Travis Robinson
CS340
Spring 2016
Assignment 3
Relational Algebra

1) $\pi_{\text{Make.make\_name,Model.model\_name}}(\sigma_{\text{model.first\_production\_year=1976}}((\text{Model} \bowtie_{\text{Model.model\_id=Vehicle.fk\_model\_id}} \text{Vehicle}) \bowtie_{\text{Vehicle.fk\_make\_id=Make.make\_id}} \text{Make}))$

2) $\pi_{\text{Make.make\_name,Model.model\_name}}(\sigma_{\text{Color.name="Blue"}}(\text{Make} \bowtie_{\text{Make.make\_id=Vehicle.fk\_make\_id}} (\text{Model} \bowtie_{\text{Model.model\_id=Vehicle.fk\_model\_id}} ((\text{Vehicle} \bowtie_{\text{Vehcile.vehicle.id=Inventory.fk\_vehicle\_id}} \text{Inventory}) \bowtie_{\text{Inventory.fk\_colo\_id=Color.id}} \text{Color}))))$

3) $\pi_{\text{Make.make\_name,Model.model\_name,Incentive.amount}}(\sigma_{\text{Incentive.type="dealer"}}(\text{Make} \bowtie_{\text{Make.make\_id=Vehicle.fk\_make\_id}} (\text{Model} \bowtie_{\text{Model.model\_id=Vehicle.fk\_model\_id}} (\text{Vehicle} \bowtie_{\text{Vehicle.vehicle\_id=Vehicle\_Incentive.fk\_vehicle\_id}} (\text{Incentive} \bowtie_{\text{Incentive.incentive\_id=Vehicle\_Incentive.fk\_incentive\_id}} \text{Vehicle\_Incentive})))))$

4) $\pi_{\text{Player.id,Team.name,City.name}}(\sigma_{\text{Player.score=100}}(\text{City} \bowtie_{\text{Team.city\_id=City.id}} (\text{Player} \bowtie_{\text{Player.team\_id}} \text{Team})))$

5) SELECT Make.make_name, Model.model_name, Incentive.amount FROM Incentive
INNER JOIN Vehicle_Incentive ON Vehicle_Incentive.fk_incentive_id=Incentive.incentive_id
INNER JOIN Vehicle ON Vehicle.vehicle_id=Vehicle_Incentive.fk_vehicle_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”