

**Today:** Recursive queries and negation in Datalog.

**Next class:** Quiz 2. Query languages wrap-up (for now).

**Reminders:** Use newsgroup. After break: database design (ER, normalization, etc.).

1. List the members of your group below. Underline your name.
  
2. Given the relation `Flights(airline, num, src, dst)` with the obvious semantics, write stratified Datalog queries for destinations reachable from Bangor...
  - (a) in exactly two hops.
  - (b) with unlimited hops.
  - (c) using only Delta flights.
  - (d) using alternating Delta and US-Airways flights (no consecutive Delta or US flights).
  - (e) using Delta but not reachable using any other single airline.
  - (f) using Delta but not reachable using any other airlines (possibly in combination).
  - (g) in at most two hops using Delta and in no fewer than three hops using some other airline.

[additional space for answering the earlier question]

3. Recall the students-courses-enrollments database from previous exercises. We say a TA  $x$  more senior than a TA  $y$  if  $x$  serves as a TA for a course taken by  $y$ . A TA is maximally senior if there is no TA senior to him or her. Write Datalog and SQL (with recursion) queries to find the names of the maximally senior TAs.