

SQL

OUTER JOIN

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OUTER JOINS

- When joining, it may be that rows in one table match *no* row on the other table
 - These rows won't appear on the result
- If we want to make those rows appear, we use an OUTER JOIN
 - fields from the other table are NULL
 - ALL rows from one table appear at least once
- LEFT or RIGHT JOIN depending on whether the table is to the left or right of the JOIN keyword
- FULL OUTER JOIN makes sure rows from BOTH tables appear at least once

- Id and Name of Area, with number of students minoring on it. Areas with no students appear with a count of 0
 - SELECT A.code, A.Name, COUNT(M.Area)
 - FROM AREA A JOIN IsMinoring M ON (A.Code=M.Area)
 - GROUP BY A.code, A.Name;
- VS
 - SELECT A.code, A.Name, COUNT(M.Area)
 - FROM AREA A **LEFT OUTER** JOIN IsMinoring M
 - ON (A.Code=M.Area)
 - GROUP BY A.code, A.Name;

- Area's code and name, with number of students *majoring* on it. Areas with no students appear, with a count of 0.
- Student's id and name, with the number of areas the student is majoring in. Students with no minors appear, with a count of 0.

OUTER Joins and Aggregating

- Every row from one table appears at least once
–with null for fields from the other table for unmatched rows
- Use a field with COUNT (since it ignores NULL)
- Use COALESCE, CASE for other functions