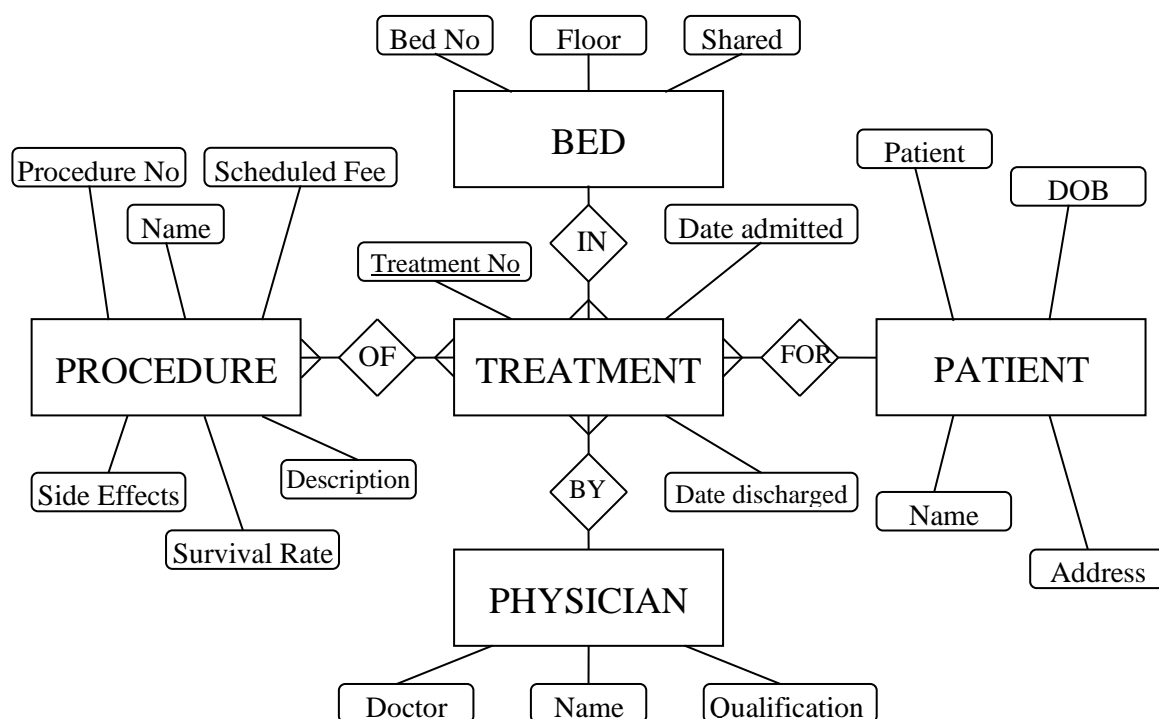**Business Data Management and Analytics**

Tutorial 6 - Data Modelling – ERD ←→ Relational - SOLUTION

Task 1 – translating ERD to Relational

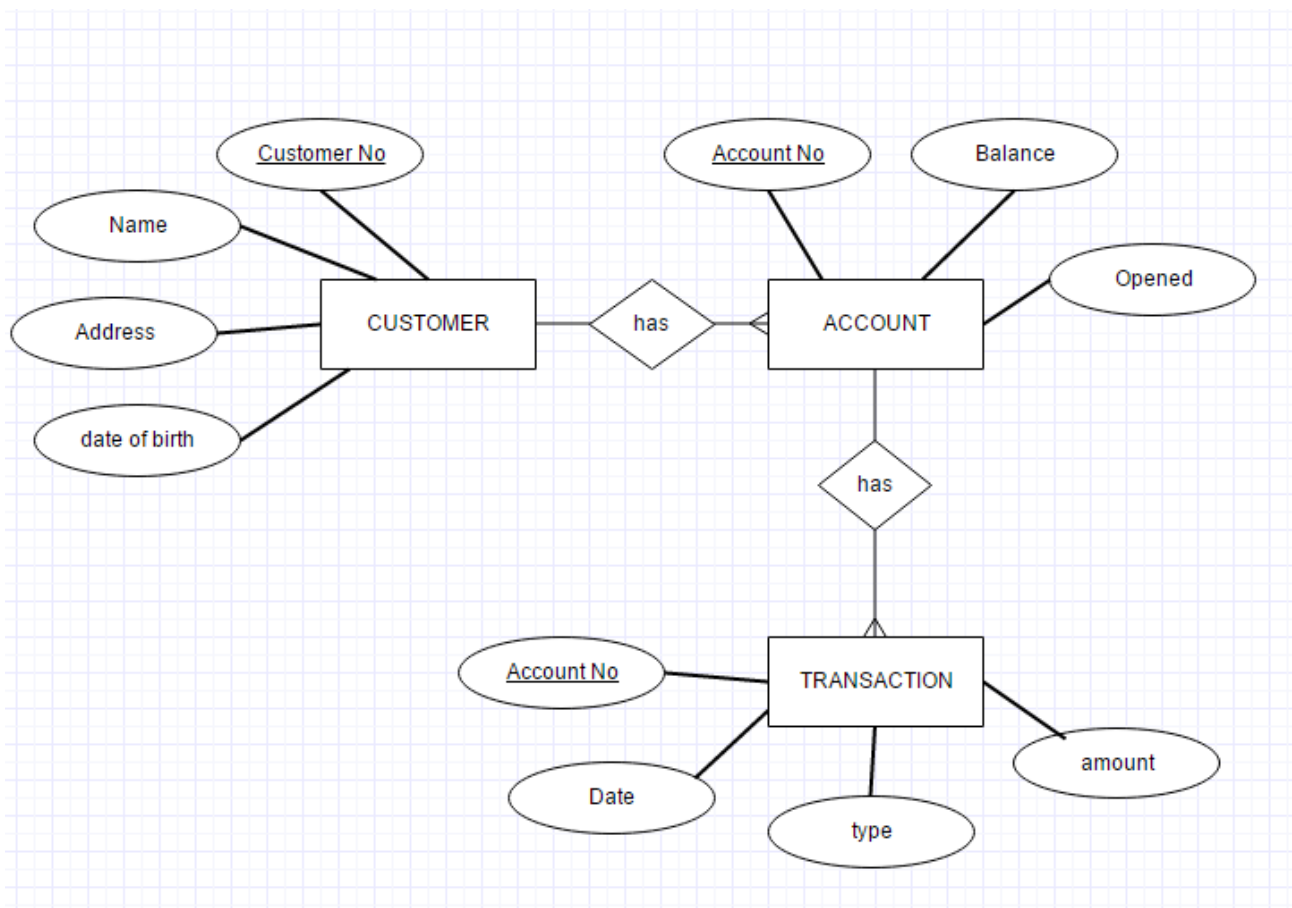Draw a relational model for the following HOSPITAL E-R Diagram:

BED	PATIENT	PHYSICIAN	TREATMENT	PROCEDURE
Bed No	Patient No	Doctor No	Treatment No	Procedure no
Floor no	Name	Name	Date admitted	Name
Shared	Address	Qualification	Date discharged	Schedule fee
	DOB		Bed no	Description
PROCTREAT			Doctor no	Survival rate
Treatment No+			Patient no	Side effects
Procedure no				
OR				
Proctreat No				
Treatment No				
Procedure no				

Task 2 – Translating Relational to ERD

Draw E-R diagram (including attributes) for the following FINANCIAL relational model:

CUSTOMER	ACCOUNT	TRANSACTION
Customer_No	Account_no	Transaction_no
Customer_name	Customer_no	Account_no
Customer_address	Account_Balance	Transaction_Date
Date_of_birth	Date_Account_opened	Transaction_Type (Deposit or withdrawal)
		Transaction_Amount

Task 3 – Business Case Model 1

Harry Happy is a used car dealer and runs one of the most profitable car yards in Melbourne. Harry has asked you to design a database for his office computer so he can record details of his sales.

Harry has given you a copy of his current paper invoice to use as a guide:

HARRY'S USED CARS				INVOICE

HARRY'S USED CARS   INVOICE

Invoice No: _____
Date: _____

SOLD TO: Name: _____
Street: _____
Suburb: _____
State: _____ PostCode: _____

Telephone: (_____) _____ - _____

SOLD BY: _____

Make	Model	Year	Serial Number	Colour

TOTAL PRICE: _____

- Produce an E-R diagram and a relational model of your design.
- Also state any assumptions you have made, and any major business rules that may apply to the system.

CUSTOMER	VEHICLE	INVOICE	STAFF
Customer No	Vehicle No	Invoice No	Staff No
Name	Rego number	Date	Name
Street	Serial number	Total price	
Suburb	Make	Customer no	
State	Model	Staff no	
Postcode	Year	Vehicle no	
Phone	colour	Type	

Assumptions:
1. Only one staff is involved in the selling of a used car (small dealership)
2. Only one vehicle sold per invoice; if more than one is purchased create new invoices.
3. Type field in INVOICE table is "S" for a sell invoice and "B" for a buy invoice. Assuming INVOICE handles both BUYS and SELLS of vehicles.

Note: This is ONE potential answer, given the above assumptions; different assumption will result in a different solution