

### Swim's RA Solution (Spring 2017)

- (a)  $\pi_{FName, LName, EMail}(Swimmer)$
- (b)  $\pi_{LevelId, StartDate}(\sigma_{SwimmerId=2}(LevelHistory))$
- (c)  $\pi_{FName, LName}(\sigma_{MeetId=10}(Meet) \mid x \mid Coach)$
- (d)  $\pi_{EventId, Title, Comment, FName, LName} (Event \mid x \mid \rho_{CoachId/CommentCoachId}(\sigma_{SwimmerId=4}(Participation)) \mid x \mid Coach))$

Note that it is necessary to rename CommentCoachId before the natural join. If not, it becomes a Cartesian product.

- (e)  $\pi_{FName, LName} (Swimmer \mid x \mid (\sigma_{EventId <> EventId\_2} (\pi_{SwimmerId, EventId}(Participation) \mid x \mid (\rho_{EventId\_2/EventId}(\pi_{SwimmerId, EventId}(Participation))))))$