Project Vision and Scope

Vision Statement:

Our library database is designed to establish a seamless and efficient system for managing library resources in a school setting, ensuring accessibility, organization, and accountability. Libraries serve as vital hubs of information, and an effective database is good for maintaining order and streamlining operations. By integrating key features such as item tracking, account status, and borrowing policies, our system creates a user-friendly experience that benefits both students and faculty.

Item tracking is an important part of the database, allowing users and staff to quickly find books, journals, and other resources. Real-time updates on availability, due dates, and reservations, helps prevent misplaced or lost items, ensuring that resources can be accessed by those who need them.

Account status management is another important feature, allowing library staff to track active users, monitor overdue accounts, and enforce a borrowing limit. Students and faculty members can easily check their borrowing history, request renewals, and receive notifications about upcoming due dates, reducing the likelihood of late returns.

Also, borrowing policies are embedded into the database to ensure fair access to resources. These policies create a borrowing limit, renewal options, and penalty structures for overdue or damaged items. By clearly outlining these rules, the system encourages responsible usage while maintaining the integrity and longevity of the library's collection.

Ultimately, our library database is built to improve the overall user experience, making it easier for students and faculty to find, borrow, and return items. By using technology to improve accessibility and organization, we aim to foster a well-managed and resourceful learning environment that supports academic success and research endeavors.

Scope Statement:

The School Library Database project aims to develop a centralized system for managing library assets, ensuring efficient resource tracking and improved record-keeping. The database will store and monitor library items, including books, magazines, and digital media, while tracking their checkout status (in stock, out of stock, checked out, lost, or on order) and item condition (new, used, lightly damaged, or highly damaged). Additionally, it will maintain account status records, classifying users as students, faculty, or suspended accounts. An account can become suspended when the account holder begins to accumulate fees or changes, often because of overdue items or unpaid fines. This restricts the user from borrowing additional items until the fees are cleared. The system will also track borrowing activity, including checkout durations,

overdue fees (small late: 1-7 days, big late: 8-29 days, lost: 30+ days), and accumulated account fees. To enhance user management, the database will generate member summaries, detailing user IDs, total fees, books borrowed, frequent genre preferences, average loan durations, and reserved items.

The system will include various functional requirements, such as the ability to store and manage library assets, update and track item conditions, maintain user records, calculate and manage fees, and generate detailed member summaries. Administrators will have the ability to impose fees, manage reservations, and generate reports on library usage trends. Additionally, the system will offer real-time updates, ensuring that users and staff can access the most current information regarding book availability and user accounts. These functionalities will streamline library operations, reduce errors, and improve accessibility for students and faculty.

Beyond core functions, the database must also meet several non-functional requirements to ensure usability and efficiency. The system must be secure, preventing unauthorized access to sensitive information, and maintain data integrity to prevent duplicate or lost records. It should feature a user-friendly interface for easy navigation, be scalable to accommodate future library expansions, and provide fast response times for real-time book searches and updates. Additionally, the database should be reliable, with minimal downtime and regular data backups, and compatible with multiple devices, including desktops, tablets, and mobile devices.