “inner” join
- Adding to result any tuple of either relation that does not join with at least one tuple of the other relation
 - Recall, those tuples are called *dangling tuples*
 - Pad out dangling tuples with NULL's in those attributes belonging to the other relation before adding to result
- Left and Right Outer Join