

Mini Case

A DVD rental shop requires a database (DB) system to assist in managing the hire and return of DVDs. The DB maintains details of customers, films, DVD copies of films and rental transactions. The system must record transactions (i.e. when a DVD is rented and when its returned), calculate how much a rental costs and determine which rentals are overdue. Additionally it must record arrival in stock of new DVDs and disposal of obsolete and faulty DVDs. DVDs are grouped into rental price categories; the category of a DVD will normally change during its lifetime in the shop – it will become cheaper as it 'ages'. The cost of rental is based on the rental price times the number of days it has been rented. The standard period of rental is two days; additional days are charged at a reduced rate. A DVD is considered 'overdue' if it is not returned within one week.

1. Draw the ERD for the above.
2. Transform the ERD into a relational model.