**Vilnius University Faculty of Mathematics and Informatics Prof. Agne Brilingaite**

Modern Library(501) -Report-

**Alexandru Mitu, Antonia Carasel Internatinal Group**

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# Abstract

# Program Presentation

This project has as its main functionality the activity

The project was developed using NetBeans.

# Program Structure

# Program Parts

The program can be divided in 3 parts, based on the activity in the library they are referring to.

For Book Borrowing:

**Class Book** represents the object itself. It contains all the necessary details of the book. The variables used are ISBN, bla bla add Alex pls. The class contains a methos to set initial values for all the fields and several methods that return the values from the variables so that they can be used in other classes of the project.

For Renting a Room:

For Events:

Another important class that we used is **ReadingData.** This class implements working with the files containing data for 3 other classes: Book, Room, Event. First of all, we declare an array of objects of the type Book. The method reads data from the file as a string. After that it divides the string into an array and copies each position from the array into the corresponding variable from the object. The while statement makes sure that all the Books are inserted into the objects. The same process is followed for the other two objects(Room and Event).

Last but not least, the project uses a total of 5 frames that were declared separately as classes.

The **most important part** of the project can be found in the **SecondPage Frame**. Its implementation is the key towards making the project functional as it allows the user to borrow a book and updates the information from the objects once the user has finished the reservation process.

At first, the user can only see 5 commands

* a Field where he can insert criteria for the book he is looking for
* a Search button
* a Text Box where the result of this search is displayed
* a Field where the user inserts the ID of one book
* a Check button that shows the user id the book is available or not

We didn’t manage to implement the Field yet, however its purpose was to compare the data inserted by the user with every field of the objects Book and select only those that contain those letters. After pressing the Search Button, all the books that match the search are displayed in the Text Box. The user inserts the ID in the field on the right part of the page and presses Check.

If the book is not available, a message stating this fact will be displayed. Otherwise, the next set of commands is shown.

* a Text Box with all the details about the selected book
* two Fields with the dates for the borrowing period
* a Borrow button

# Team and Project Management

The team was well balanced and we managed to divide the work evenly.

Looking back, we believe that we needed a little bit more time to finish the project. At first, we tried to use complicated methods or concepts, that were too difficult to implement and required more time and practice. After we managed to find the simplest way, our work was effective and the project started to take shape.

# Work Distribution

As far as the tasks are concerned, we can not say that they were thoroughly planned. For the first programming part, one of us focused on declaring the classes, while the other was preparing the necessary data to test them. The second part was more of a random work. We realized that in order to check if the program is functional, we would need to insert some data and see the results. This led us to believe that the first task should be implementing the methods that read the information from the files. After that we focused on the graphical interface and added the first two pages(LogIn and Borrow Menu).