**Course: ISTA 420**

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**Lesson Plan 5**

**1. In General why would you even want to join two (or more) tables together? This is a good time to think about the nature of relational algebra.**

Joining two or more tables together in a RDMS creates a set than can be saved as a table or used at it is. This set is created by combining columns from one table or more tables by using values common to each. By doing so we are able to querry data that are from different tables but share a common relationship.

**2. Describe in your own words the output from an inner join.**

The inner join applies a Cartesian product between the two input tables like in a cross join, and filters rows based on the predicate that as been specified.

**3. Describe in your own words the output from an outer join.**

A FULL OUTER JOIN will combine the results of both left and right outer joins and return both matched and unmatched (all) rows from the tables on both sides of the join clause. The RIGHT OUTER JOIN keyword will return all records from the right table and the matched records from the left table. The LEFT OUTER JOIN keyword will return all records from the left table and only the matched records from the right table.

**4. Describe in your own words the output from a cross join.**

If a Where clause is not used then the cross join is supposed to produce a result set that has the number of rows in the first table multiplied by the number of rows in the second table. It gives a Cartesian product.

**5.** **A convenient mnemonic for remembering the various joins is “Ohio." Why is this true?**

This is because Ohio is bigger in the middle. There is one type of cross join, one type of inner join, but three types of outer joins (left, right, full).

**6. Give an example of a composite join:**

SELECT C.name, O.number from Sales.Customers as C INNER JOIN Sales.Orders as O on customers.id = orders.custid and customers.address != orders.shipaddress

**7.** This is because the predicate O.orderdate > = '20160101' in the WHERE clause evaluates to UNKNOWN for all outer rows. All outer rows are eliminated by this WHERE filter.