

Kin-Ho Lam  
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CS 340

### Relational Algebra Assignment

1.  $\pi$  Make.make\_name, Model.model\_name (  $\sigma$  first\_production\_year = '1987' ((Vehicle  $\bowtie$  Model.model\_id = Vehicle.fk\_model\_id Model)  $\bowtie$  Make.make\_id = Vehicle.fk\_make\_id Make) )
2.  $\pi$  Make.make\_name, Model.model\_name (  $\sigma$  Color.name = 'Sky Blue' (((Vehicle  $\bowtie$  Model.model\_id = Vehicle.fk\_model\_id Model)  $\bowtie$  Make.make\_id = Vehicle.fk\_make\_id Make)  $\bowtie$  Inventory.fk\_vehicle\_id = Vehicle.vehicle\_id Inventory)  $\bowtie$  Inventory.fk\_color\_id = Color.color\_id Color) )
3.  $\pi$  Make.make\_name, Model.model\_name, Incentive.amount (  $\sigma$  Incentive.type = 'dealer' (((Vehicle  $\bowtie$  Vehicle\_Incentive.fk\_vehicle\_id = Vehicle.vehicle\_id Vehicle\_Incentive)  $\bowtie$  Vehicle\_Incentive.fk\_incentive\_id = Incentive.incentive\_id Incentive)  $\bowtie$  Model.model\_id = Vehicle.fk\_model\_id Model)  $\bowtie$  Make.make\_id = Vehicle.fk\_make\_id Make) )
4.  $\pi$  Player.id, Team.name, City.name (  $\sigma$  Player.score = 100 (Player  $\bowtie$  Player.team\_id = Team.id Team)  $\bowtie$  Team.city\_id = City.id City) )
5. SELECT Make.make\_name, Model.model\_name, Incentive.amount FROM Vehicle  
    INNER JOIN Vehicle\_Incentive  
    ON Vehicle\_Incentive.fk\_vehicle\_id = Vehicle.vehicle\_id  
    INNER JOIN Incentive  
    ON Vehicle\_Incentive.fk\_incentive\_id = Incentive.incentive\_id  
    INNER JOIN Model  
    ON Model.model\_id = Vehicle.fk\_model\_id  
    INNER JOIN Make  
    ON Make.make\_id = Vehicle.fk\_make\_id  
WHERE Incentive.type = 'dealer';