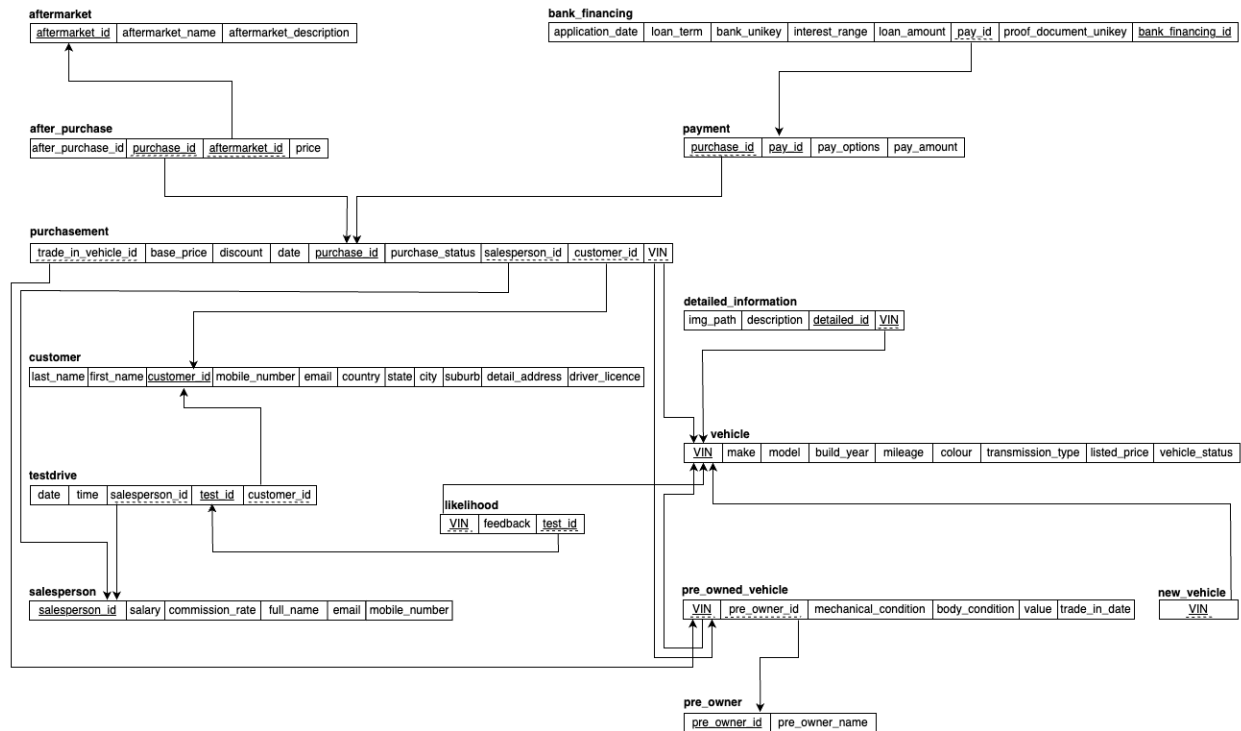


RM Model



Step 1: Test Drive Interaction Module

Step1 shows the customer's interaction with the dealership during the pre-purchase phase, which includes test drives schedule and customer interest record in vehicles.

Entity	Primary Key (PK)	Foreign Key (FK)	Arrow Direction (FK → PK)	Explanation
customer	customer_id (customer)			Uniquely identifies each customer.
testdrive	test_id (testdrive)	customer_id (customer)	testdrive(customer_id) → customer(customer_id)	A test drive is scheduled by a customer.
		salesperson_id (salesperson)	testdrive(salesperson_id) → salesperson(salesperson_id)	A test drive is arranged by a salesperson.
salesperson	salesperson_id (salesperson)			Uniquely identifies each salesperson.
likelihood	test_id (likelihood)	test_id (testdrive)	likelihood(test_id) → testdrive(test_id)	Links customer's interest feedback to a specific test drive.

	VIN (likelihood)	VIN (vehicle)	likelihood(VIN) → vehicle(VIN)	Records the rated vehicle in each test drive.
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Step 2: Vehicle Information Management Module

Step2 manages the dealership's vehicle data, which cover new and pre-owned cars and include ownership history and other vehicle details.

Entity	Primary Key (PK)	Foreign Key (FK)	Arrow Direction (FK → PK)	Explanation
vehicle	VIN (vehicle)			Unique identifier for all vehicles.
detailed_information	detailed_id (detailed_information)	VIN (vehicle)	detailed_information(VIN) → vehicle(VIN)	Each vehicle has its associated detail and image.
pre_owned_vehicle	VIN (pre_owned_vehicle)	VIN (vehicle)	pre_owned_vehicle(VIN) → vehicle(VIN)	Foreign key inheritance.
		pre_owner_id (pre_owner)	pre_owned_vehicle(pre_owner_id) → pre_owner(pre_owner_id)	Connects pre-owned cars to their previous owners.
new_vehicle	VIN (new_vehicle)	VIN (vehicle)	new_vehicle(VIN) → vehicle(VIN)	Inherits vehicle structure for new cars.
pre_owner	pre_owner_id (pre_owner)			Represents previous owners.

Step 3: Core Purchase Module

Step3 records the transaction where a customer purchases a vehicle, including relationships to salesperson and trade-in data.

Entity	Primary Key (PK)	Foreign Key (FK)	Arrow Direction (FK → PK)	Explanation
purchasement	purchase_id (purchasement)	customer_id (customer)	purchasement(customer_id) → customer(customer_id)	Records which customer made the purchase.
		salesperson_id (salesperson)	purchasement(salesperson_id) → salesperson(salesperson_id)	Links the salesperson involved.

		VIN (vehicle)	purchasement(VIN) → vehicle(VIN)	The vehicle being purchased.
		trade_in_vehicle_id (pre_owned_vehicle)	purchasement(trade_in_vehicle_id) → pre_owned_vehicle(VIN)	Tracks the trade-in vehicle if present.

Step 4: Payment and Financing Module

Step4 documents how customers pay for the vehicle, and whether they used a financing option such as a bank loan.

Entity	Primary Key (PK)	Foreign Key (FK)	Arrow Direction (FK → PK)	Explanation
payment	pay_id (payment)	purchase_id (purchasement)	payment(purchase_id) → purchasement(purchase_id)	Each payment is tied to a specific purchase.
bank_financing	bank_financing_id (bank_financing)	pay_id (payment)	bank_financing(pay_id) → payment(pay_id)	Represents optional loan for the purchase.

Step 5: Aftermarket Customization Module

Step5 records some additional products and services chosen by customers after finishing their purchase.

Entity	Primary Key (PK)	Foreign Key (FK)	Arrow Direction (FK → PK)	Explanation
aftermarket	aftermarket_id (aftermarket)			Available accessories or service options.
after_purchase	after_purchase_id (after_purchase)	purchase_id (purchasement)	after_purchase(purchase_id) → purchasement(purchase_id)	Associates aftermarket action with a purchase.
		aftermarket_id (aftermarket)	after_purchase(aftermarket_id) → aftermarket(aftermarket_id)	Refers to the selected aftermarket service.