

Software Requirements Specification

for

LIBRARY SYSTEM

Version 0.5

Prepared by Team 5

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Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
| … | … | … | … |
|  |  |  |  |

1. Introduction

## Purpose

## System Purpose

|  |  |
| --- | --- |
| Software | Version |

## Definitions, Acronyms and Abbreviations

|  |  |  |
| --- | --- | --- |
| ID | Acronyms | Definition |

## Document Conventions

## Intended Audience and Reading Suggestions

## Project Scope

## References

1. Overall Description

## Product/System Perspective

## System/Product Features

## User requirements

## User Classes and Characteristics

## Operating Environment

## Design and Implementation Constraints

* Coding used Model-View-Controller architectural model.
* Variables used camel case (words are joined without spaces and are lowercase with first letter)
* Methods, functions must be commented to support maintenance programmers (comment before functions, before loop, before long code) to understand easily code.
* Code must be coded by convention Java code convention of Oracle.
* Html, Css must be coded by convention Designing with Web Standards.

## User Documentation

The user documentation will be able as a function of a website, it will use screen captures of website to describe all features.

## Assumptions and Dependencies

Nothing assumptions and dependencies in Library System version 0.5.

1. Specific Requirements

## Functional Requirements Specification

### Librarian

#### Login

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | MK01 | | |
| **Use Case Name:** | Login for user | | |
| **Created By:** | LamdtHE153097 | **Last Updated By:** | LamdtHE153097 |
| **Date Created:** | Oct 04, 2021 | **Date Last Updated:** | Oct 10, 2021 |
| **Actors:** | Librarian | | |
| **Triggers** | Users click on the input boxes to enter personal information when they want to access the website | | |
| **Description:** | User enters information such as username password and choose role | | |
| **Pre-conditions:** | **none** | | |
| **Post-conditions:** | A connection to database is initialized. Update number of people access in database | | |
| **Normal Flow:** | MK01\_NF\_1. User clicks on login in the website  **MK01\_NF\_2.** Website validates username, password and role  **MK01\_NF\_3.** Website display all feature of each user’s class | | |
| **Alternative Flows:** | **MK02\_AF\_1.** At step MK02\_NF\_4, if username is existed but password is not correct in database, show error: “Login information is not invalid”  **MK02\_AF\_2.** At step MK02\_NF\_4, if username is not found in database, show error: “Login information is not invalid” | | |
| **Exceptions:** | N/A | | |
| **Priority:** | Normal | | |
| **Other information:** | N/A | | |
| **Frequency of Use:** | Usually | | |
| **Business Rules:** | N/A | | |
| **Assumptions:** | N/A | | |

#### Logout

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | MK02 | | |
| **Use Case Name:** | Login for user | | |
| **Created By:** | LamdtHE153097 | **Last Updated By:** | LamdtHE153097 |
| **Date Created:** | Oct 04, 2021 | **Date Last Updated:** | Oct 10, 2021 |
| **Actors:** | User | | |
| **Triggers** | User clicks on Login on the header of website | | |
| **Description:** | Registration for a new user | | |
| **Pre-conditions:** | **MK02\_PRE\_1**. User is in website M&K | | |
| **Post-conditions:** | A connection to database is initialized. Update number of people access in database | | |
| **Normal Flow:** | MK02\_NF\_1. User clicks on login in the header of M&K website  MK02\_NF\_2. Website display form registration: email, password, submit button  **MK02\_NF\_3.** User fills up, clicks on submit button  **MK02\_NF\_4.** Website validates username, email, passwords and show “Login successful”  **MK02\_NF\_5.** If user forgot password, click Forget password and fill up mail. | | |
| **Alternative Flows:** | **MK02\_AF\_1.** At step MK02\_NF\_4, if username is existed but password is not correct in database, show error: “Login information is not invalid”  **MK02\_AF\_2.** At step MK02\_NF\_4, if username is not found in database, show error: “Login information is not invalid” | | |
| **Exceptions:** | N/A | | |
| **Priority:** | Normal | | |
| **Other information:** | N/A | | |
| **Frequency of Use:** | Usually | | |
| **Business Rules:** | N/A | | |
| **Assumptions:** | N/A | | |

#### Add publication (Nhà xuất bản)

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | MK03 | | |
| **Use Case Name:** | Add products for admin | | |
| **Created By:** | TuanPA | **Last Updated By:** | TuanPA |
| **Date Created:** | Sep 27, 2018 | **Date Last Updated:** | Sep 27, 2018 |
| **Actors:** | Admin | | |
| **Triggers** | Admin click on add new product on menu | | |
| **Description:** | Product will be added to database | | |
| **Pre-conditions:** | **MK06\_PRE\_1**. Admin is login website M&K by admin account  **MK06\_PRE\_2**. Admin is click on manage product on menu  **MK06\_PRE\_3.** Admin click on add new product on submenu | | |
| **Post-conditions:** | Quantity’s old product/new product with will be updated | | |
| **Normal Flow:** | MK06\_NF\_1. Admin fills up: id, name, price and quantity.  MK06\_NF\_2. Admin clicks on submit, message alert: “Successful” | | |
| **Alternative Flows:** | **MK06\_AF\_1.** At step MK07\_NF\_1, if id is not existed, alert: “This product is not existed” | | |
| **Exceptions:** | N/A | | |
| **Priority:** | Normal | | |
| **Other information:** | All text box must be filled up if create new product Only id must be filled up if modify | | |
| **Frequency of Use:** | Usually | | |
| **Business Rules:** | If admin modified quantity of old product, it means that quantity will be add to old quantity of that product | | |
| **Assumptions:** | N/A | | |

#### Add book

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | MK04 | | |
| **Use Case Name:** | Add products for admin | | |
| **Created By:** | TuanPA | **Last Updated By:** | TuanPA |
| **Date Created:** | Sep 27, 2018 | **Date Last Updated:** | Sep 27, 2018 |
| **Actors:** | Admin | | |
| **Triggers** | Admin click on add new product on menu | | |
| **Description:** | Product will be added to database | | |
| **Pre-conditions:** | **MK06\_PRE\_1**. Admin is login website M&K by admin account  **MK06\_PRE\_2**. Admin is click on manage product on menu  **MK06\_PRE\_3.** Admin click on add new product on submenu | | |
| **Post-conditions:** | Quantity’s old product/new product with will be updated | | |
| **Normal Flow:** | MK06\_NF\_1. Admin fills up: id, name, price and quantity.  MK06\_NF\_2. Admin clicks on submit, message alert: “Successful” | | |
| **Alternative Flows:** | **MK06\_AF\_1.** At step MK07\_NF\_1, if id is not existed, alert: “This product is not existed” | | |
| **Exceptions:** | N/A | | |
| **Priority:** | Normal | | |
| **Other information:** | All text box must be filled up if create new product Only id must be filled up if modify | | |
| **Frequency of Use:** | Usually | | |
| **Business Rules:** | If admin modified quantity of old product, it means that quantity will be add to old quantity of that product | | |
| **Assumptions:** | N/A | | |

### 3.1.1.5 View book report

### 3.1.1.6 Add branch (Chi nhánh)

### 3.1.1.7 Add student

### 3.1.1.8 View student report

### 3.1.1.9 Issue book (Ngày cho mượn sách)

### 3.1.1.10 Issue report (Lịch sử cho mượn sách)

### 3.1.1.11 Return book (Ngày trả sách)

### 3.1.1.12 Penalty (Phạt nếu sinh viên trả sách muộn quá thời hạn)

## 3.1.2 Student

### 3.1.2.1 Login

### 3.1.2.2 Logout

### 3.1.2.3 View Account

### 3.1.2.4 Edit Account

### 3.1.2.5 Change password

### 3.1.2.6 My report (List sách đang mượn và sách đã trả)

### 3.1.2.7 Penalty report (Lịch sử phạt do trả sách quá kỳ hạn)

### 3.1.2.8 View book (Xem các sách đang có sẵn)

## Non-Functional Requirements Specification

### External Interface Requirements

#### User Interfaces

#### Hardware Interfaces

#### Software Interfaces.

#### Communications Interfaces

### Other Nonfunctional Requirements

#### Performance Requirements

#### Design constraints

#### Safety Requirements

#### Security Requirements

#### Software Quality Attributes

1. Other Requirements

Appendix A: Database diagram

Appendix B: Database entity