Library Automation System
Software Design Description

1. Revision History

Version	*Date*	*Author*	*Change Description*
1.01	25.04.2017		

2. INTRODUCTION

2.1 Purpose and Scope

This document gives information about the general structure of the program. This includes the class, ER and sequence diagrams of the program. It also includes system design, program interfaces, and requirement classes matrix.

2.2 Document Overview

The following sections cover the design of the program, interfaces, class diagrams, sequence diagrams, ER diagrams and requirement matrices.

* The design of the program is the part that describes the general structure of the program.

* Interfaces include screenshots and explanations of the views the user provides to the program.

* The class diagram contains the general structure of the classes in the program and the variables and methods found in these classes.

* Sequence diagram contains a scheme in which the flow of the program is schematically transferred for each use case i of the program.

* The ER diagram contains a diagram showing how the information is stored in the program.

* The states of the classes for which the requirements are specified are specified in a matrix.

2.3 System Overview

Our program is a library system. Within this system, customers can search for books in the library, borrow books and return them. In addition, the request for a book on another user can be specified and the user is informed when appropriate.

2.4 Definitions, Acronyms, and Abbreviations

Term/Acronym	*Definition*

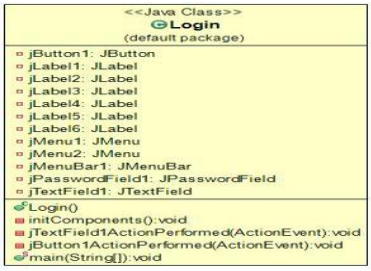
2.5 References

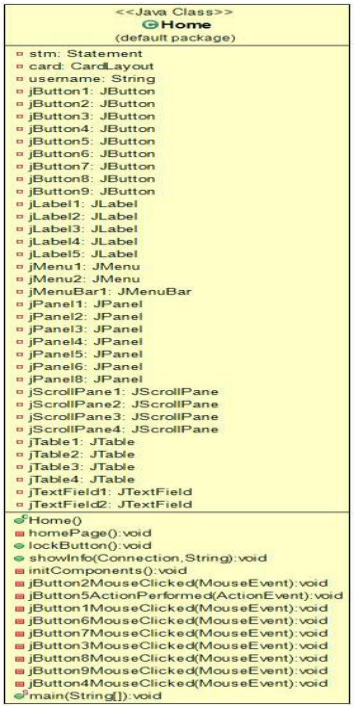
3. Design Constraints and Decisions

4. Design Details

The program works on 3 main components. The interface consists of a program management block and database components. Through the user interface, it performs the operations by logging in. During the process, the program interface that we have written using the java language takes the operations and organizes them in the data management section and performs operations on the database.

4.1 Software Components





4.2 Software Behavior

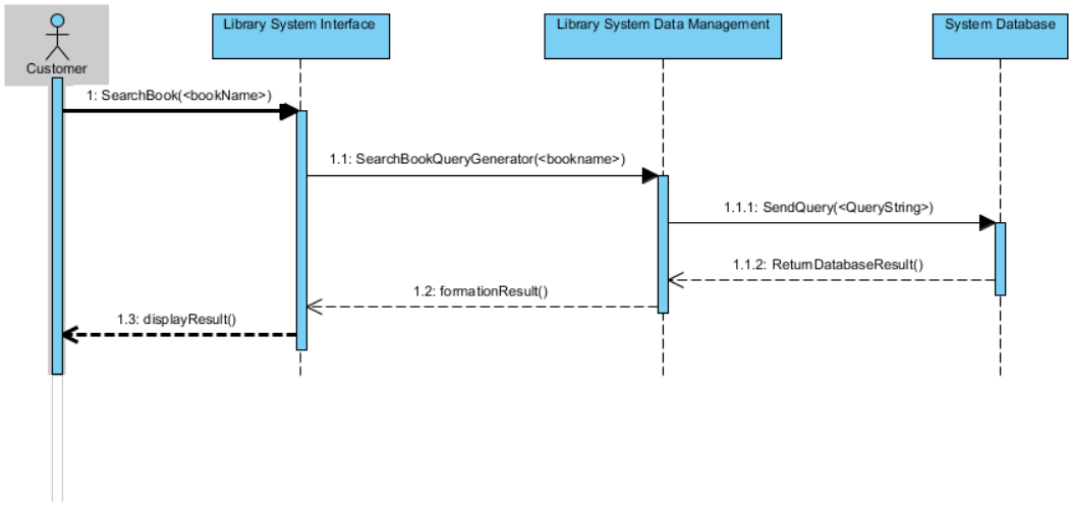


Diagram 1.Search for book Case sequence diagram

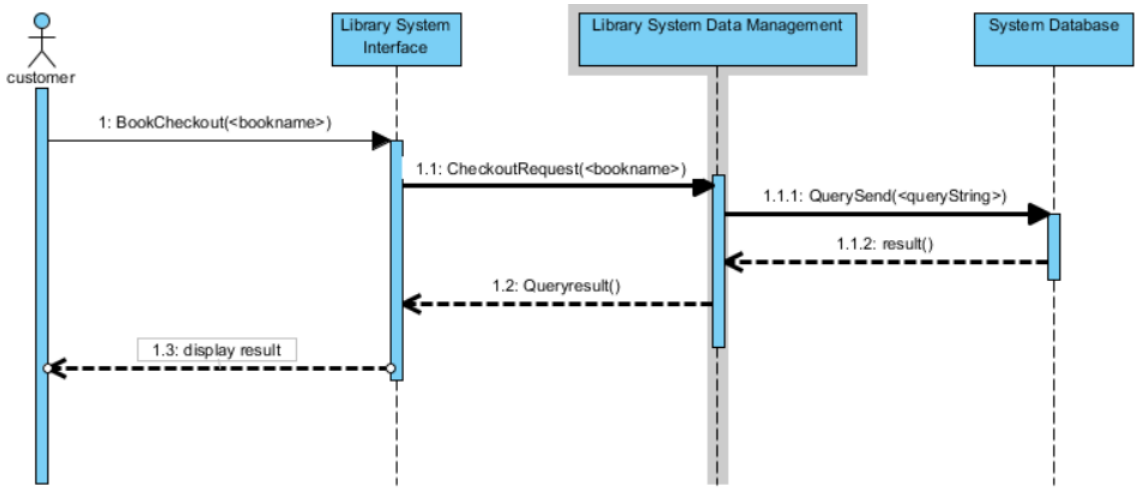


Diagram 2:Self Check-out Case sequence diagram

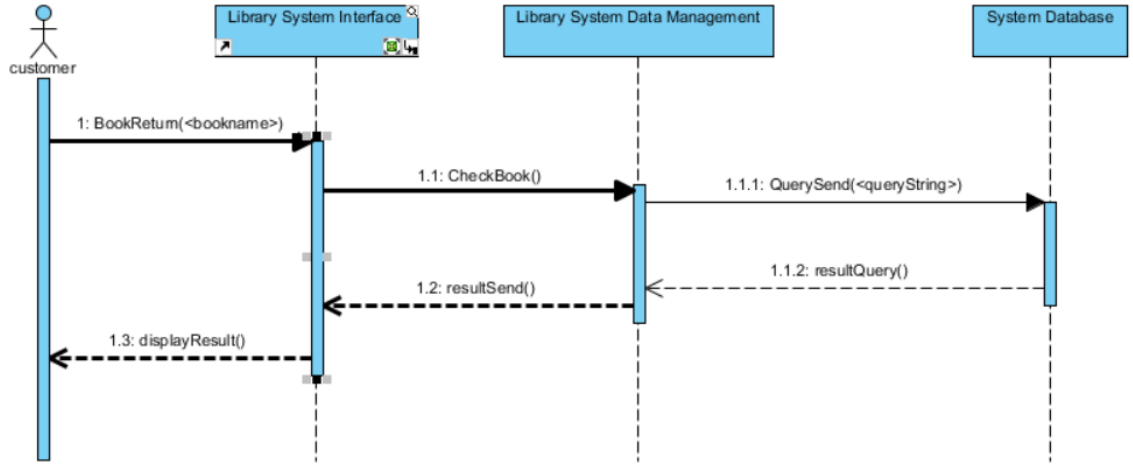


Diagram 3:Self Return Case Sequence diagram

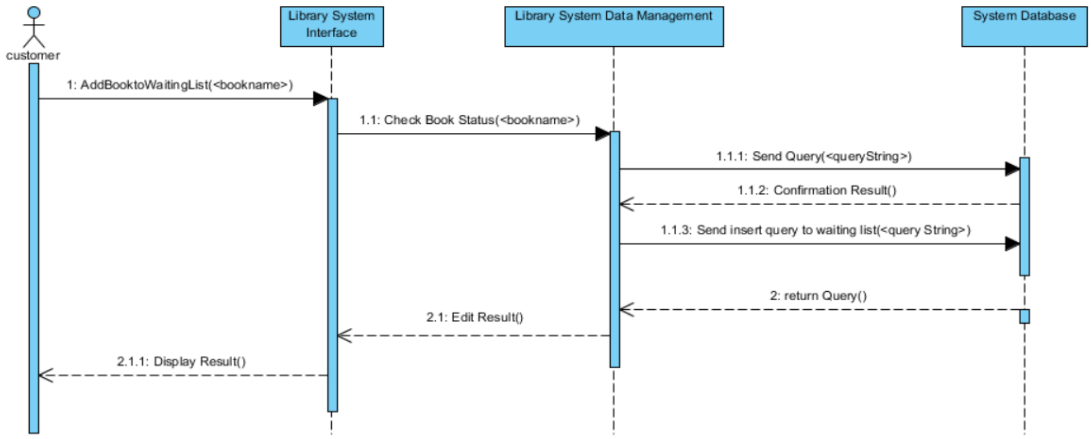


Diagram 4 :Add Name to Book Waiting List Case Sequence Diagram

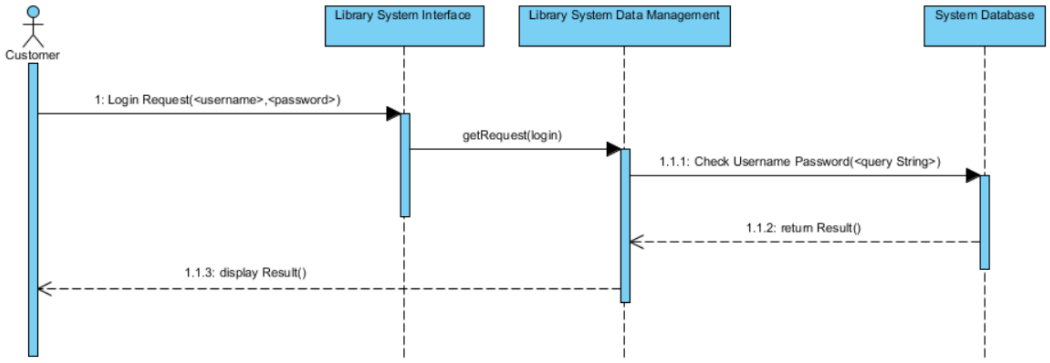


Diagram 5:Login Case Sequence Diagram

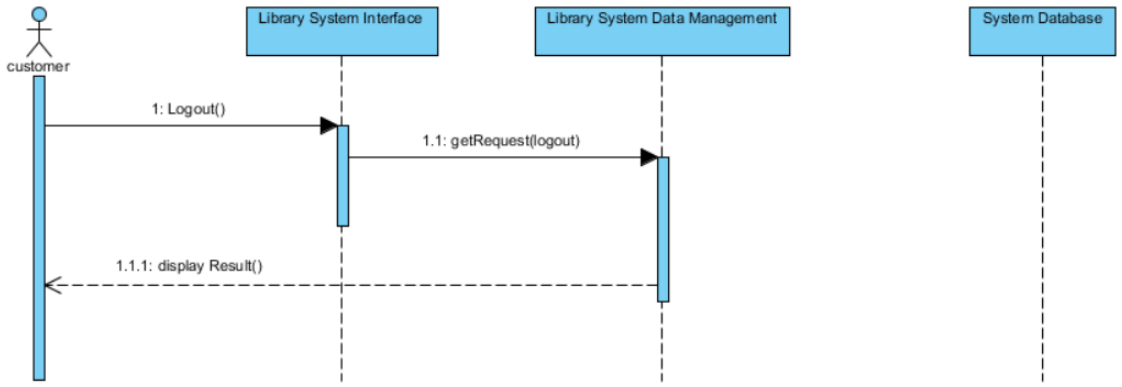


Diagram 6:Logout Case Sequence Diagram

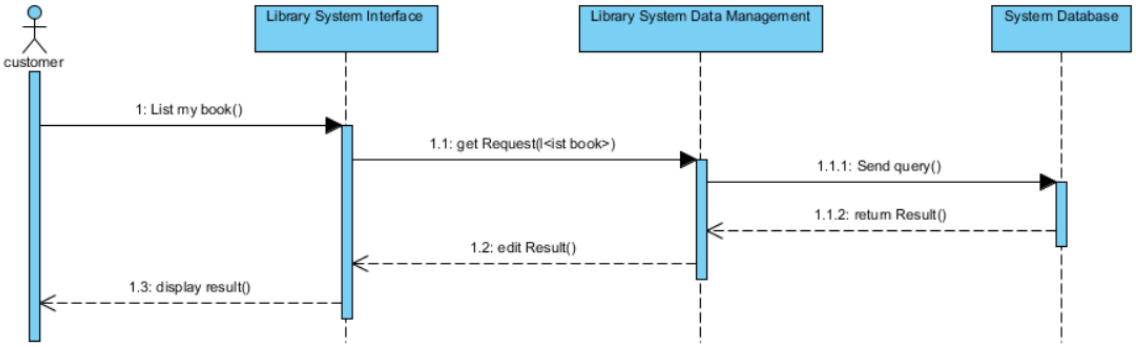


Diagram 7:View my Book Case Sequence Diagram

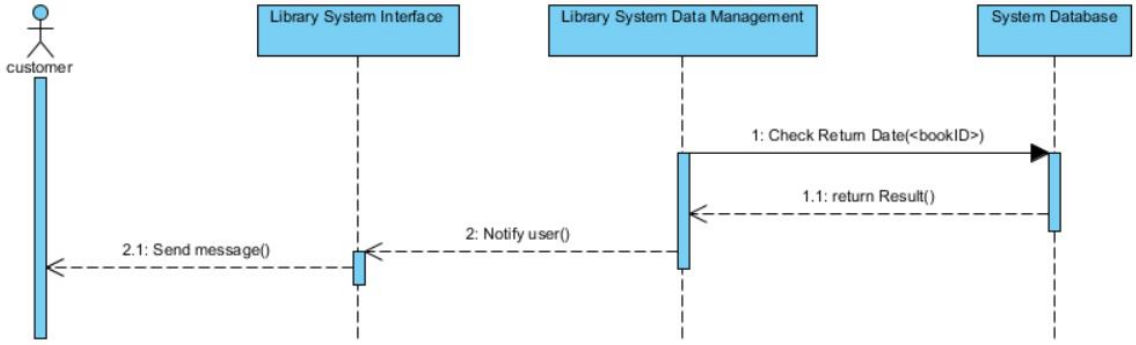


Diagram 8:Issue Late Fine Case Sequence Diagram

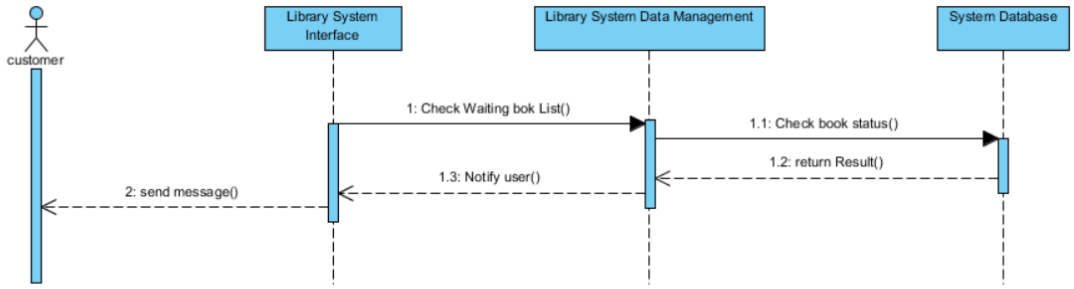


Diagram 9:Notify of being Book Available Case Sequence Diagram

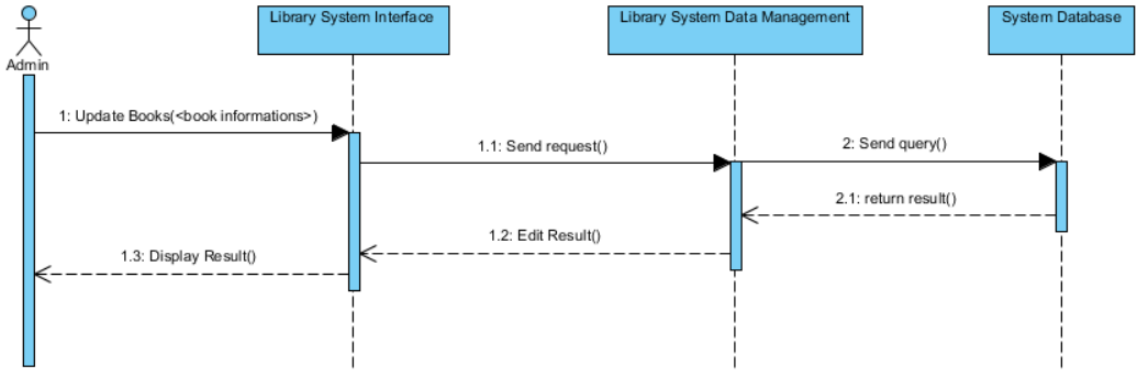


Diagram 10:Manipulate Book Case Sequence Diagram

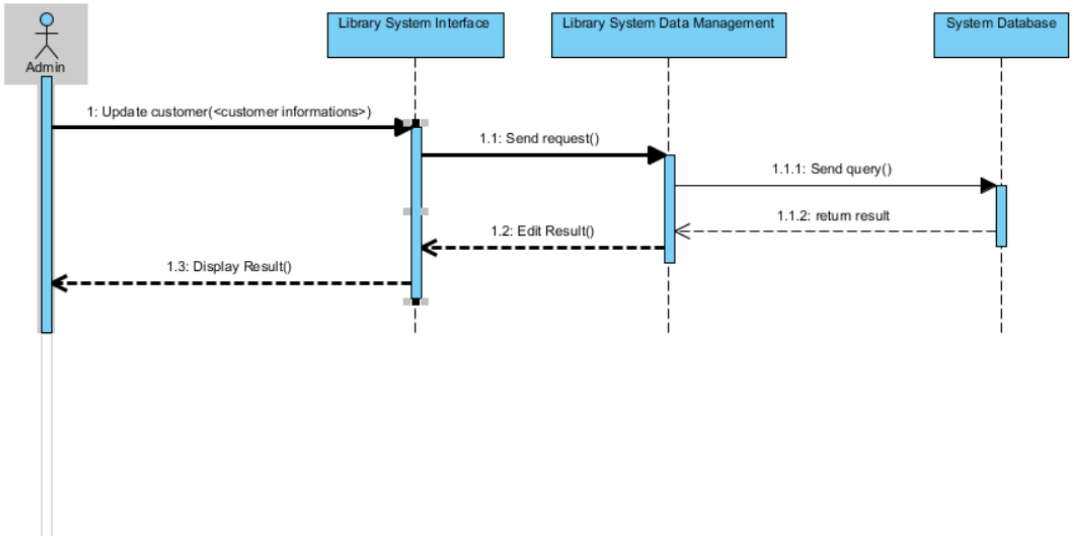


Diagram 11:Manipulate Customer Case Sequence Diagram

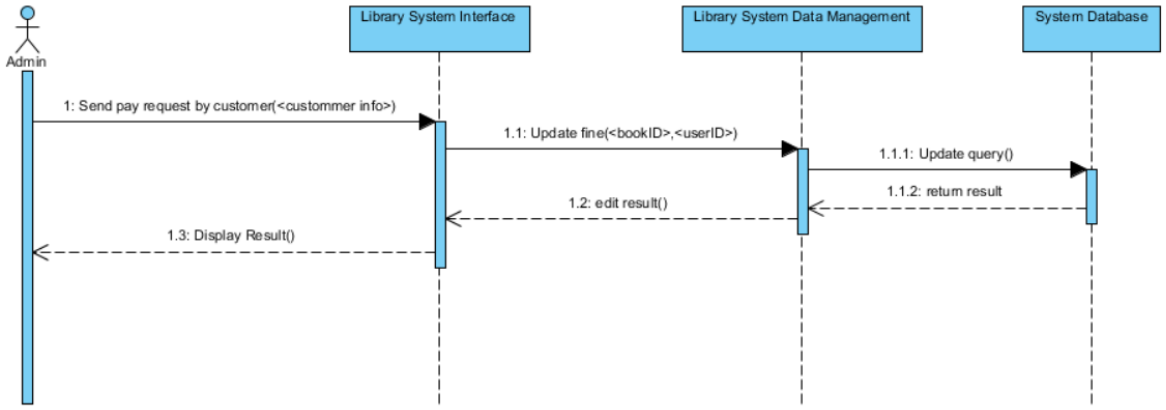


Diagram 12:Pay Fine Case Sequence Diagram

4.3 Data Model (E-R Diagram)

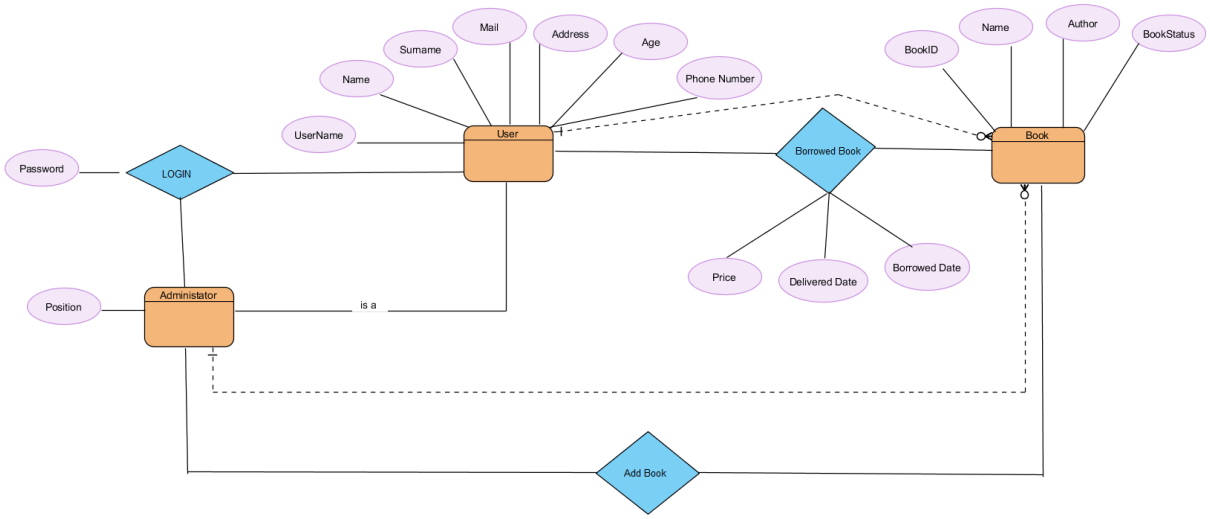
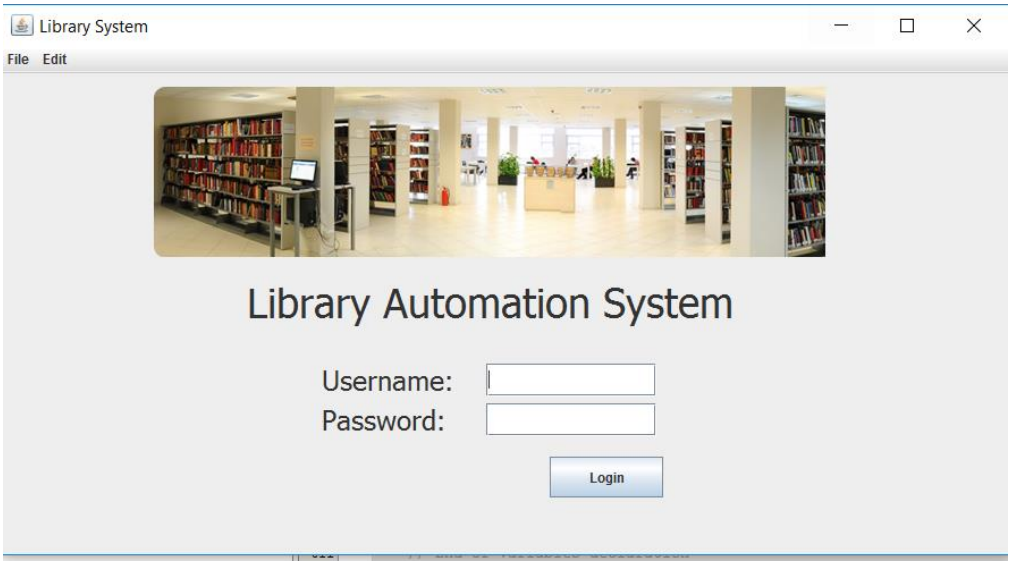
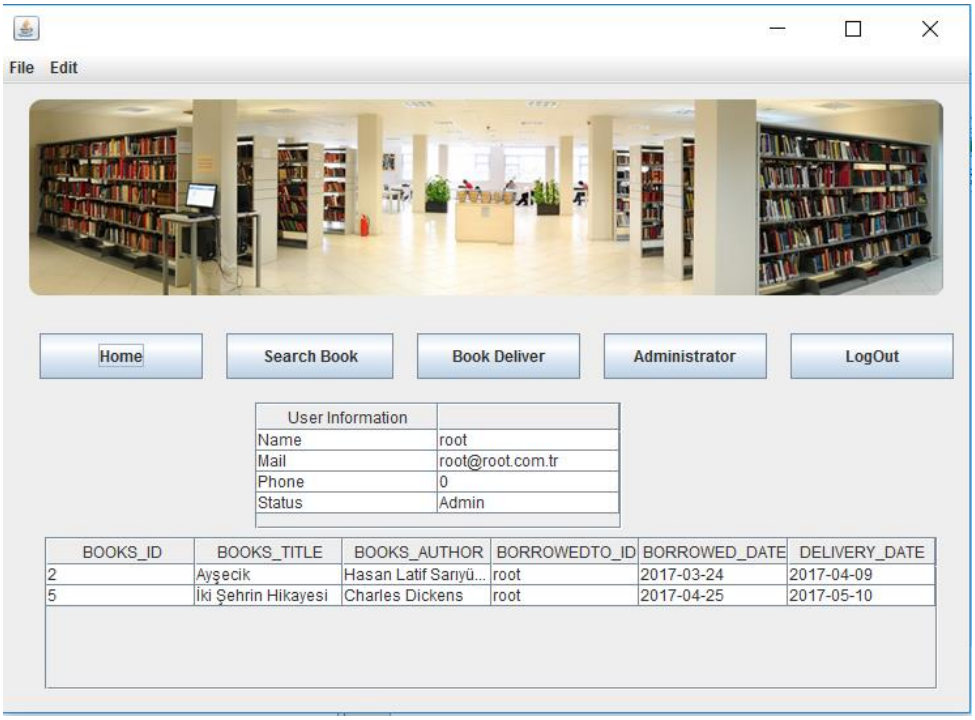


Diagram 13:ER Diagram

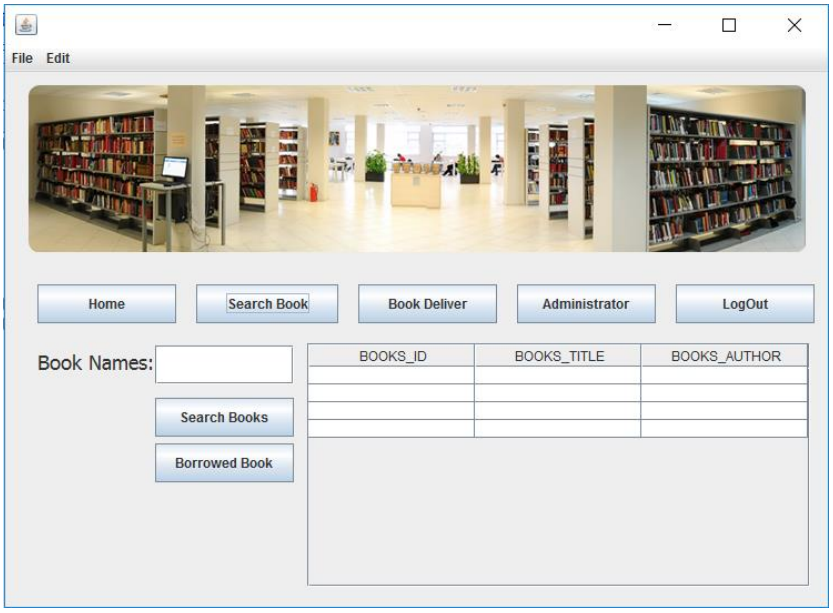
4.4 User Interface Design



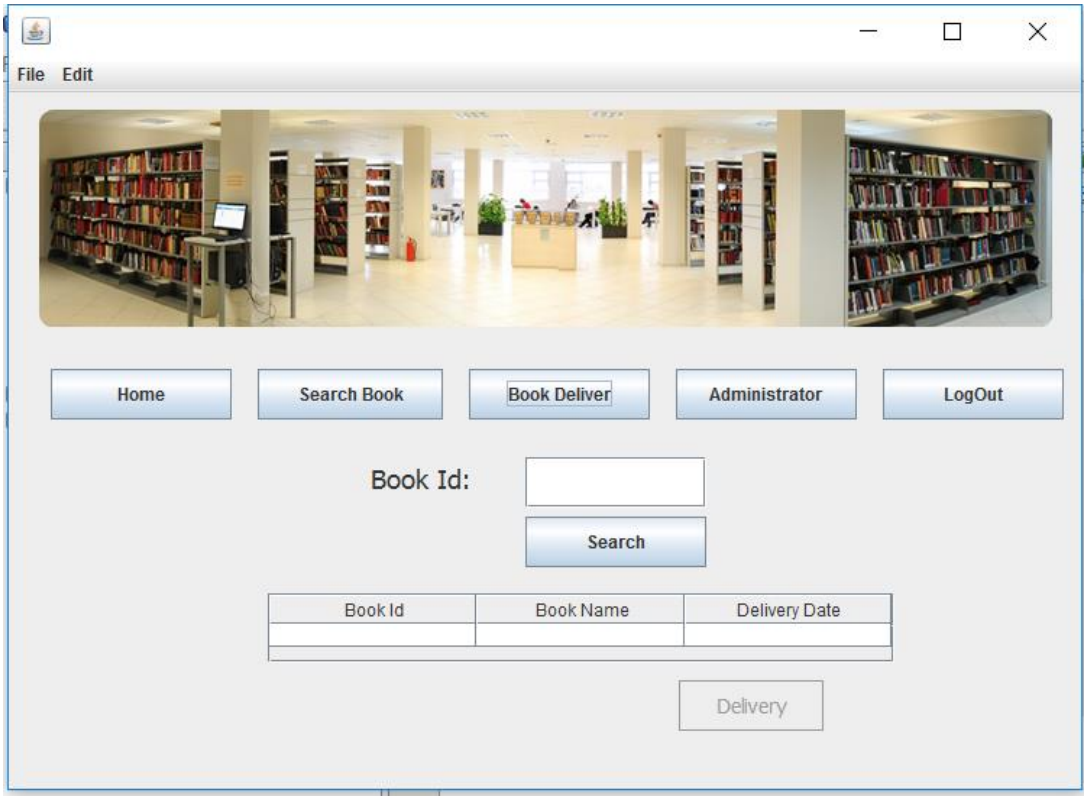
The user is redirected to the home page by entering the user name and password with this screen



This screen displays user information and books the user has received.



On this screen, the user can search for and borrow books on the library.



The book will be returned by entering the book owned by the book deliver page

5. Requirements Traceability

6. Annexes