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CS340

Relational Algebra Assignment

1. π Model.model_name, Make.make_name (σ Vehicle.year ≥ '1987' (Model ⋈ Model.model_id = Vehicle.fk_model_id Vehicle) ⋈ Make.make_id = Vehicle.fk_make_id Make)

2. π Model.model_name, Make.make_name (((σ Color.name = 'Sky Blue' (Color ⋈ Color.color_id = Inventory.fk_color_id Inventory) ⋈ Vehicle.vehicle_id = Inventory.fk_vehicle_id Vehicle) ⋈ Make.make_id = Vehicle.fk_make_id Make) ⋈ Model.model_id = Vehicle.fk_model_id Model)

3. π Model.model_name, Make.make_name, Incentive.amount ((((σ Incentive.type = 'dealer' (Incentive ⋈ Incentive.incentive_id = Vehicle_Incentive.fk_incentive_id Vehicle_Incentive) ⋈ Vehicle.vehicle_id = Vehicle_Incentive.fk_vehicle_id Vehicle) ⋈ Inventory.fk_vehicle_id = Vehicle.vehicle_id Inventory) ⋈ Make.make_id = Vehicle.fk_make_id Make) ⋈ Model.model_id = Vehicle.fk_model_id Model)

4. π Player.id, Team.name, City.name (σ Player.score = 100 (Player ⋈ Player.team_id = Team.id Team) ⋈ Team.city_id = City.id CITY)

5. SELECT ma.make_name, mo.model_name, Inc.incentive_amount FROM Incentive
   INNER JOIN Vehicle_incentive vi ON inc.incentive_id = vi.fk_incentive_id
   INNER JOIN Vehicle ve ON ve.vehicle_id = vi.fk_vehicle_id
   INNER JOIN inventory in ON in.fk_vehicle_id = ve.vehicle_id
   INNER JOIN Make ma ON ma.make_id = ve.fk_make_id
   INNER JOIN Model mo ON mo.model_id = ve.fk_model_id
   WHERE inc.type = ‘dealer’