IN1010 Data Modelling Exercise 2 – Classic Car Club

In this exercise you must decide what the entities (tables) are, which attributes should belong in which tables, and what the relationships should be.

A classic car club where members pay a fee to belong and can book out various classic cars for up to 5 days is developing a database. The customer’s membership fee is translated into club points. The database needs to record members by their unique membership number, name, address, date of birth and club points. The system needs to record bookings of cars with a unique booking id, a start date, and a few days. The cars available to members need to be put in the database. Each car has a registration number, make, model, mileage and band. When a booking is complete the system should store the invoice information which should show the end date of the booking and the cost of the car in club points.

Develop data model in Visual Paradigm to represent the above scenario.

Hint: The relationship between two of the tables is one we haven’t used before, but it is on the Visual Paradigm relationship menu.

Member:

* Membership number (Primary key)
* Name
* Address
* Date of birth
* Club points

Car:

* Registration number (Primary key)
* Make
* Model
* Mileage
* Band
* Availability to members (either available or unavailable)

Booking

* Booking ID (Primary Key)
* Membership Number (Foreign Key from Members)
* Registration Number (Foreign Key from Cars)
* Start Date
* Duration (less than or = 5 days)
* End Date (to be calculated based on Start date and Duration)
* Cost of car (in club points)

Invoice

* Invoice ID (Primary Key)
* Booking ID (Foreign Key from Bookings)
* End date (same as Booking end date)
* Cost in points

Relationships

- Member has a 1-to-Many relationship with Booking (a member can make many bookings).

- Car has a 1-to-Many relationship with Booking (a car can be booked multiple times).

- Booking has a 1-to-1 relationship with Invoice (each booking generates one invoice).