**University of Maryland Global Campus**

**Library Management System (LMS)**

**Project Design**

**CMSC 495 7380**

**11 April 2023**

**Version 1.5**

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**Revision History**

|  |  |  |  |
| --- | --- | --- | --- |
| **REVISION** | **DATE** | **DESCRIPTION** | **Author** |
| 1.0 | 4/4/2023 | Initial | Ben Ramos |
| 1.1 | 4/5/2023 | Addition of Pseudocode | Brandon Durham |
| 1.2 | 4/5/2023 | Document modification | Ben Ramos |
| 1.3 | 4/7/2023 | Inclusion of Event Scenarios | Ben Kus |
| 1.4 | 4/1/2023 | Modification of Pseudocode  Addition of Risk Mitigation | Brandon Durham  Ben Kus |
| 1.5 |  | Rick Management | Brandon Durham |
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**Event Trace Scenario**

**Scenario 1**

**Diagram

Description automatically generated**

Description: The system shall provide an administrator specific display to conduct admin role

Precondition:

Post-condition:

**Scenario 2**

**Table

Description automatically generated**

Description: The system shall provide an administrator specific display to check out books

Precondition:

Post-condition:

**Scenario 3**

Diagram

Description automatically generated

Description: The system shall allow the admins to include library borrower’s information during issuing

Precondition:

Post-condition:

**Scenario 4**

**Diagram, table

Description automatically generated with medium confidence**

Description: The system shall allow the administrator to search for books based on title, author, etc.

Precondition:

Post-condition:

**Scenario 5**

**Diagram

Description automatically generated**

Description: The system shall allow administrators to add and remove books Precondition:

Post-condition:

**Start Up Scenario**

**Diagram

Description automatically generated**

Description: The system shall provide administrator with a login screen

Precondition:

Post-condition:

**Shut Down Scenario**

**Diagram

Description automatically generated**

Description: The system shall provide ability for admins to log out and end a session

Precondition:

Post-condition:

**Error Handling Scenarios**

**Diagram

Description automatically generated**

Description:

Precondition:

Post-condition:

**Class Design**

**BLURB!!!**

Class LMS{

void addBooks(){  
 insert book information

}

void displayBooks(){

Display books within lms }

void issueBook(){

Insert name of person borrowing the book

Insert information of book being issued

Assign book as unavailable

}

void viewIssuedBooks(){

display only issued/ unavailable books

}

Void returnBook(){

Add book back to lms mark as available

Remove person information attached to book

}

Void logout(){

Exit and or close lms

}

}

LMS GUI{

Add button “Add Books”

Add button “View Books”

Add button “Issue Book”

Add button “View Issued Books”

Add button "Return Book”

Add button "Logout”

}

Database Pseudocode

Create Books Table w/ title, author, genre, etc as keys primary key(s) to be determined

Create Issued Table w/ information of persons issued books?

**Risk Mitigation**