Functional and Non-Functional Requirements for a Library System

NEWGIZA UNIVERSITY

NGU.

CCAS.4.3 Software Engineering

Assignment 1

Donia Elanany- 202101818

Functional Requirements

ID	Requirement	Description	MOSCOW Category
FR1	Search for books by title, author, or genre	Users can search the library catalog	Must have
FR2	Borrow and return books	The system tracks book lending and returns	Must have
FR3	Maintain inventory of books	The system should maintain and update an inventory of available books	Must have
FR4	Reserve books	Users can reserve books currently checked out	Should have
FR5	Overdue tracking	The system tracks overdue books and fines	Must have
FR6	Notify users of overdue books	Send overdue notifications to users via email	Could have
FR7	Add, edit, or remove books	Librarians can update the catalog	Must have
FR8	User registration	Users can create accounts and log in	Must have
FR9	Borrowing history	Users can view their past borrowing records	Should have
FR10	Generate reports	Reports on the most borrowed books can be generated	Should have
FR11	Bulk import of books	Allow bulk import of book records	Could have
FR12	External database integration	Integrate with external databases for additional book info	Could have
FR13	Barcode scanning support	Support for barcode scanning during check-in/check-out	Must have
FR14	Rate and review books	Users can rate and review borrowed books	Could have
FR15	Renew books	Users can renew borrowed books online	Should have
FR16	Borrowing limits	Restrict users from borrowing more than a set number of books	Must have
FR17	Blacklist users	Restrict users with unpaid fines from borrowing	Could have
FR18	Mobile-friendly interface	Provide a mobile-friendly interface for users	Could have
FR19	Multiple language support	The system should support multiple languages	Could have
FR20	System activity logs	Log all activities for auditing purposes	Should have

Table 1: Functional Requirements for a Library System

Non-Functional Requirements

ID	Requirement	Description	MOSCOW Category
NFR1	Availability	System should be available 99.9% of the time	Must have
NFR2	Scalability	Support up to 1000 concurrent users	Must have
NFR3	Performance	System should respond to user requests within 2 seconds	Should have
NFR4	Security	Ensure data privacy through encryption	Must have
NFR5	Compliance	System must comply with GDPR	Must have

Table 2: Non-Functional Requirements for a Library System