

Specification of Library System

"A college library provides various resources for students and staff, including books, videos, DVDs and CDs. It is common that several copies are kept of some resources, for example, recommended books for courses. The usual loan period of a resource is 2 weeks, but some resources are available for short loan only (2 days) and some other resources can only be used within the library.

The library consists of 3 floors. Resources are stored in the library on shelves. To locate a specific item in the library a combination of floor number and shelf number are used. In addition to this, a class number system is used to identify in which subject area a particular item belongs, for example, all resources concerned with Database Systems will have the same class number.

Students hold library cards which identify them as valid members of the Library. Students can have a number of different resources at one time, but the total number of resources they may borrow at a given time must never exceed 5. Staff members at the College also hold library cards, and are allowed to have up to 10 different items at one time.

The library charges fines for resources that are loaned for longer than the time allowed for that resource. For each day a resource is overdue the member is fined one dollar. When the amount owed in fines by a member is more than 10 dollars, that member is suspended until all resources have been returned and all fines paid in full.

The system is required to maintain a record of all of the above details. Specifically it needs to keep track of:

- What each resource is, its class number, how many copies of it are held by the library and where these are located in the library.
- Student and staff members of the library.
- All current loans, including whether they are overdue.
- A record of previous loans to help in identifying popular resources.
- The details of any fines owed by members.
- A list of library members who have been suspended due to overdue loans or unpaid fines." (Stockman: 2020)