

SQL slide #28, fall 2008:

## Example Query

Oops!

**assignment:**

(position,  
division, SS#,  
managerSS#)

**study:**

(SS#,  
academic\_dept.,  
adviser)

```
SELECT DISTINCT M.academic_dept., A.division
FROM study M NATURAL LEFT OUTER JOIN
      assignment A
```

*What does this produce?*

**In class:** “pairs of (academic\_dept, division) where some student works in the division and studies in the academic dept. PLUS pairs (academic\_dept, null) when no student studying in the department works”

Based on slides for Database Management Systems by R. Ramakrishnan and J. Gehrke

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*correction:*

## Example Query

**assignment:**

(position,  
division, SS#,  
managerSS#)

**study:**

(SS#,  
academic\_dept.,  
adviser)

```
SELECT DISTINCT M.academic_dept., A.division
FROM study M NATURAL LEFT OUTER JOIN
      assignment A
```

*What does this produce?*

**Problem:** *any* tuple in **study** that doesn't have a *matching SS# value* in **assignment** will be in the outer join with nulls for the **assignment** attributes *position*, *division*, and *managerSS#*.

For example, we might have:

(u, COS, LaPaugh) combined with (desk\_attendent\_5, library, u, v) to give (u, COS, LaPaugh, desk\_attendent\_5, library, v) in the join, but (w, COS, LaPaugh) in **study** with no SS# match in **assignment** to give (w, COS, LaPaugh, null, null null) in the join.

Then both (COS, library) and (COS, null) are in the result.

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