

Title: University Library Management System

Scope: The University Library management system is intended to record all the library activities in a systematic way such as maintaining the details of the books, journals and thesis present in the library. This system also provides ease of access to the students and faculties by maintaining the record of the borrowers and shelves containing the books. If the borrower misses to return the books then he/she is subjected to fine. This also helps the librarians in providing information about no. of copies of a particular book, list of books in a certain category, shelf no. of a particular book, journal and thesis. Each document (i.e. book, journal, thesis) can have a specific type of binding.

Usually university library also has facilities of online resources which can be accessed through computers but this system is not taken in consideration in designing this database.

Database Requirement:

- University library maintains the records of students, faculties and staff of library.
- University library has books, journals and thesis for the students and faculties.
- Students and Faculties can borrow books for a fixed time interval and then shall return it but other material is meant to be read there.
- Each book, journal or thesis has a particular type of binding which can help the user to search it.
- One book can be borrowed by one student at a time but as there are several copies other students and faculties shall also borrow it.
- Librarian should also maintain the records of the new arrivals
- Record of students and faculties should be maintained who has borrowed books and he/she will be subjected to fine if book not returned till deadline time.
- Details of each shelf is to be maintained by keeping track of all the books, journals and thesis present on the shelf which helps in navigating the student or faculty to and particular book.
- Each book, journal and thesis have a unique Id and all such things have a proper location in some appropriate shelf according to their category.

- All the library staff have permission to issue a book or return the book but only admin has the right to remove or add entry for new book, journal or thesis.
- We have various categories of books and one book can belong to only one of the categories.

Queries:

1. Given a project "University Library Management System", retrieve ID and name of all the students of Library.
2. Retrieve name of all the books whose publication year is 2019.
3. Retrieve category and total number of copies available of a book named "The Legends of Khasak".
4. Given author "Bischoff", retrieve name and category of all the thesis he wrote.
5. List out the name and publication house of all the Journals.
6. List out names of all faculties who have issued books and not returned yet.
7. Retrieve name and category of all the books whose cost is under 500.
8. List out name and cost of all the books published by publication house named "Pearson".
9. Retrieve the name and department of student who borrowed the book "Database Management System".
10. Retrieve ID and name of student whose department is Bachelors or Masters.
11. List out student name, borrowing detail and return details of books that are borrowed in the month of July 2020.
12. Retrieve book code, title, ISBN number of all the books that are placed in shelf 'A1' and sorted by book title in ascending order.
13. Retrieve the name of students who have not taken any book.
14. Retrieve ID and name of all the students who returned the books after the due date of submission.
15. Retrieve all the journals that are arrived in the library in the month of May 2020.