



Entities: The ERD includes several key entities like Salesperson, Customer, Car, Invoice, ServiceTicket, ServiceHistory, Mechanic, CarService, and Parts. Each entity represents a significant aspect of the car dealership's operations.

Relationships:
Salesperson and Car: One-to-Many. Each car is sold by one salesperson, but a salesperson can sell many cars.
Customer and Car: One-to-Many. Each car is purchased by one customer, but a customer can buy multiple cars.
Salesperson and Invoice: One-to-Many. A salesperson issues an invoice for each car sold.
Customer and Invoice: One-to-Many. Each customer receives an invoice for each car purchased.
Car and Invoice: One-to-One. Each car sale generates one invoice.
Customer and ServiceTicket: One-to-Many. Customers can have multiple service tickets for car services.
Car and ServiceTicket: One-to-Many. Each car can have multiple service tickets.
Car and ServiceHistory: One-to-Many. Each car has a service history with potentially multiple records.
Car and Mechanic (via CarService): Many-to-Many. Cars are serviced by mechanics, with each mechanic working on many cars.
Mechanic and CarService: One-to-Many. Each mechanic performs multiple services.
Parts and CarService: Many-to-Many. Services may require parts, and each part can be used in multiple services.

Keys:
Primary Keys (PK) and Foreign Keys (FK) are used to establish and enforce these relationships. For instance, CarSerialNumber is a PK in the Car entity and a FK in the Invoice and ServiceTicket entities.

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