Library-ERM

A library manages **book**s and **journal**s. Each **book** is published by a publishing house, there may be several copies of each **book**, which can also be *borrowed* by **customers**. There are published issues of the **journal**s, these are only available once, a loan is not possible. The articlespublished in the **journal**s as well as the **book**s should be managed in such a way that comfortable functions for information retrieval are possible: In addition to the assignment of a subject area, there should also be a keyword, whereby the relevance of each assigned keyword is important. Synonymous keywords should be recorded. **Articles** and **book**s can each have several authors. Certain **book**s can each have one **book** as a translation template, *articles can reference each other*: Each *borrowing* is handled by one **employee**, and one **employee** is also responsible for *returning* the **book** copy. **Customers** can also reserve **book**s, each reservation usually results in a loan. The **book**s and magazines are stored on **shelves**. A **journal** is placed on a shelf, and each shelf is assigned a subject area for the storage of the **book**s.

Relational Model:

**Book** (**ISBN+#:int**, publishing\_house:varchar(32), is\_reserved\_from:"Customer\_id", is\_borrowed\_from:"Customer\_id", is\_sold\_to:"Customer\_id", subject\_area:varchar(32), main\_author:varchar(32), co\_author+:varchar(32), translatin\_template:Integer,)

**Journal** (**ISBN+#:int**, is\_sold\_to:"Customer\_id", main\_author:varchar(32), co\_author+:varchar(32))

**Article (ID:int**, is\_found\_in:"ISBN", title:varchar(32), subject\_area:varchar(32), keyword+:varchar(32), refers\_to:"Article\_id",

**Customer** (**ID:int**, first\_name:varchar(32), last\_name:varchar(32), address:varchar(32), email\_address:varchar(32), phone\_nr:int)

**Employee** (**ID:int**, first\_name:varchar(32), last\_name:varchar(32), address:varchar(32), email\_address:varchar(32), phone\_nr:int, work\_hours:int;)

**Shelfe** (**location:int**, subject\_area:varchar(32))