

Tutorial:

ER Modelling Exercise – DVD Rental

The purpose of this tutorial is to explain how to tackle an ER modelling problem. The scenario is a shop that rents out DVDs & Blu-rays. After explaining the modelling of one scenario there are others for you to try. Consider the following requirements for a DVD & Blu-ray rental shop: The rental shop rents out copies of **films** on **DVD or blu-ray**. Each film, identified by a **unique film ID**, has a **title** and is supplied by a **named distributor**. The shop owns many **copies of each film**, each identified by a **unique copy serial number**, some DVD and some blu-ray. DVD's have a **matrix number** and a **region code**. The **purchase date** and **purchase price** of blu-ray discs, but not DVDs, has to be recorded. **Customers** pay a **standard rate** for each night's rental and customers can **rent copies** for up to 2 weeks. Customers pay in advance and their **name**, **address** and **credit card details** are recorded, if not already known; the **rental date** is also recorded. A **receipt** is issued for each payment, with a **unique receipt number** and the **date**. Customers are given a **unique customer number**. Regular customers are encouraged to become 'club members'. Club members pay a one-off membership fee, which entitles them to a discount on their rentals. Discounts become more generous the more a member rents film. Club members need not pay in advance but are invoiced once a month for the rentals they have made that month; each invoice has a unique invoice number, the month in question and the amount being invoiced. Derive an E-R model for the above database, being careful to show all attributes, keys, cardinalities, and constraints. Then, translate it into the Relational Model.