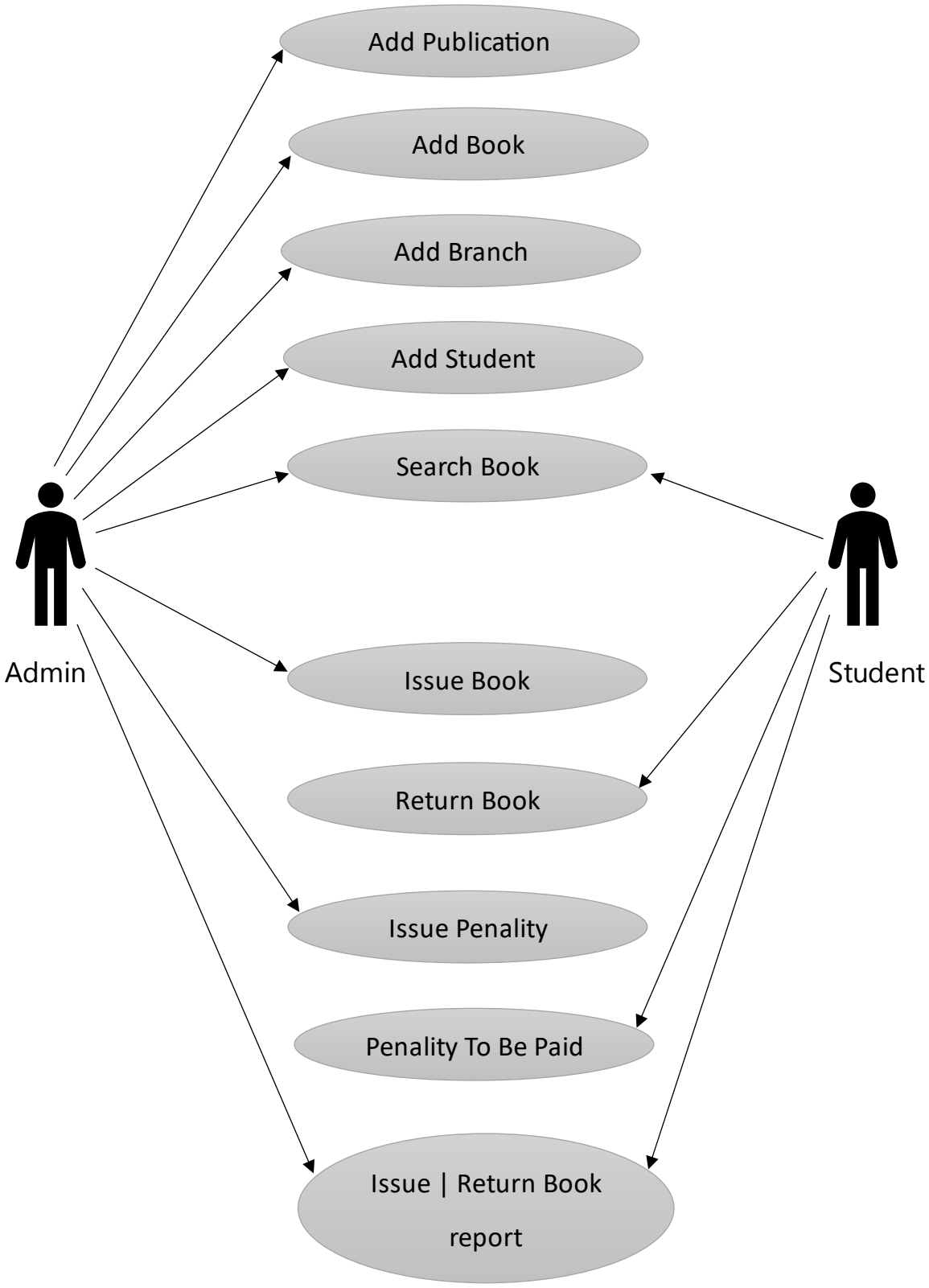
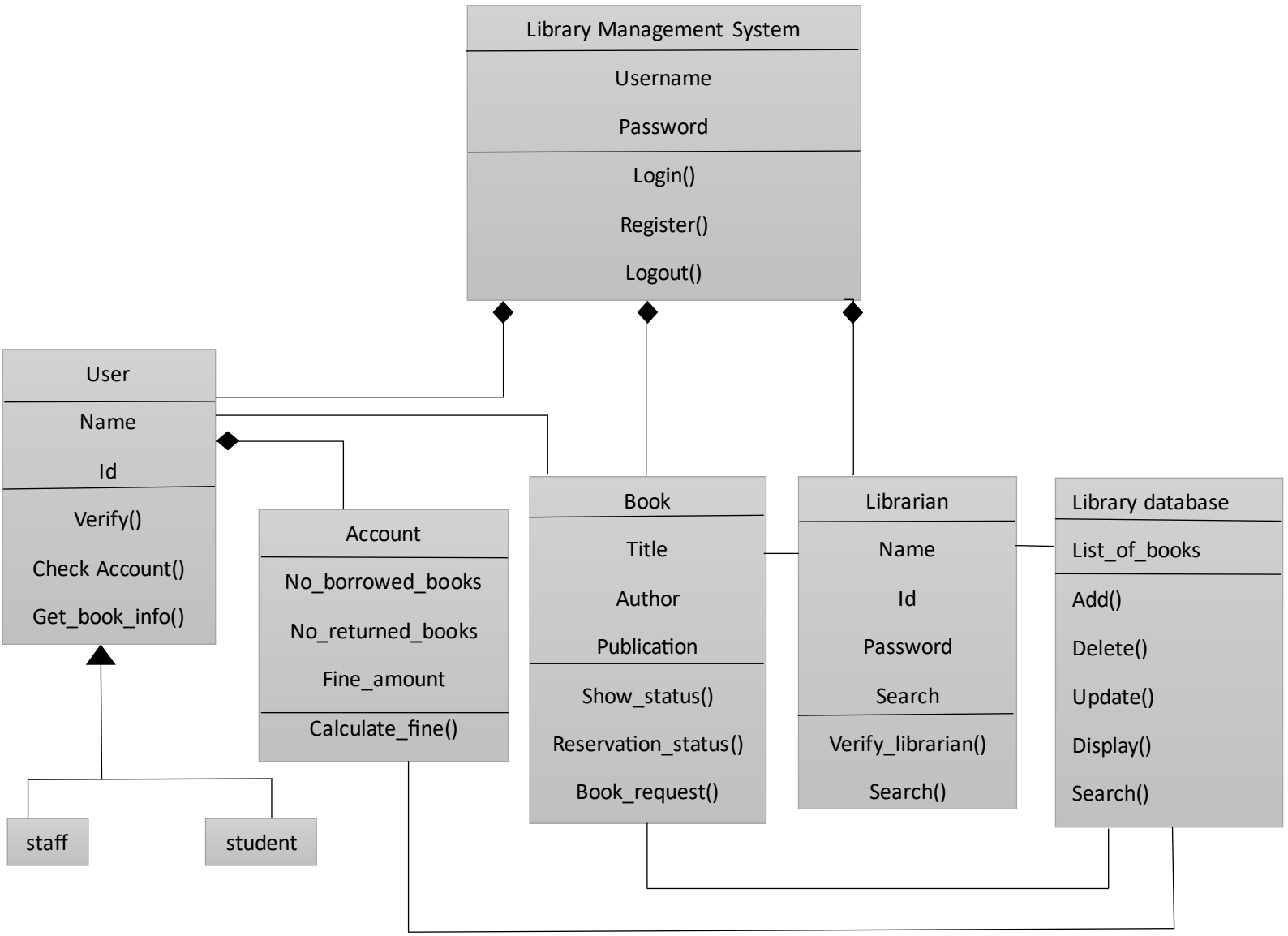
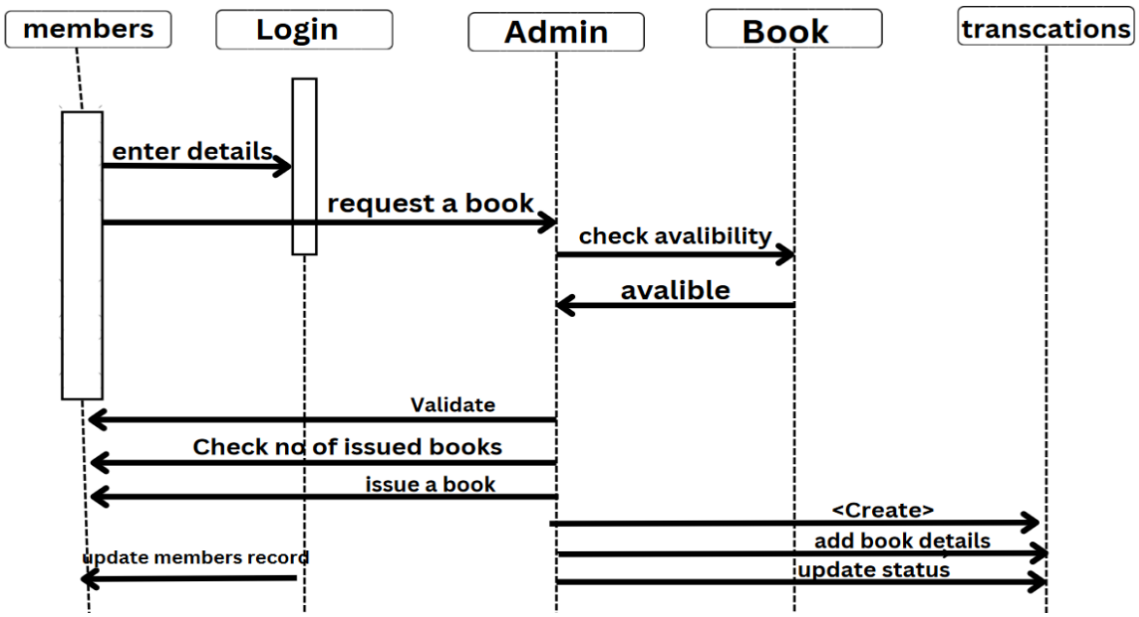
1. Use Case Diagram:



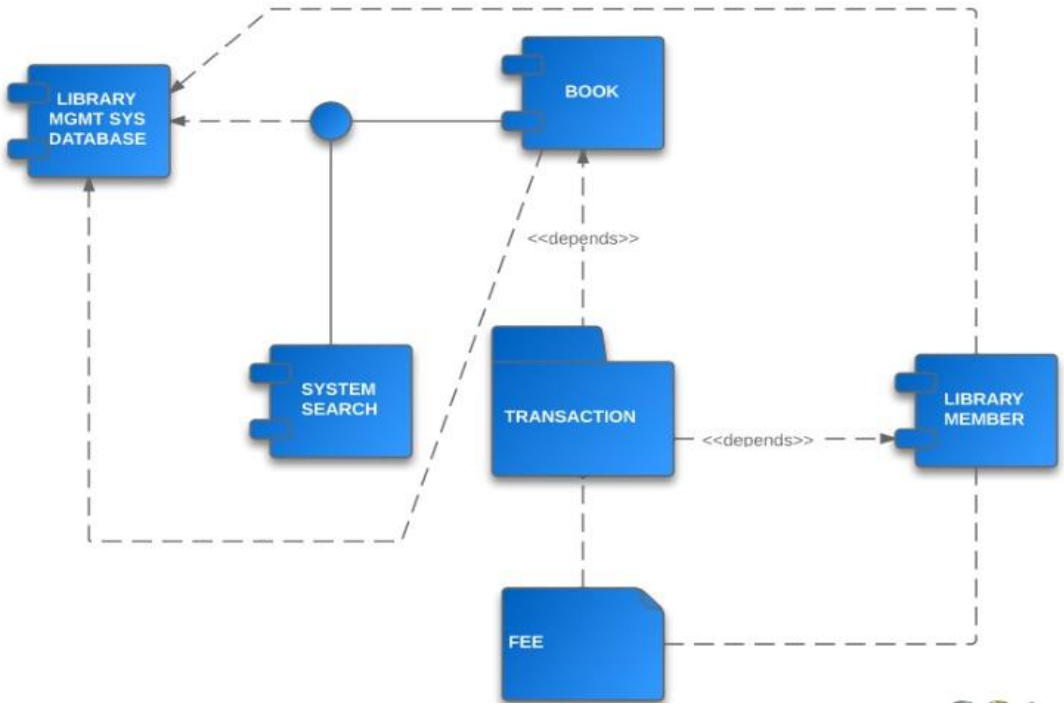
2. Class Diagram:



3. Sequence Diagram:

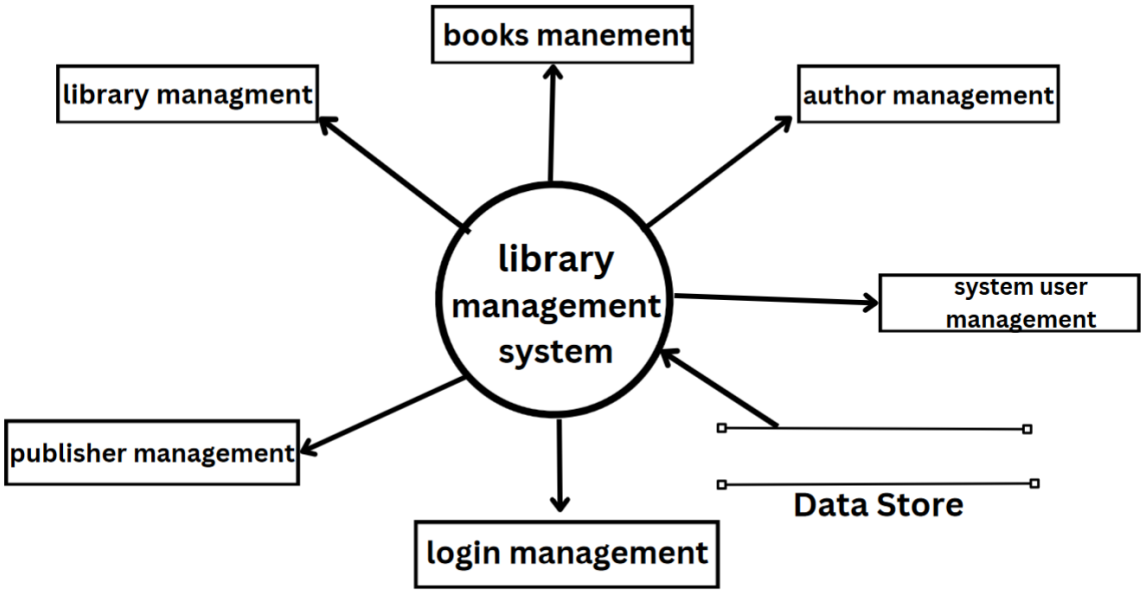


4. Component Diagram:

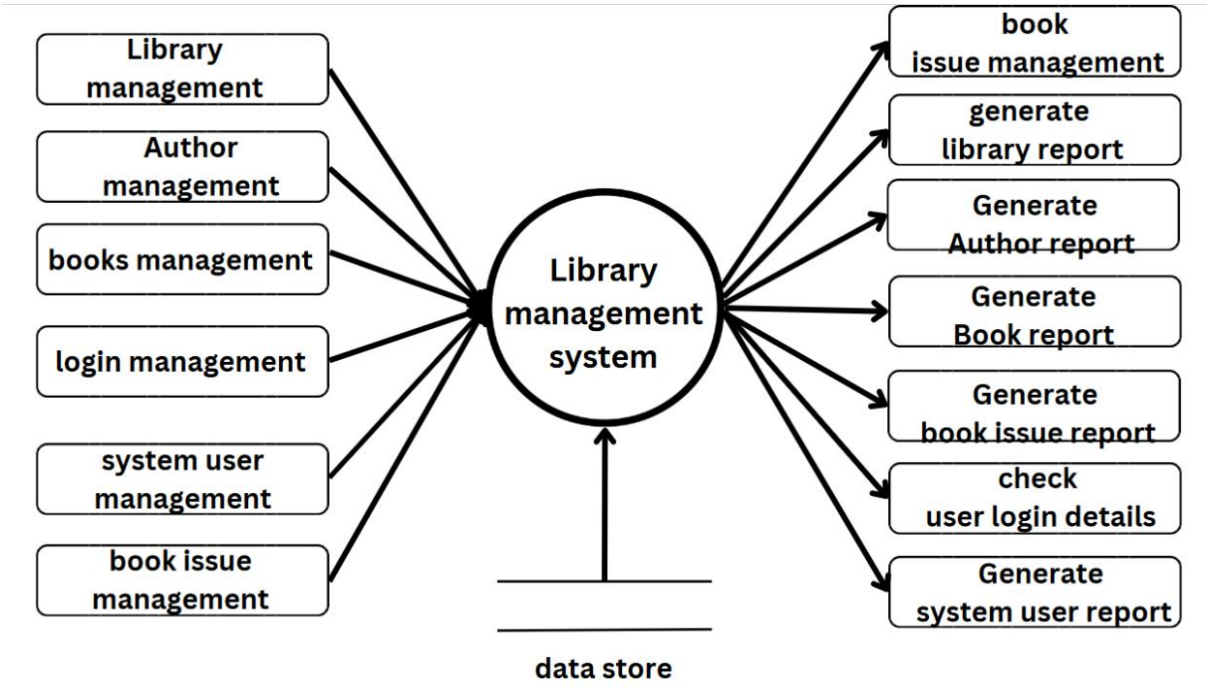


5. Data Flow Diagram:

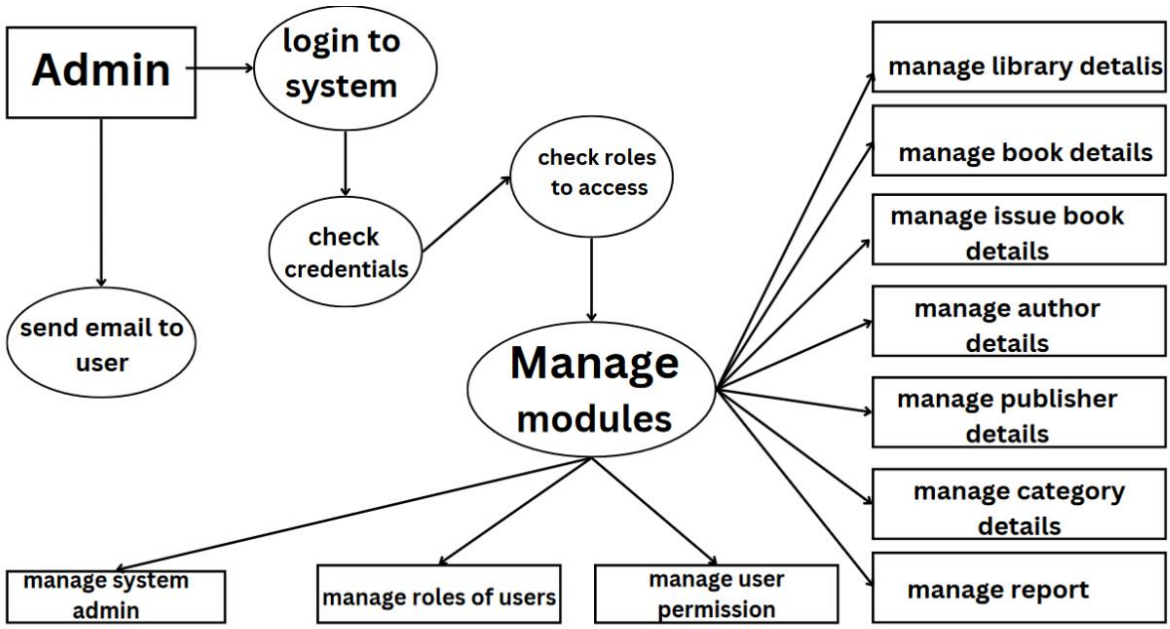
Level 0:



Level 1:

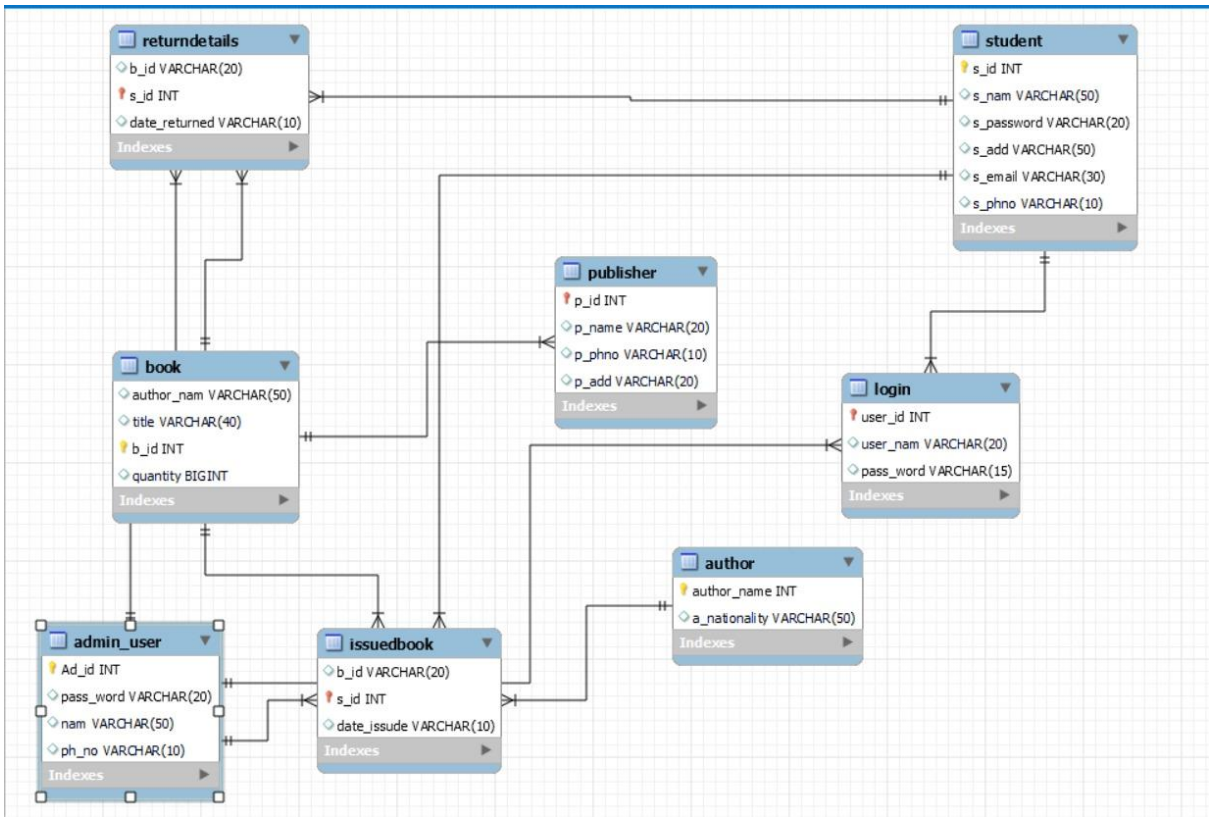


Level 2:


Admin
login to system
check credentials
check roles to access
send email to user
Manage modules
manage library detalis
manage book details
manage issue book details
manage author details
manage publisher details
manage category details
manage report
manage system admin
manage roles of users
manage user permission

6. Test Cases:

TestCaseID	TestCase Scenario	TestCase Steps	Test Input	Expected Result	Actual Result	Status Pass/ Fail
1	Checking for valid login whether right user name and mail id and password	Enter Username, password and login	Enter Username: munna Enter Password: myproject	Welcome to login page	Welcome to login page	Pass
2	Checking for valid login whether right user name and mail id and password	Enter user mail id and password chicking Register	Email: mu@gmail.com password: 1234	You are logged in as mu@gmail.com	Invalid username or password please try again	Fail
3	Scenario to see the student registering her profile	Click on "Register Here"	Provide First Name, Last Name, Registration Number, Select Department from the drop-down menu, and enter your password. Then click on Login	The Student Login page opens.	The Student Login page opens.	Pass

4	Admin can Add a book in the library	Click on "Add book"	Enter the Book name, Author name, ISBN number, category	Book added Successful	Book added Successful	pass
5	Student can edit his/her profile	Click on "Edit Profile"	Enter the required Details to edit user profile	Edited Details Successful	Edited Details Successful	Pass
6	Admin trying to issue a book to student	Click on "Issue Book – Issue a Book"	Enter required Book name and ISBN number and also with whom to issue a book student Details also	Book name and ISBN – python[1234] Student – Name[Brach][class][Roll no]	Issued Book to A student	Pass
7	Admin can View All Student who are registered	Click on "View All Students"	-	All Details of the students are visible	All Details of the students are visible	Pass
8	Student can view the Issued books by Admin and view to pay Fine	Click on "View my issued Books"	-	Student Can See the books Issued by Admin	Student Can See the books Issued by Admin	Pass
9	Student Failed to return the book by 15 Days	Book not returned	-	Fine is raised in student profile after 15 days	Failed to return the book in 15 days	Fail
10	Student returned the book in due date	Book returned Successful	Press of return Book to Admin form Admin portel	Fine is not raised in the student profile can see as Fine = 0 rs	Fine is not raised in the student profile can see as Fine = 0 rs	Pass

7. Entity-Relationship (E-R) Diagrams: