

Connor Shields  
CS 340  
Homework 3

1.

$\pi$  make\_name, model\_name ( $\sigma$  first\_production\_year = '1986' (Model  $\bowtie$  Model.model\_id = Vehicle.fk\_model\_id (Make  $\bowtie$  Make.make\_id = Vehicle.fk\_make\_id (Vehicle))))

2.

$\pi$  Model.model\_name, Make.make\_name ( $\sigma$  Color.name = 'Sky Blue' (Color  $\bowtie$  Color.color\_id = Inventory.fk\_color\_id (Inventory  $\bowtie$  Inventory.fk\_vehicle\_id = Vehicle.vehicle\_id (Make  $\bowtie$  Make.make\_id = Vehicle.fk\_make\_id (Vehicle  $\bowtie$  Vehicle.fk\_model\_id = Model.model\_id (Model))))))

3.

$\pi$  Model.model\_name, Make.make\_name, Incentive.amount ( $\sigma$  Incentive.type = 'dealer' (Incentive  $\bowtie$  Incentive.incentive\_id = Vehicle\_Incentive.fk\_incentive\_id (Vehicle\_Incentive  $\bowtie$  Vehicle\_Incentive.fk\_vehicle\_id = Vehicle.vehicle\_id (Make  $\bowtie$  Make.make\_id = Vehicle.fk\_make\_id (Vehicle  $\bowtie$  Vehicle.fk\_model\_id = Model.model\_id (Model))))))

4.

$\pi$  Player.id, Team.name, City.name ( $\sigma$  Player.score = 100 (City  $\bowtie$  Team.city\_id = City.id (Team  $\bowtie$  Player.team\_id = Team.id (Player))))

5.

```
SELECT DISTINCT Model.model_name, Make.make_name, Incentive.amount FROM Model
INNER JOIN Vehicle ON Vehicle.fk_model_id = Model.model_id
INNER JOIN Make ON Make.make_id = Vehicle.fk_make_id
INNER JOIN Vehicle_Incentive ON Vehicle_Incentive.fk_vehicle_id = Vehicle.vehicle_id
INNER JOIN Incentive ON Incentive.incentive_id = Vehicle_Incentive.fk_incentive_id
WHERE Incentive.type = 'dealer'
```