



HACETTEPE UNIVERSITY COMPUTER ENGINEERING
DEPARMANT BBM 487 – SOFTWARE ENGINEERING
LABORATORY

LIBRARY BOOK LOAN SYSTEM
- Software Design Description-

Group 10

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1. Revision History

<i>Version</i>	<i>Date</i>	<i>Author</i>	<i>Change Description</i>
1.0	04.04.2017	Group 10	Add login
2.0	25.04.2017	Group 10	Add logout, add book, add member, delete book, delete member, view book

2. INTRODUCTION

2.1 Purpose and Scope

The goal in this project is to create a library book loan system. The project consists of users and managers. The executive has the authority to edit the users and books in the system. Users can get the book they want after they join the library system. If they do not deliver the book on time, they will apply a punishment procedure. This punishment procedure is intended to protect the books in the system.

2.2 Document Overview

The definition of the system is given. This definition is supported by the interpreted drawing. Version information is provided for the system. The runaway version will be released and what additional features will be included in this version. When designing, it is explained how preferences are decided according to what. The pros and cons of the decisions made are explained in detail. Class diagrams were drawn. The qualities of each class and the functions they contain are explained. The sequence diagram was drawn. We elaborated on the elements that make up the data model and the relationships between them. The interfaces were explained in more detail. There was a traceability relationship between software design and the need to be able to show that it meets all the requirements.

2.3 System Overview

At first we thought to use Oracle database. We chose the project language C # and we started developing it on Unity3D. We met with a few problems later. Unable to link Oracle database Unity3Dye. So we run our project through a text file, but at the end of the project we will try to solve this problem and withdraw from the database.

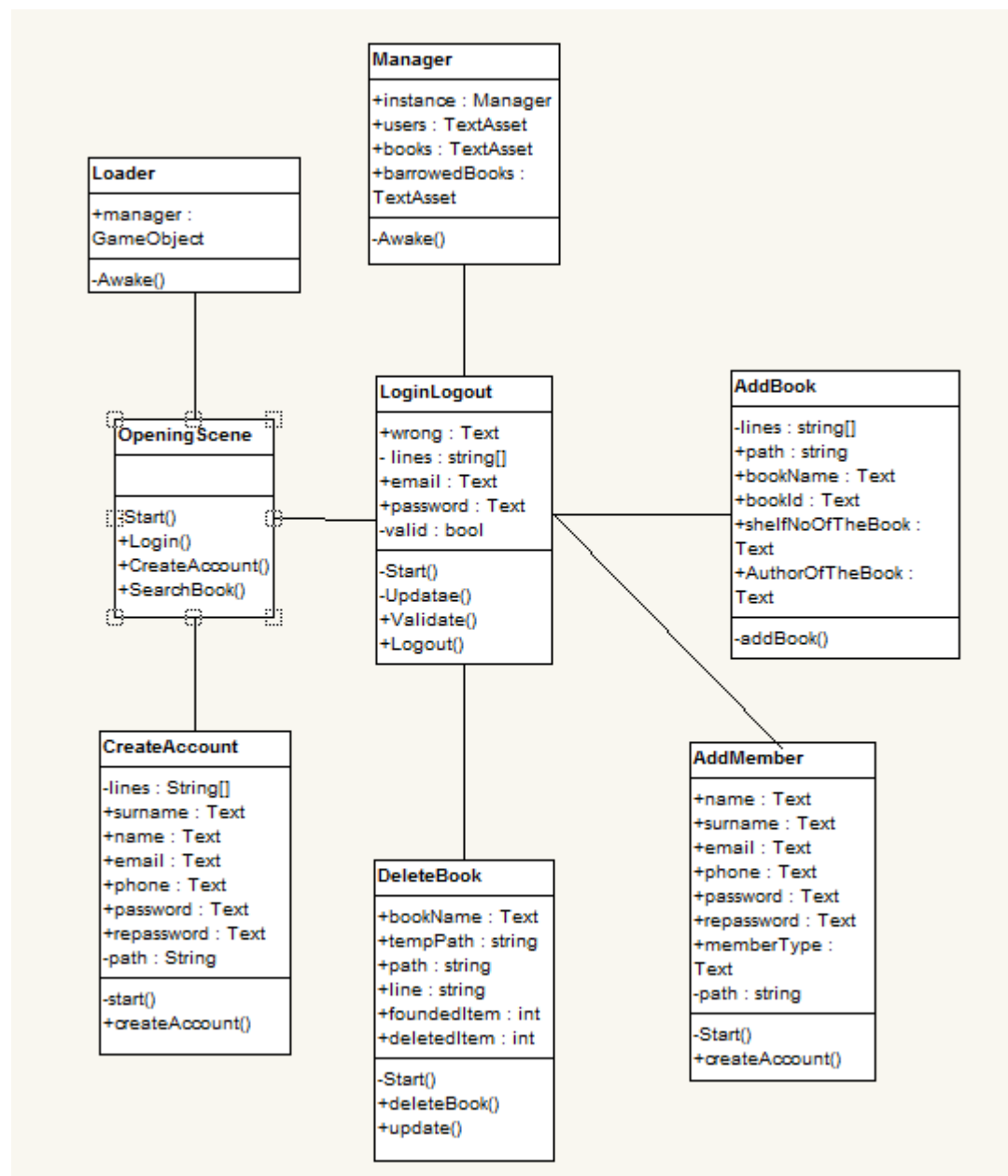
3. Design Constraints and Decisions

Because of a limited time, we changed the way we hold the data. We decided to keep it in the text files because we thought it would be easier later in the database. We designed the screens with Unity3D. Unity3D is a program we use more often because we choose it and visual designs are done very quickly. We used C # in the program's software. Choosing this language is the reason why we are dominant in using it. At the same time, there are more resources written on the internet. That's why we think we can find faster solutions when we make mistakes or when we have difficulties. There has been no way to ensure that members have access to user-initiated data on privacy. Only the administrator can access the information of other users, delete or add new users. The security of this limited user information is ensured. The access areas are separated by taking care of them. Until now, we have not encountered an obstacle that restricts us. There has never been a situation that restricts us as software or hardware or makes our work difficult. We may have to plan ahead and plan well.

4. Design Details

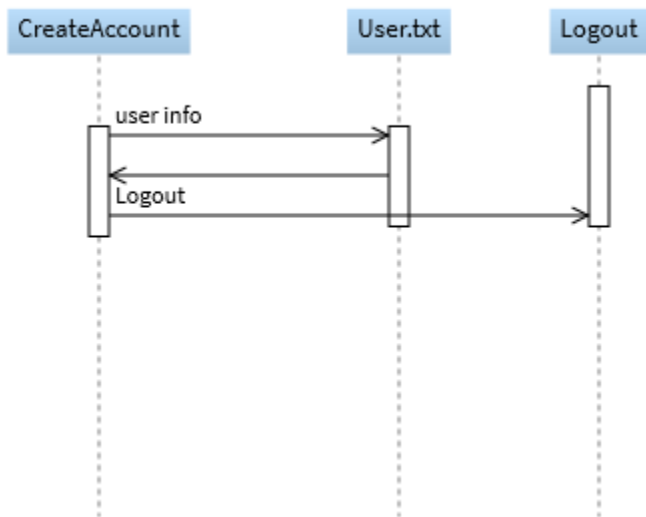
The login screen is the same for both the user and the administrator. After logging in, it is decided which screen to go to. The user will be directed to the user screen for the administrator and to the administrator screen for the administrator. If the user does not have a subscription to the system, there is an account open button to sign up. From here you can subscribe to the system by entering the necessary information. There are two important things that are controlled when you become a member. First of all, the first email address should not be in the system. The same e-mail address can not be used for two users. Second, the entered passwords need to be kept together. When these two are provided, a new account can be created by someone who enters the user account: book search, list books, update information, book and book the book. Some of the administrator's powers are the same as those of the users: such as receiving books and listing books. However, the system can add books, add members, delete books, delete members, edit book information and users' information, and search for users in the system. At the same time, both user and administrator can exit the system with exit button and login again.

4.1 Software Components

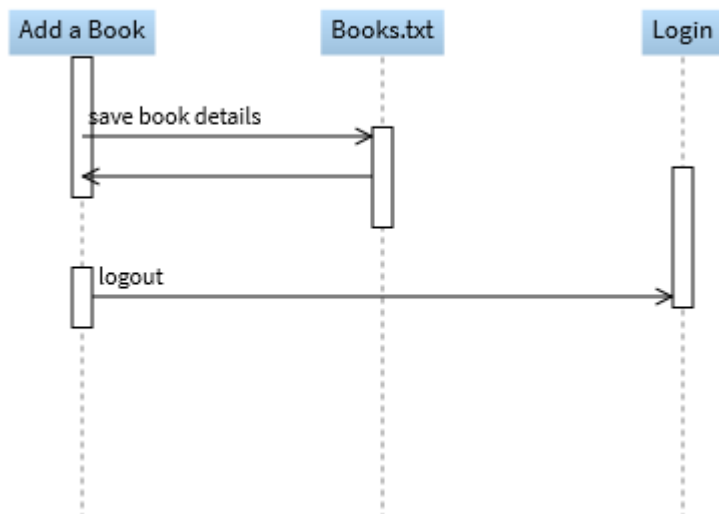


4.2 Software Behavior

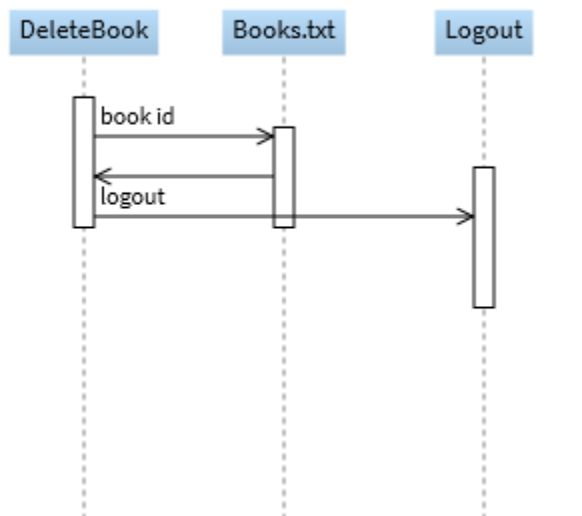
4.2.1 Create Account



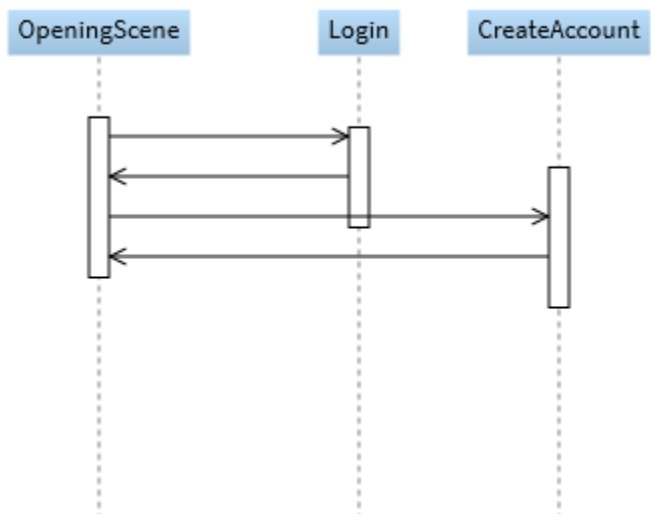
4.2.2 Add a Book



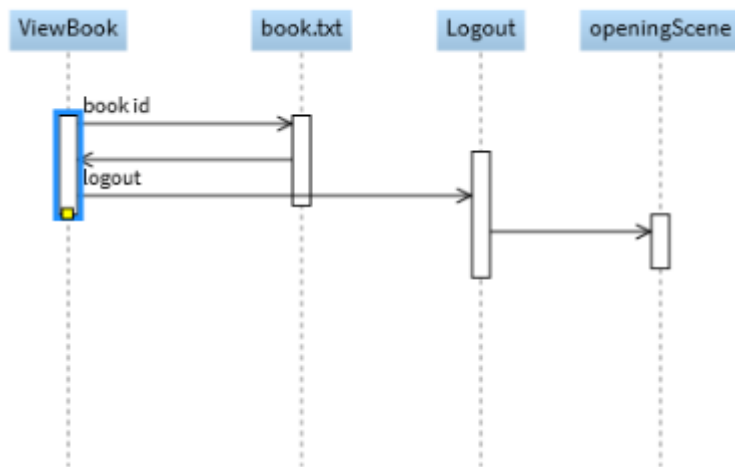
4.2.3 Delete Book



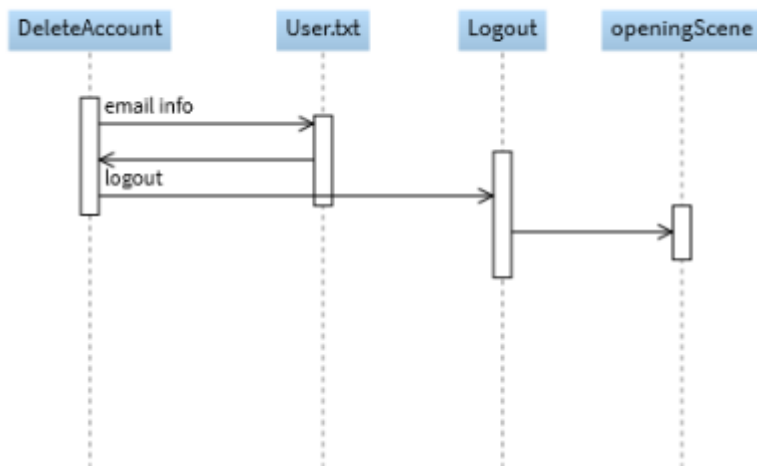
4.2.4 OpeningScene



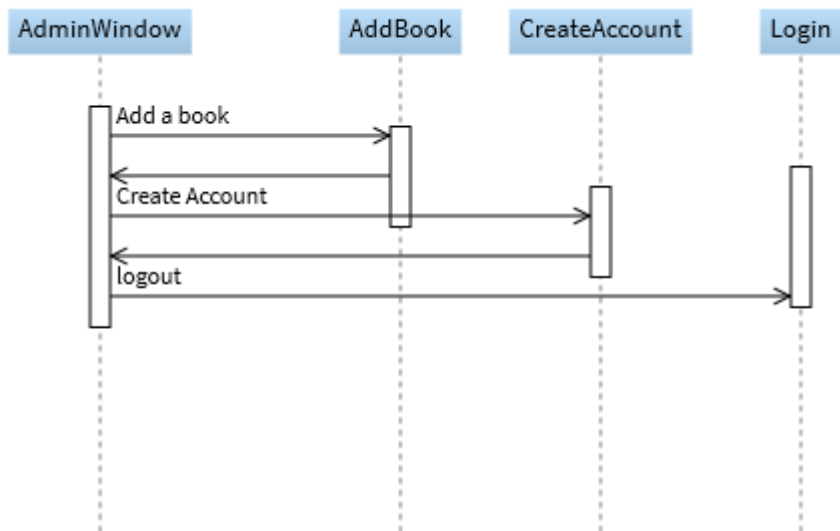
4.2.5 View Book



4.2.6 Delete Book



4.2.7 Admin Window



4.3 Data Model (E-R Diagram)

