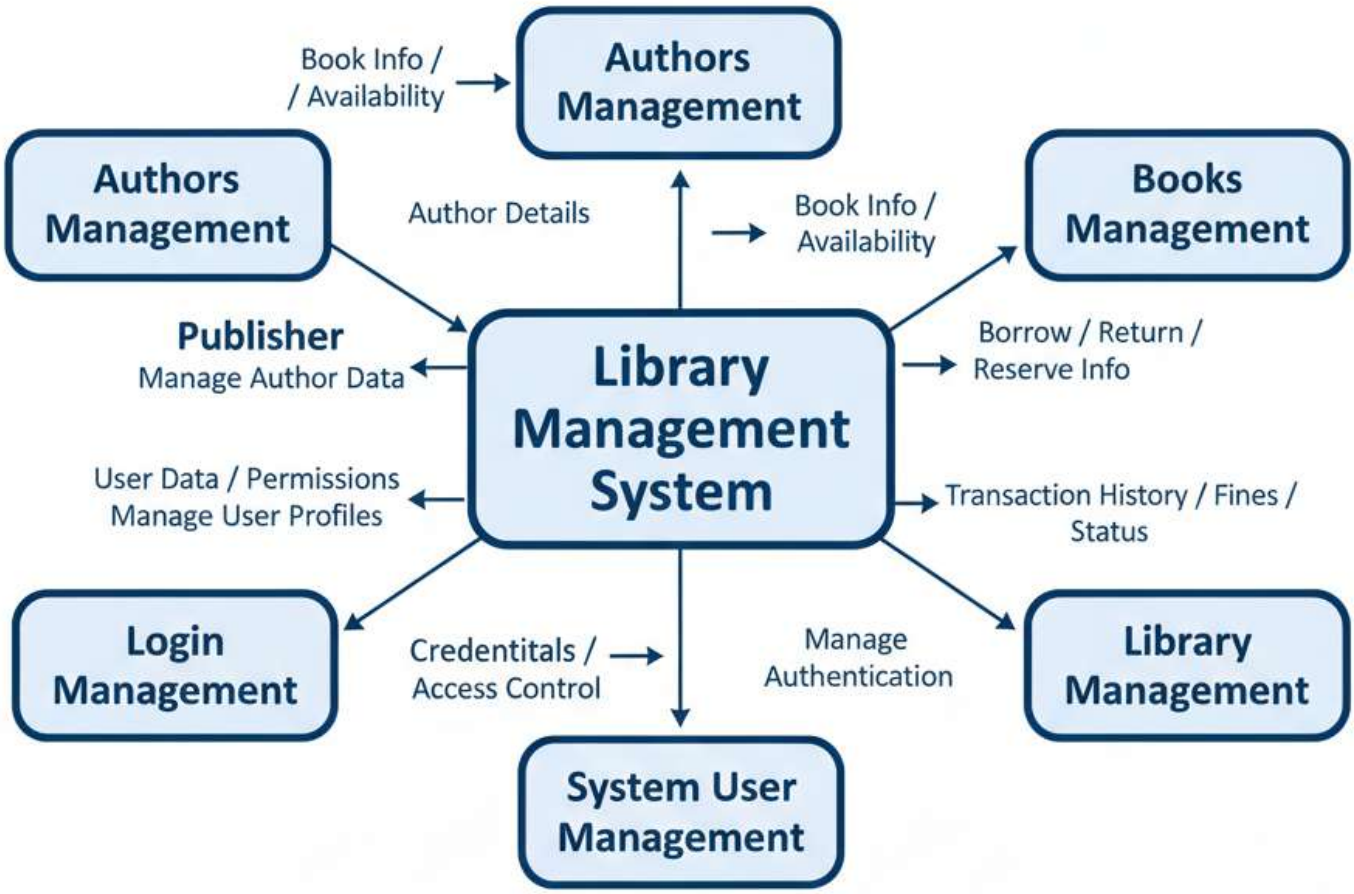
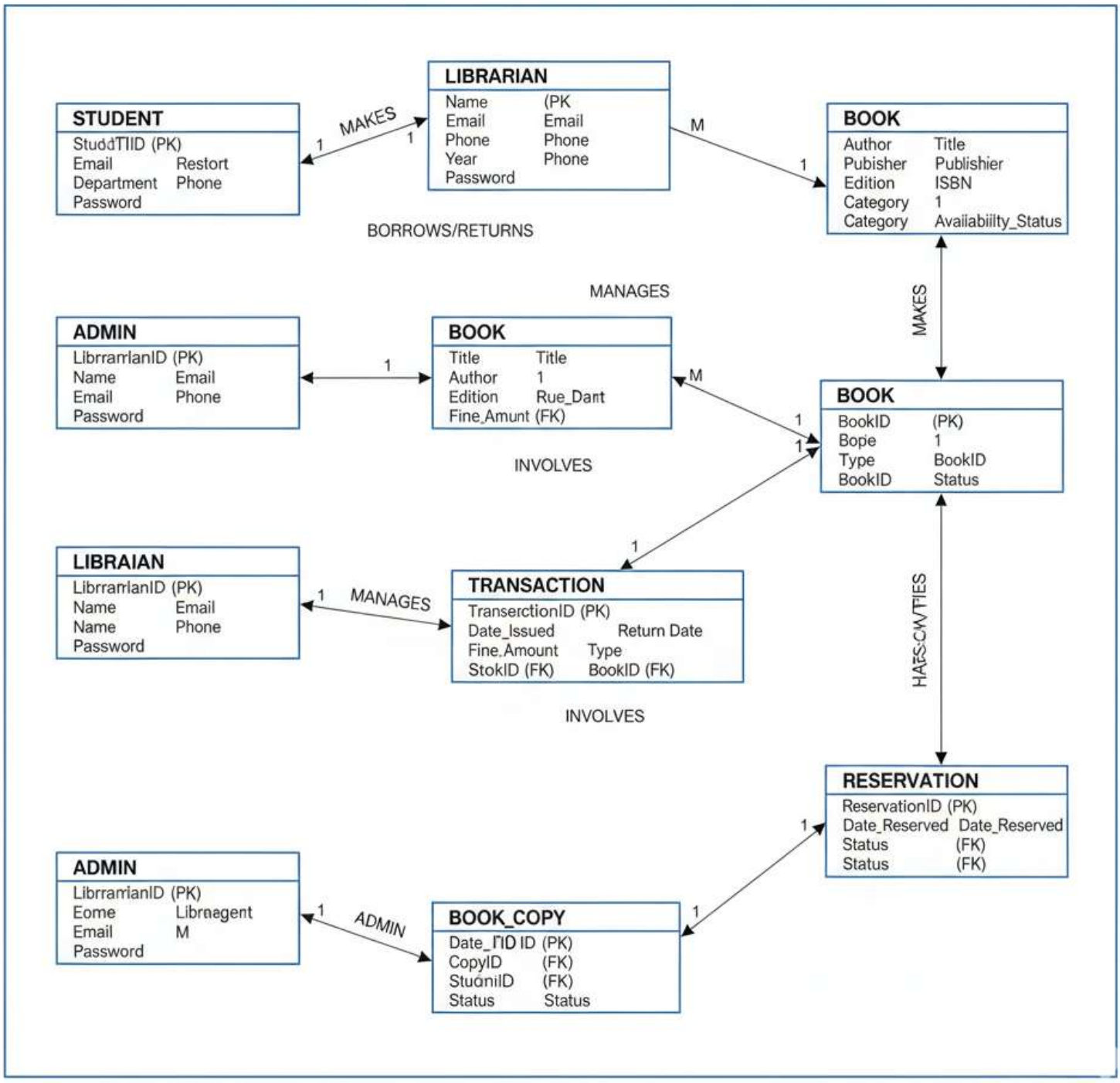
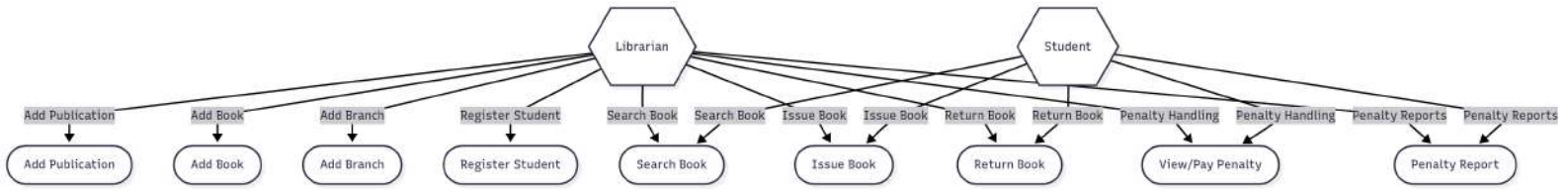
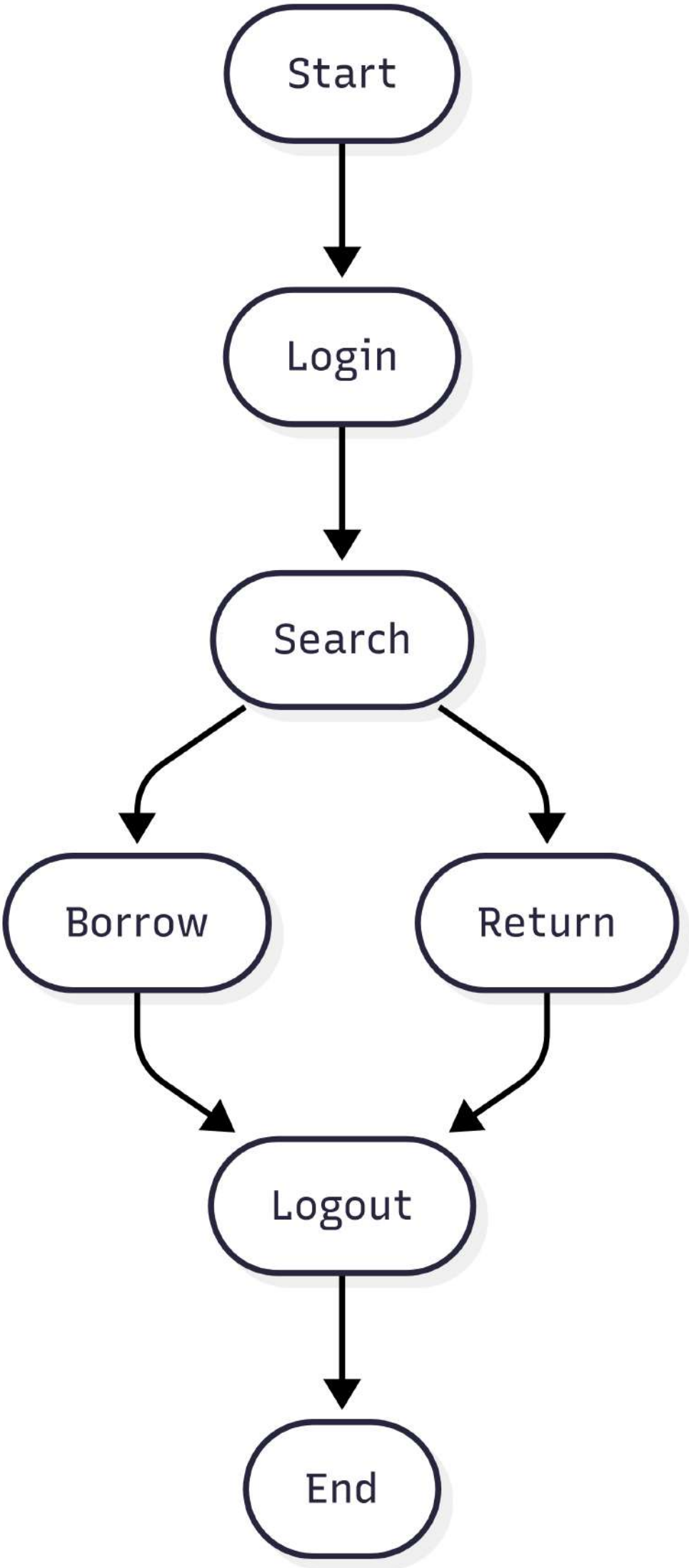
DFD Diagram for Library Management System

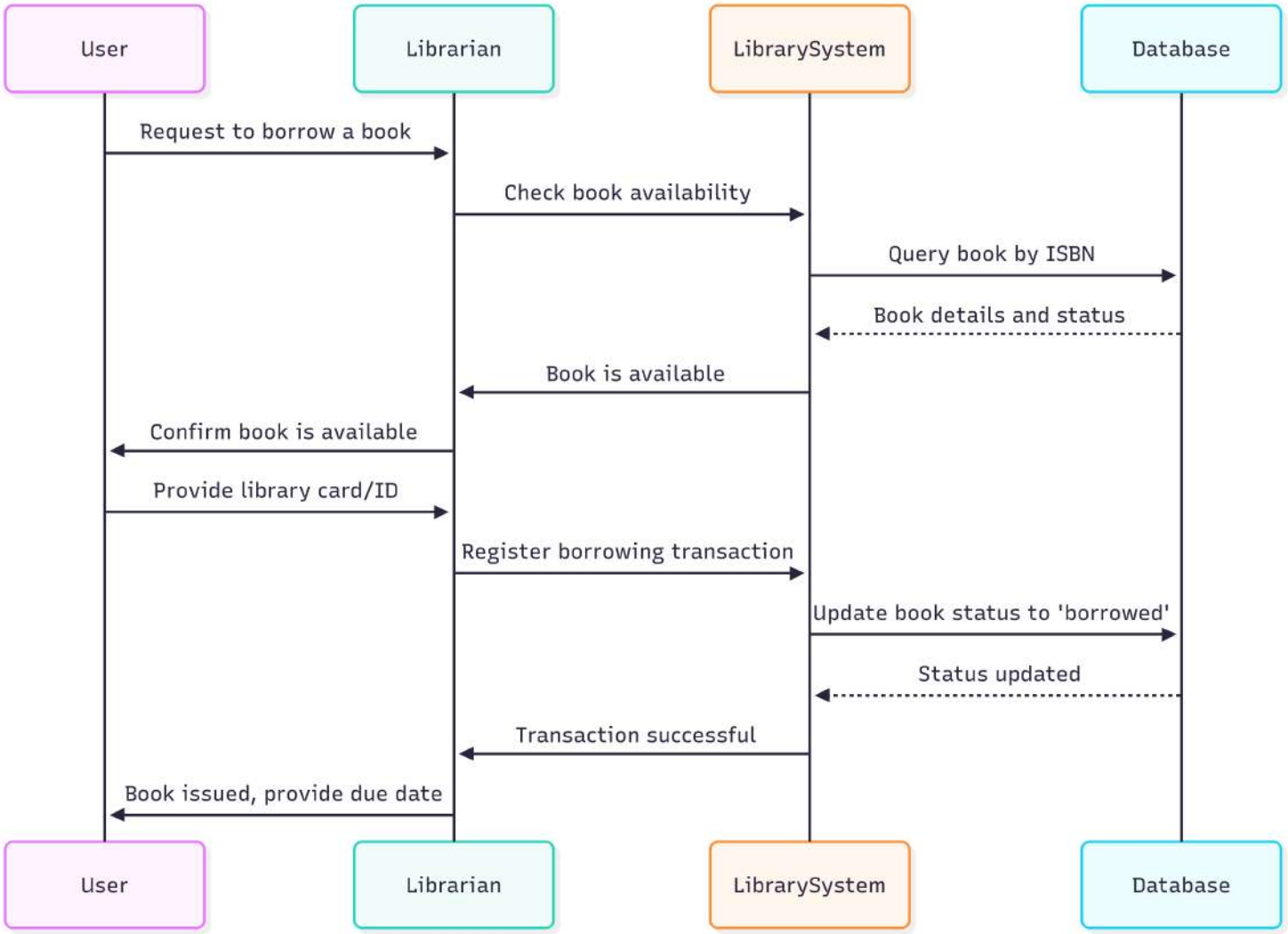


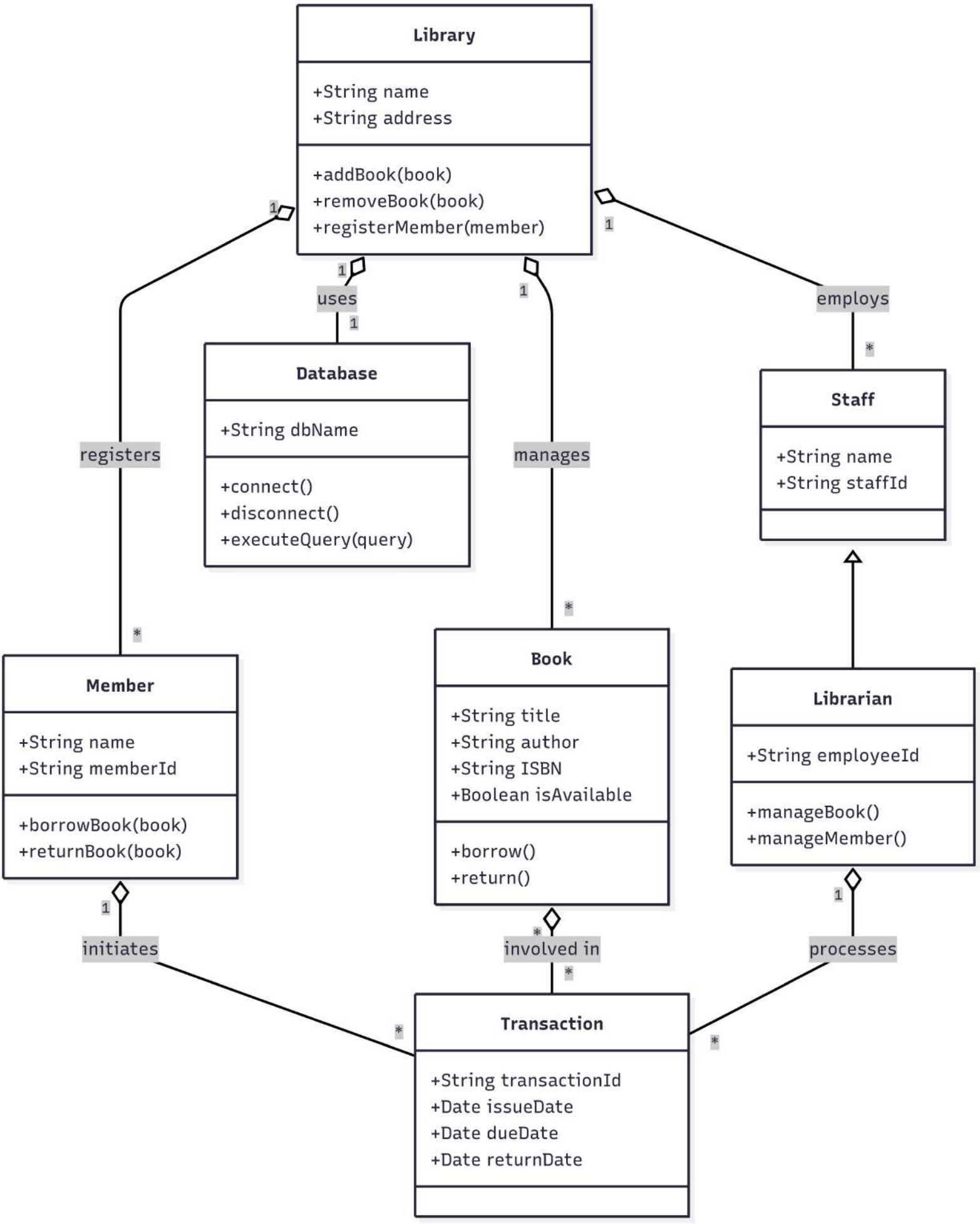
Library Management System - ER Diagram




Librarian
Student
Add Publication
Add Book
Add Branch
Register Student
Search Book
Search Book
Issue Book
Issue Book
Return Book
Return Book
Penalty Handling
Penalty Handling
Penalty Reports
Penalty Reports
Add Publication
Add Book
Add Branch
Register Student
Search Book
Issue Book
Return Book
View/Pay Penalty
Penalty Report


Start
Login
Search
Borrow
Return
Logout
End


User
Librarian
LibrarySystem
Database
Request to borrow a book
Check book availability
Query book by ISBN
Book details and status
Book is available
Confirm book is available
Provide library card/ID
Register borrowing transaction
Update book status to 'borrowed'
Status updated
Transaction successful
Book issued, provide due date
User
Librarian
LibrarySystem
Database


Library
+String name
+String address
+addBook(book)
+removeBook(book)
+registerMember(member)
1
1
1
1
1
uses
1
employs
*
Database
+String dbName
+connect()
+disconnect()
+executeQuery(query)
Staff
+String name
+String staffId
registers
manages
*
*
Member
+String name
+String memberId
+borrowBook(book)
+returnBook(book)
Book
+String title
+String author
+String ISBN
+Boolean isAvailable
+borrow()
+return()
Librarian
+String employeeId
+manageBook()
+manageMember()
1
1
initiates
*
involved in
*
processes
*
*
Transaction
+String transactionId
+Date issueDate
+Date dueDate
+Date returnDate