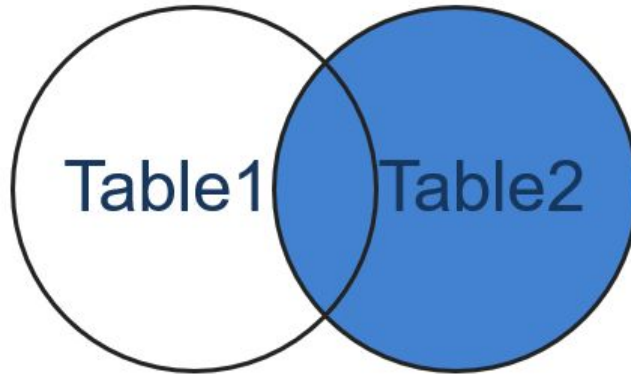# Right Join

- A **RIGHT JOIN** returns all matching rows from the *second* table, even if there are no matching rows in the *first* table
  - NULL values will be displayed for the *first* table if there is no match

Right Join

- Syntax:
  SELECT *t1.columns, t2.columns* FROM *table1 t1*
  RIGHT JOIN *table2 t2* ON *t1.column = t2.column*;

- List *all* doctors, along with any appointments
  SELECT a.a_date, d.d_lastname FROM Appointment a
  RIGHT JOIN Doctor d ON a.d_id = d.d_id
  ORDER BY d.d_lastname; #*All* doctors are listed, regardless of existing appointments

- List *all* patients, along with any appointments
  SELECT a.a_date, p.p_lastname FROM Appointment a
  RIGHT JOIN Patient p ON a.p_id = p.p_id
  ORDER BY p.p_lastname; #*All* patients are listed, regardless of existing appointments

Right Join

- List the patients who have an appointment at 11am or who *do not* have an appointment at all
  SELECT p.*, a.* FROM Appointment a
  RIGHT JOIN Patient p ON a.p_id = p.p_id
  WHERE a.a_date = '2016-02-15 11:00:00'
  OR a.a_id IS NULL; #a_id will be NULL in first table in RIGHT JOIN

- Do this another way using 2 subqueries
  SELECT p.* FROM Patient p
  WHERE p.p_id IN
    (SELECT a.p_id FROM Appointment a
    WHERE a.a_date = '2016-02-15 11:00:00')
  OR p.p_id NOT IN
    (SELECT a.p_id FROM Appointment a);

Joining Data From Multiple Tables Summary

Command Desc.	Basic Syntax Structure	Example
INNER JOIN Returns all rows from both tables where there is a match	SELECT *t1.columns*, *t2.columns* FROM *table1 t1* [INNER] JOIN *table2 t2* ON *t1.column = t2.column*;	SELECT d.d_firstname, d.d_lastname, a.a_date FROM Doctor d JOIN Appointment a ON d.d_id = a.a_id ORDER BY d.d_lastname, d.d_firstname;
LEFT JOIN Returns all matching rows from the first table	SELECT *t1.columns*, *t2.columns* FROM *table1 t1* LEFT JOIN *table2 t2* ON *t1.column = t2.column*;	SELECT d.*, a.* FROM Doctor d LEFT JOIN Appointment a ON d.d_id = a.d_id ORDER BY d.d_lastname;
RIGHT JOIN Returns all matching rows from the second table	SELECT *t1.columns*, *t2.columns* FROM *table1 t1* RIGHT JOIN *table2 t2* ON *t1.column = t2.column*;	SELECT p.p_lastname AS 'Patient Last Name', a.a_date AS 'Appointment Date' FROM Appointment a RIGHT JOIN Patient p ON a.p_id = p.p_id ORDER BY p.p_lastname;