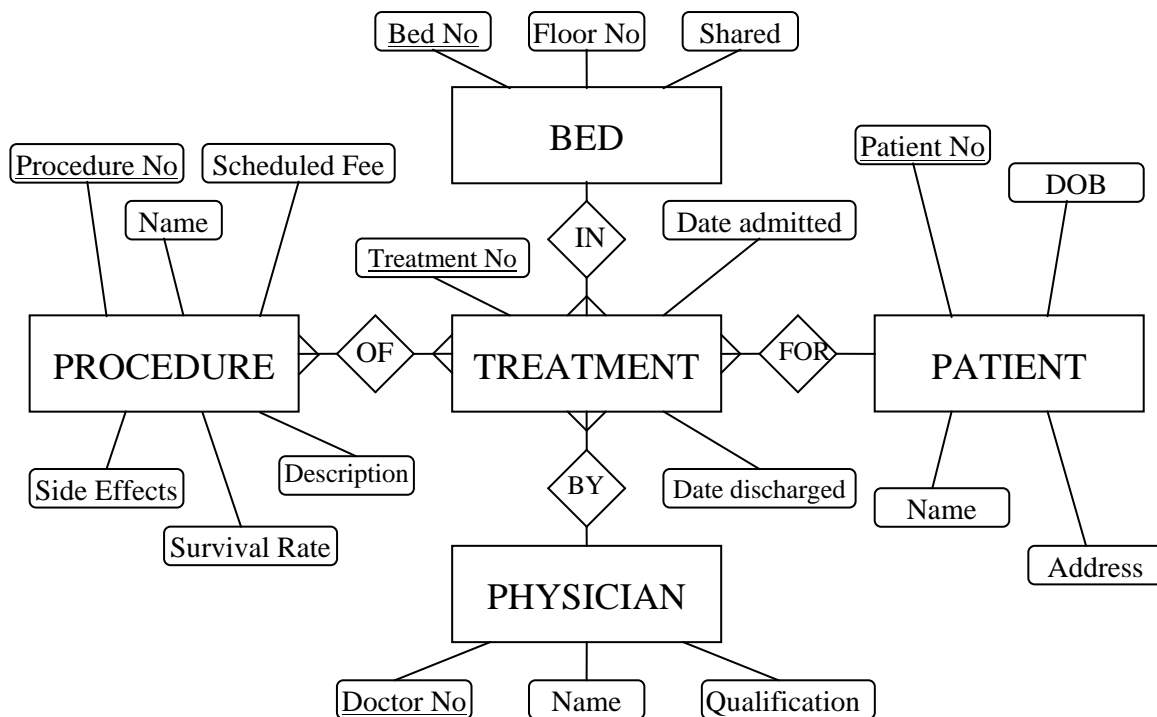**Business Data Management and Analytics**

Tutorial 6 - Data Modelling – ERD ←→ Relational

Task 1 – translating ERD to Relational

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

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                   │
│                                    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.
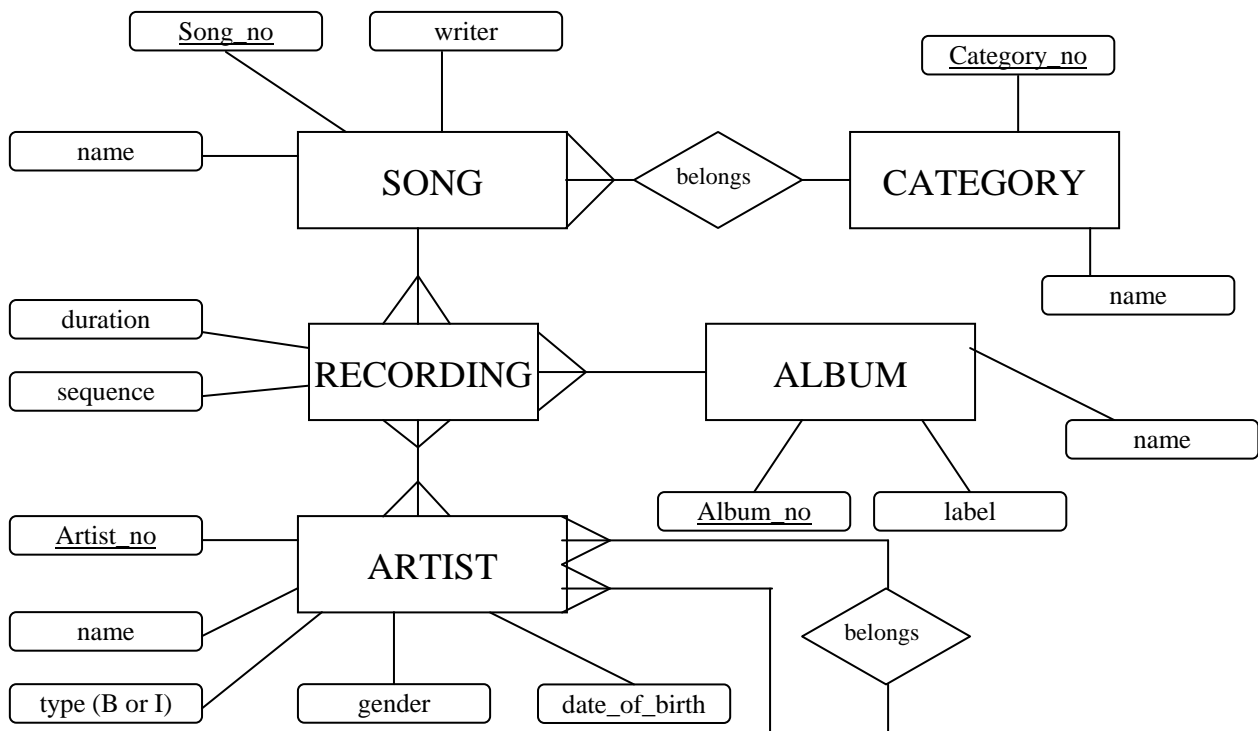
HOMEWORK EXERCISES

The following two pages contain homework exercises 1 and 2.

You are required to complete these exercises and have them ready at the beginning of tutorial 7 for assessment.

Your answers will be assessed by your tutor during the tutorial class and you will be given both feedback and a mark. The exercises, combined, are worth 1 mark.

Homework 1 – Translating ERD to Relational

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

Homework 2 – translating Relational to ERD

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

Customer(**Customer ID**, Tax ID, Name, Address, City, State, Zip, Phone)

Order(**Order No**, Customer ID, Date Placed, Date Promised, Terms, Status)

Order Line(**Order Line No**, **Order No**, **Product Code**, Qty)

Product(**Product Code**, Product Description, Price)