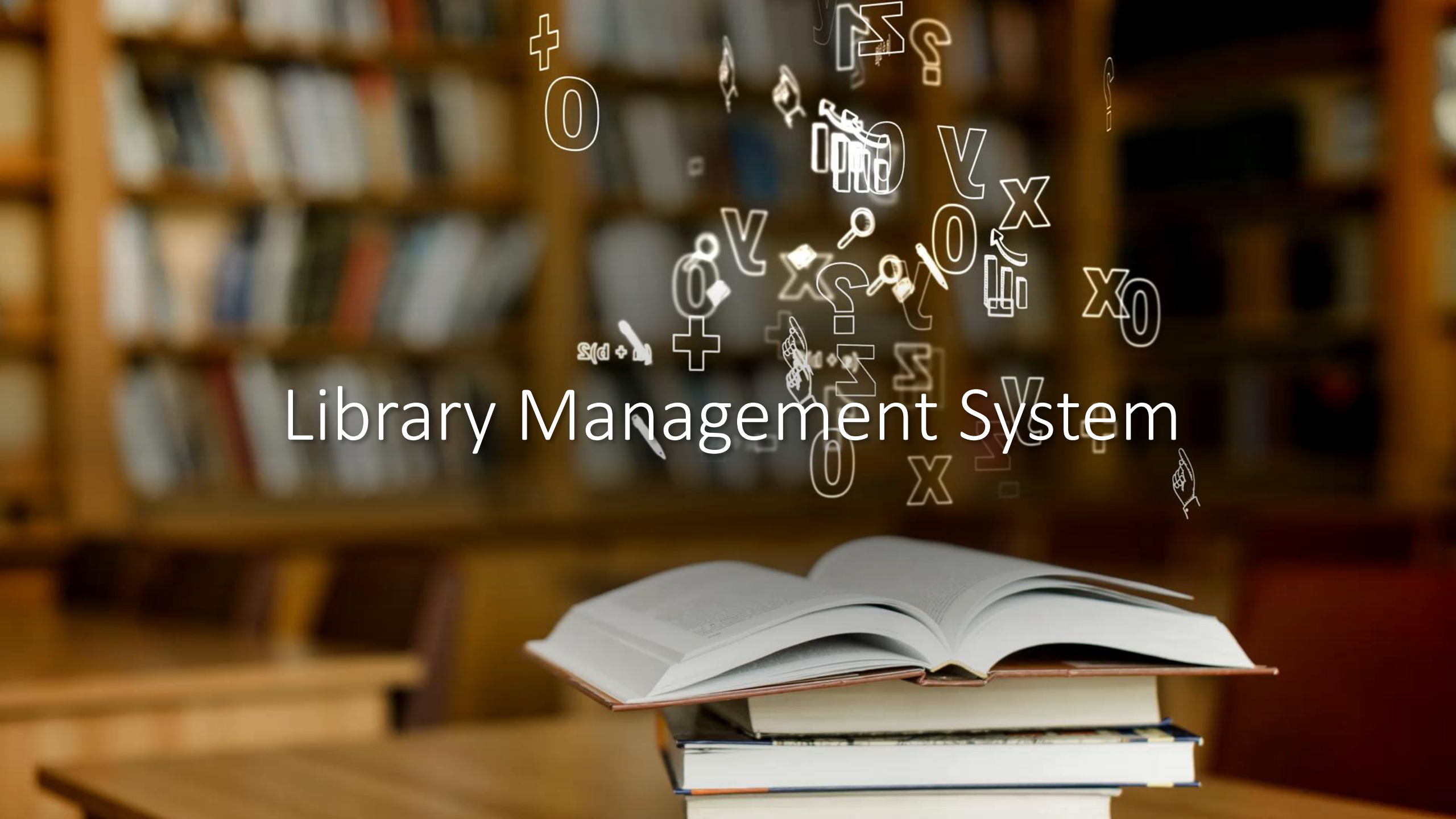

Library Management System

Team Members

- Sarang Goel (2100290110143)
- Shivam Yadav (2100290110156)
- Sudhanshu Tyagi (2100290110166)

Introduction

Library Management System is a Binary Search Tree based program, where the books will be stored in a binary search tree based on a specific key(ex.: book title). Each node could represent a book and contains information of the book (i.e. title, author, etc).
By this software students can issue books and the admin or librarian can update/delete the record of books kept in the library.

Features

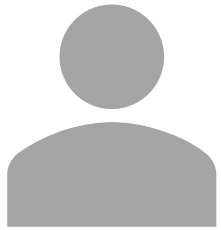
Librarian login

Add book

Delete book

Update book

Print all books(inorder-traversal)



User login

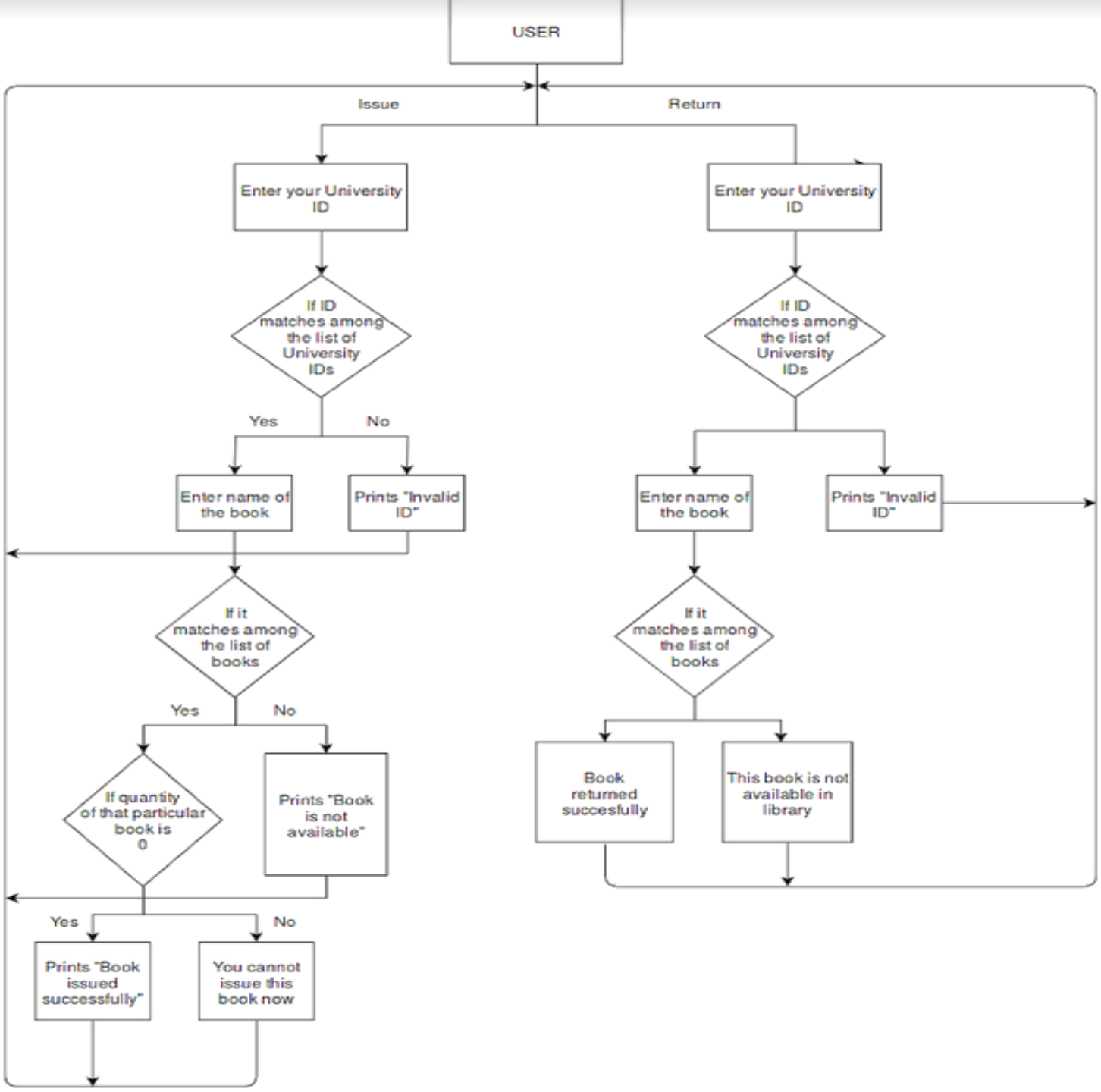
Issue book

Return book

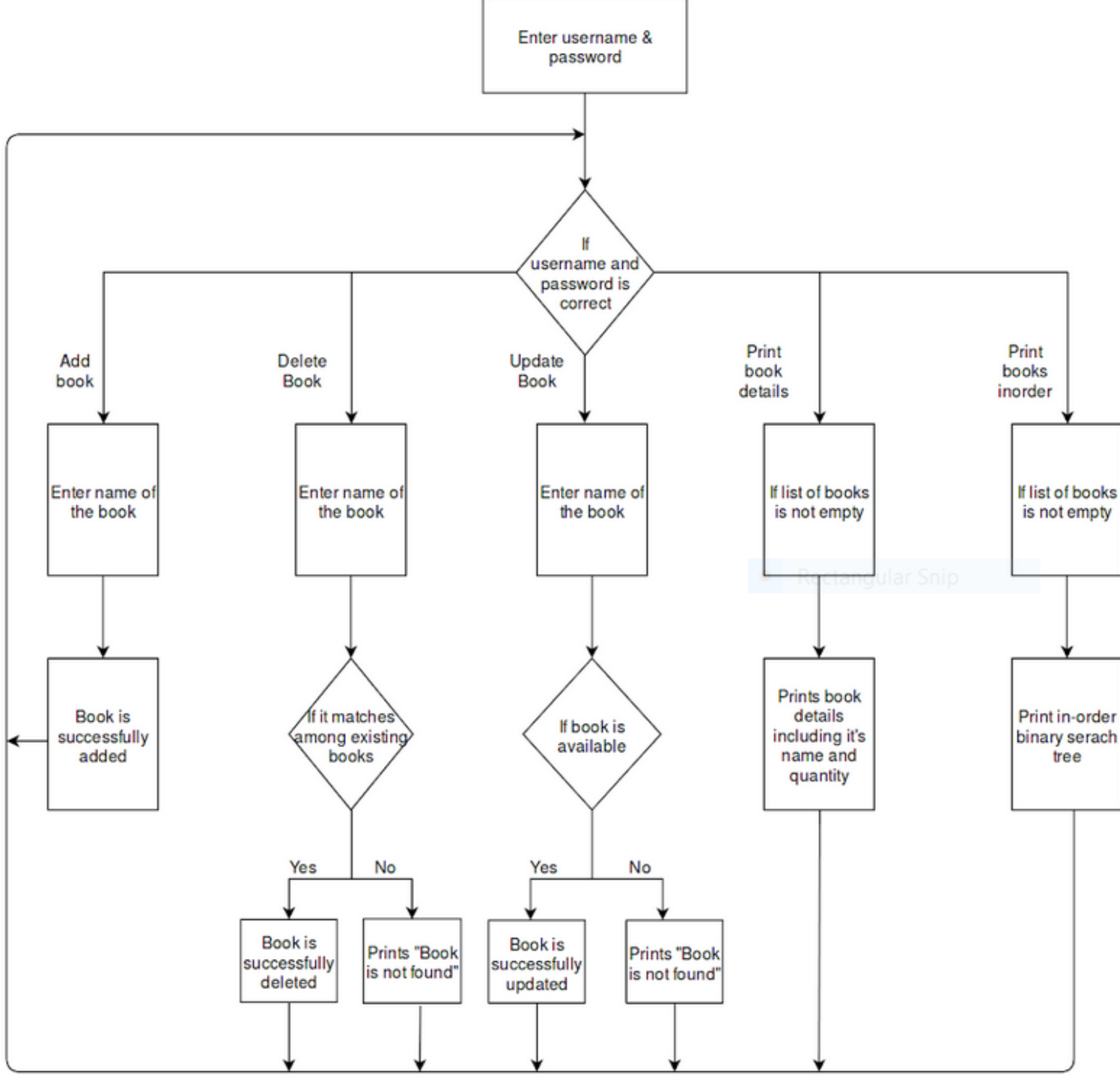
Data Structures used

- **Binary Search Tree**: Searching operation performs an in-order traversal on the created binary search tree to get the elements in sorted order.
- **Hash-Map:** Unique keys are generated using hash map and assigned to every book to avoid duplication of keys.
- **2-D array:** store the record of each book where rows indicate unique value for particular book which hash-map returns and columns indicate total quantity of books and available quantity of books.

Flow Chart for User Interface



Flow Chart for Admin Interface



Thank You