



Library Information System:

Lito

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Table of Contents

First of all, I would like to thank my lecturer Mr.Nurlan Shaydullaev for helping me to acquire some basic knowledge of “Java Programming Language”. At the same time, he gave me the opportunity to learn something new related to our module like constructors, methods, arrays, JFrames etc.

Beside from my lecturer, I like to thank my other classmates for helping to understand the assignment related questions more clearly. They gave their best for completing this report on time. I thank them for their efforts.

INTRODUCTION

This assignment is based on developing an LIS (Library Information System) using “Java Programming Language”.

For that we used GUI (Graphical User Interface) in this development so that it will become more users friendly to interact.

Besides, we also added text files for user's records that are directly linked with this program. It is so called a heart of this program where all the functions depend on it.

EXPLANATIONS

in this documentation we have given explanations of how to interact successfully with this LIS (Library Information System). We have explained here step by step so that it will surely help users to become more user friendly with it. Below are our explanations: First Things First:

Before execute this program users need to do some works that it will run properly into their system. First they need to make sure their system is having “JDK”. If they don’t have it then they can download from this below link:

<http://www.oracle.com/technetwork/java/javase/downloads/jdk7-downloads-1880260.html>

Depending on their system (Windows 64bit/32bit) they need to download and install. Then they need to add the “JAVA” files to their system “PATH” so that the system can run the program from CMD (Command Prompt). The path will show something like this “C:\Program Files (x86)\Java\jre1.8.0_25\bin;”. Now just add the address besides the current path directory and

save it. The other way they can execute this program in to

download the IDE (Integrated Development Environment) on their system. They can download ECLIPSE or NETBEANS depending on the windows (32bit/64bit). Below is the link:

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Environment) on their system. They can download ECLIPSE or NETBEANS depending on the windows (32bit/64bit). Below is the link:

IntelliJ IDEA:

<https://www.jetbrains.com/idea/>

We developed this program using “Intelij IDEA”.

Execution Procedures:

They will see the startup GUI (Graphical User Interface) of this program.

1.MENU



2. Sign Up



Click "Sign up" to open Registration Form

A screenshot of a registration form within the same application window. The form has a grey background. It contains three input fields: "Name", "Password", and "Email". To the right of the "Password" field is a small white square icon. Below the input fields is a white button labeled "Done". In the bottom right corner, there is a white button labeled "Back" in red text.

User need to fill the fields.


Name

Password

Email

Done

Registration was succes

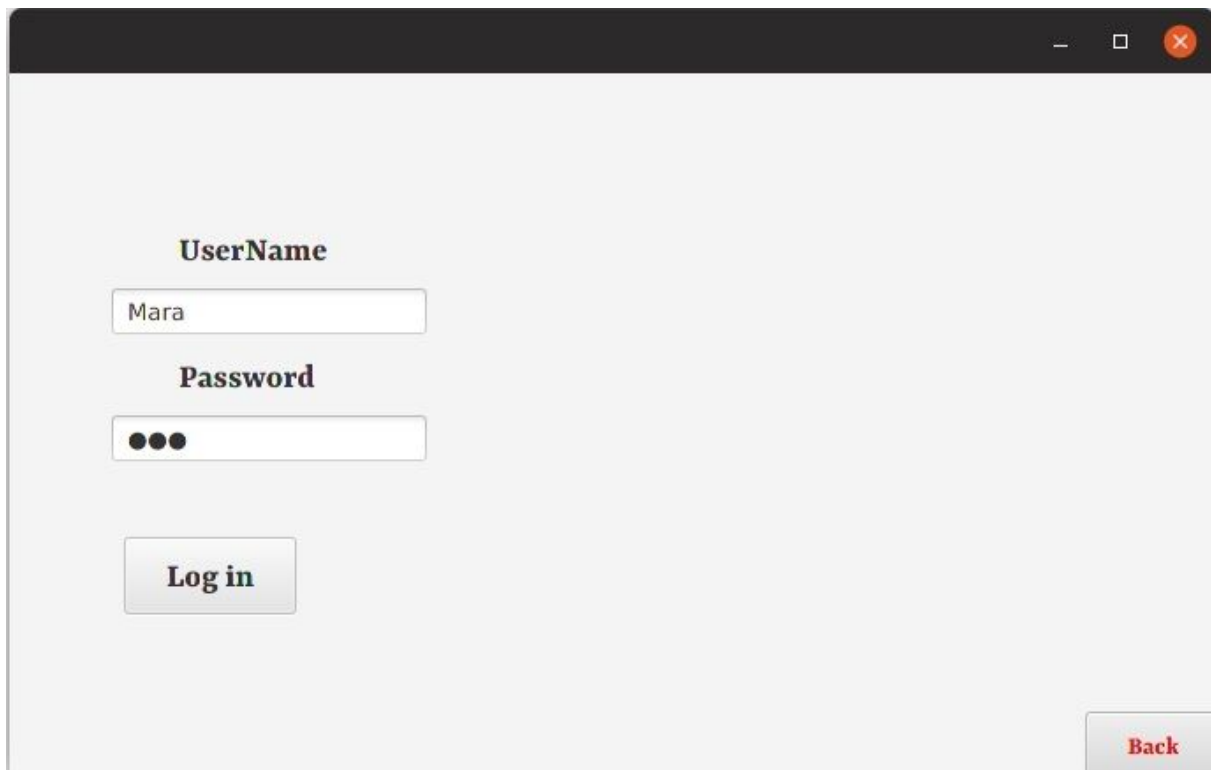


Back

Sending data to database by using the button “Done”.



Click "Sign up" to open Registration Form



A screenshot of a web application window with a dark title bar. The window contains a login form with the following elements:

- UserName**: A text input field containing the value "Mara".
- Password**: A password input field with three black dots representing masked characters.
- Log in**: A button with a light gray gradient and black text.
- Back**: A button in the bottom right corner with a light gray gradient and red text.

Finding user from DataBase;



A screenshot of the same web application window, but now displaying an error message. The form fields and buttons are still present, but the input values have changed:

- UserName**: The text input field now contains "asd".
- Password**: The password input field still shows three black dots.
- Log in**: The button remains unchanged.
- Back**: The button remains unchanged.
- Error Message**: A large, bold, red 3D-style text "ERROR" is displayed on the right side of the window.
- Error Description**: Below the "ERROR" text, the message "Invalid username or password" is displayed in a smaller, dark blue font.

if no that user, it will throw error ;

Hello,I'm LITO

Admin Dashboard

a waki to remember
Dota

Add
Delete

Title

Author

Category

Year

Riting

Back

If are logged as admin you will see admin interface ;

Hello,I'm LITO

Lito Library

Search

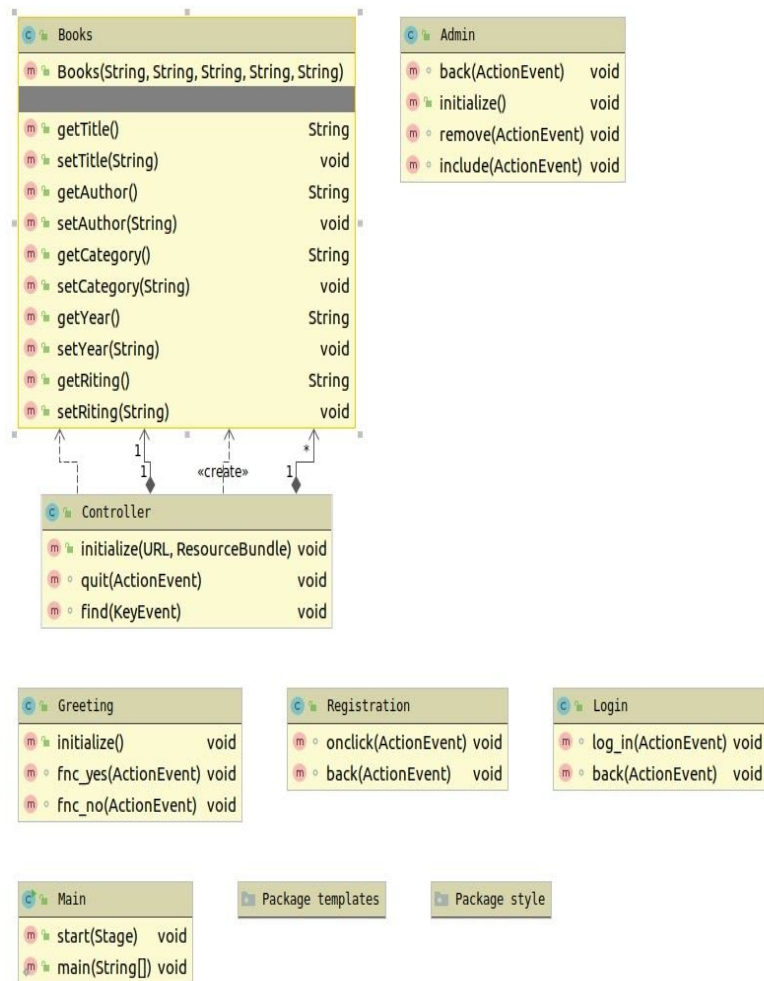
Select language
EN

Quit

Title	Author	Category	Year	Riting
a waki to remember	Nicholas Sparks	Drama	1999	4
Dota	Nara	RPG	1956	6

If you are logged as user you will see user interface where you can see books ;

OBJECT ORIENTED EXPLANATION



Books and Controller have dependency to each other.

```

public void initialize(URL url, ResourceBundle rb) {
    try {
        Books books;
        Books books1;
        String myUrl = "jdbc:mysql://localhost/lito";
        Connection conn = DriverManager.getConnection(myUrl, user: "username", password: "password");
        String get_request = "SELECT * FROM books";
        Statement statement = conn.createStatement();
        ResultSet rs = statement.executeQuery(get_request);
        choicebox.getItems().add("EN");
        choicebox.getItems().add("RU");
        choicebox.getSelectionModel().selectedIndexProperty().addListener(new ChangeListener<Number>() {
            @Override
            public void changed(ObservableValue<? extends Number> observableValue, Number number, Number number2) {
                String choice = choicebox.getItems().get((Integer) number2);
                if (choice.equals("EN")) {
                    en_content.setVisible(true);
                    ru_content.setVisible(false);
                }
                if (choice.equals("RU")) {
                    en_content.setVisible(false);
                    ru_content.setVisible(true);
                }
            }
        });

        while (rs.next()) {
            books = new Books(rs.getString(1), rs.getString(2), rs.getString(3), rs.getString(4), rs.getString(5), rs.getString(6));

            oblist.addAll(books);
        }
        get_request = "SELECT * FROM ru_books";
        ResultSet rs_ru = statement.executeQuery(get_request);

        while (rs_ru.next()) {
            books1 = new Books(rs_ru.getString(1), rs_ru.getString(2), rs_ru.getString(3), rs_ru.getString(4), rs_ru.getString(5), rs_ru.getString(6));
            oblist_2.addAll(books1);
        }
    }
}

```

The initialize method is called after all @FXML then it create Books instances which will be inside ObservableList that we need to implement by FXCollections.observableArrayList(); Then I will put all of that into TableView (JavaFX) to represent.

Also there was used Listener for track behavior of choicebox.

In order to use DB we:

1. Establishing a connection
2. Create a statement
3. Execute the query

```
public class Books {  
    String title, author, category, year, riting;  
  
    public Books(String title, String author, String category, String year, String riting) {  
        this.title = title;  
        this.author = author;  
        this.category = category;  
        this.year = year;  
        this.riting = riting;  
    }  
  
    public String getTitle() {  
        return title;  
    }  
  
    public void setTitle(String title) { this.title = title; }  
  
    public String getAuthor() {  
        return author;  
    }  
  
    public void setAuthor(String author) { this.author = author; }  
  
    public String getCategory() { return category; }  
  
    public void setCategory(String category) { this.category = category; }  
  
    public String getYear() { return year; }  
  
    public void setYear(String year) { this.year = year; }  
  
    public String getRiting() { return riting; }  
  
    public void setRiting(String riting) { this.riting = riting; }  
}
```

My class Books with setter getter and own constructor.

ASSUMPTION

I tried to make this app more useful for myself but i will fix some functionality and add flexible oportunities for users not only admins.

For instance people should have a possibility to add own favorites books and order books that not inside in the Library;

Thanks for attention :)

Reference

Github: <https://github.com/Marlen1703/qwe.git>

JavaFX: <https://openjfx.io/>

IntelliJ IDEA: <https://www.jetbrains.com/idea/>