Huynh Dang Khoa 20110375

Phan Thanh Luan 20110380



Project

Library Management System



**MINISTRY OF EDUCATION AND TRAINING**

**HCMC UNIVERSITY OF TECHNOLOGY AND EDUCATION**

**FACULTY FOR HIGH-QUALITY TRAINING**

Course: IT Project

Lecturer: Le Van Vinh

*HCMC October, 2022*

**SCORE**

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| Criteria | Content | Presentation | Total |
| Point |  |  |  |

**REMARKS OF TEACHERS**

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Ho Chi Minh City, October 12th, 2022

Teacher’s score

(Signature and full name) Le Van Vinh

**THANK YOU**

In order to successfully complete this topic and this report, we would like to extend our sincere thanks to the lecturer, Mr. Le Van Vinh, who directly supported us throughout the process of making the topic. We thank the teacher for giving advice from his practical experience to guide us in the right direction with the requirements of the selected topic, always answering questions, and giving suggestions and corrections. time to help us overcome our shortcomings and complete them well as well as on schedule.

We also would like to express our sincere thanks to the teachers in the High-Quality Education Department in general and the Information Technology industry in particular for their dedicated knowledge to help us have a foundation to make. This topic has created conditions for us to learn and perform well on the topic. Along with that, we would like to thank our classmates for providing useful information and knowledge to help us improve our topic.

The topic and report are made by us in a short time, with limited knowledge and many other limitations in terms of technology and experience in implementing a software project. Therefore, in the process of creating a topic with shortcomings is inevitable, we look forward to receiving valuable comments from the teachers to make our knowledge more complete and We can do even better next time.

We sincerely thank you.

At the end, we would like to wish all of you teachers, ladies and gentlemen, always having abundant health and more success in the career of growing people. Once again we sincerely thank you.

# **SUBJECT DESCRIPTION OF THE LIBRARY MANAGEMENT**

Implementing student: **Huynh Dang Khoa** ID’s student: **20110375**

Implementing student: **Phan Thanh Luan** ID’s student: **20110380**

Field: **Information Technology**

Name’s project: **Library Management System**

Instructor: **Dr. Le Van Vinh**

**Tasks of the topic:** Building Library Management System:

1. Introduction to the application
2. Explain forms used in this application
3. Explain software architechture used in this application
4. Show diagrams and explain it

1. INTRODUCTION

Library management is one of the jobs that requires an application to manage books in the library, borrowed books and manage staff. With the management application, the library will no longer worry about losing books or losing books. And the library management application, manipulations with the library will be done quickly.

Library management is a useful tool, there are many libraries that need it, along with the knowledge learned in Window Programming, our team decided to choose library management as the topic for this project.

Library Manager is an application built in adotnet that combines sql and c# language. It is built in a three-tier model including: Data Access Layer, Business Logic Layer, Presentation Layer.

My group's library management application can manage users who log in to the system, manage employees, readers, publishers, authors, perform book loan, return features and charge fees.

In this project, my team applied common controls, some basic knowledge about winform, duplicated database, updated and repaired database.

The project has successfully fulfilled the basic requirements of Final Project.

2. EXPLAIN FORMS

In this project, my team created a total of 11 main Forms including: Text

Description automatically generated

* **Form Login-Form:**

Graphical user interface, application, website

Description automatically generated

This form used to login into application, it include textbox username and password, you must type true value in this to login, Login button(click to login) and Sign up button(Open SignUp-Form to add new user)

- When you clik Sign up button in Login-Form, **SignUp-Form** will show Graphical user interface

Description automatically generated

It use to create a new user, you just type your Username ,email, password and confirm password .After that, you click add button to add new user, you also click exit or “X” button to back to Login-form

+ Whether you foget your password , you can click the foget password button . After that, the Forgetpassword-Form will show :

Graphical user interface

Description automatically generated

* You must type your User name and your email that you type in the Sign up proccess and click send.It will send a code to your email

Graphical user interface

Description automatically generated

\*In my email inbox:

Graphical user interface, text, application, chat or text message

Description automatically generated

* After that you can check at your email the code to valid the changing password process . Then , you will see this form :

\*if the code is wrong\*

Graphical user interface

Description automatically generated

\*after click ok\*

Graphical user interface

Description automatically generated

* When you login successful, **Dashboard-form (Main\_form)** will show :

Timeline

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This form include all form to manager books, employees, publishers, authors, reader, book borrowed of library. It’s same a bridge.

This form have 7 buttons to navigation.

Books buton Text

Description automatically generated with low confidence use to show Watch\_library form which use to manager Books

Employees button Text

Description automatically generated use to show Employee form which use to manager Employees

Publisher button Text, logo

Description automatically generated use to show Publishers form which use to manager all Publisher

Text

Description automatically generated

Authors button use to show Authors form which use to manager all Authors

Reader button Text, logo

Description automatically generated use to show Reader form which use to maneger all Reader

Borrowed Book button A picture containing text

Description automatically generated use to show BorrowBook which use to manager all book borrowed

Chart, treemap chart

Description automatically generated with medium confidence is used for showing the number of objects in mny fields like book, authors, reader, employees

The last one is  use to exit application

* **Form Book-Form** is form will showed when click Books button in DashBoard\_form

Graphical user interface

Description automatically generated

In this form,We can find data from BOOKS with  and seclect column you want to find in compobox Graphical user interface, text, application, chat or text message

Description automatically generated and type infor you find in

And we can edit data with Edit button Icon

Description automatically generated, when you click it, Edit book Form will show.

We can insert books by click Insert button Diagram

Description automatically generated, InsertBook will show for you

You can delete 1 book by delete button Icon

Description automatically generated with medium confidence,when you delete 1 row, N\_books in this books will be -1

You also can Load data into datagridview by Load button Shape

Description automatically generated

If you want to print, you just need to click Graphical user interface

Description automatically generated with low confidence to print the datatable on datagridview

-**Employee Form:** It show when click Employees in Watch\_library. It Form use to manager all employees of library

Graphical user interface

Description automatically generated

Diagram

Description automatically generated this button use to change interface for insert new employee

Icon

Description automatically generated this button use to change interface for update employee

Text

Description automatically generated with medium confidence this button use to save change after click Add or update button

Shape

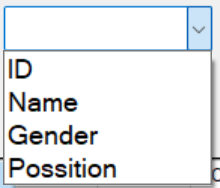
Description automatically generated this button use to cancel insert or update event

A picture containing icon

Description automatically generatedthis button use to delete 1 row of Employee

Icon

Description automatically generated this button use to exit application

this button use to find rows with name column in  and content in  to datagridview but you can not choose the particular position right away , If you choose to find position , you can choose the obvious position Text

Description automatically generated with low confidence

The button Graphical user interface, application

Description automatically generated to print the datatable in datagridview to file pdf

-**Publisher Form:** it show when click Publisher in DashBoard-Form. It use to manager all Publisher for library.

Graphical user interface

Description automatically generated

Diagram

Description automatically generated this button use to change interface for insert new Publisher

Icon

Description automatically generated this button use to change interface for update Publisher

Text

Description automatically generated with medium confidence this button use to save change after click Add or update button

Shape

Description automatically generated this button use to cancel insert or update event

A picture containing icon

Description automatically generatedthis button use to delete 1 row of Publisher

Icon

Description automatically generated this button use to exit application

Graphical user interface, application

Description automatically generatedthis button use to find rows with name column in Graphical user interface, text, application

Description automatically generated and content in Graphical user interface, application

Description automatically generated with medium confidence to datagridview

The button Graphical user interface, application

Description automatically generated to print the datatable in datagridview to file pdf

**-Author Form:** this form will show when we click Text

Description automatically generated in Watch\_library, It use to manager all Authors from library.

Graphical user interface, application

Description automatically generated

Diagram

Description automatically generated this button use to change interface for insert new Authors

Icon

Description automatically generated this button use to change interface for update Authors

Text

Description automatically generated with medium confidence this button use to save change after click Add or update button

Shape

Description automatically generated this button use to cancel insert or update event

A picture containing icon

Description automatically generated **T**his button use to delete 1 row of Authors

Icon

Description automatically generated This button use to exit application



this button use to find rows with name column in Graphical user interface, application

Description automatically generated and content in Graphical user interface, application

Description automatically generated with medium confidence to datagridview

The button Graphical user interface, application

Description automatically generated to print the datatable in datagridview to file pdf

-**Reader Form:** This will show when click Reader button in DashBoard-Form. This form use to manager all Reader who borrowed books.

Graphical user interface

Description automatically generated

Diagram

Description automatically generated

This button uses to change interface for insert new Readers

Icon

Description automatically generated

This button uses to change interface for update Readers

Text

Description automatically generated with medium confidence

This button uses to save change after click Add or update button

Shape

Description automatically generated this button use to cancel insert or update event

A picture containing icon

Description automatically generatedthis button use to delete 1 row of Readers

Icon

Description automatically generated this button use to exit application

 this button use to find rows with name column in Graphical user interface, text, application

Description automatically generated and content in Graphical user interface, application

Description automatically generated with medium confidence to datagridview

The button Graphical user interface, application

Description automatically generated to print the datatable in datagridview to file pdf

-**BorrowBook Form:** This form will show when click borrowed book button in Main\_form**. T**his form use to add, delete, edit information of people borrowed books

Graphical user interface, application

Description automatically generated

Diagram

Description automatically generated

this button **uses to change interface** for **insert new Borrowed books** and you only have permission to add id reader, id book, Borrow date, Estimated date. Like:

Graphical user interface, application

Description automatically generated

Icon

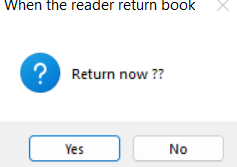
Description automatically generated

This button **uses to change interface** for **update Borrowed books** and can set return day or set the time at that time you edit. Like:

Graphical user interface, application

Description automatically generated

Ask for returning now or other day :



+ if you click yes, it will set the return day at the time you edit.

+ if you click no, it will show a message that you have to edit the date time picker to the day you want .

Text

Description automatically generated with medium confidence this button use to save change after click Add or update button

Shape

Description automatically generated this button use to cancel insert or update event

A picture containing icon

Description automatically generatedthis button use to delete 1 row of Borrowed books

Icon

Description automatically generated this button use to exit application

 this button use to find rows with name column in Graphical user interface, application

Description automatically generated and content in Graphical user interface, application

Description automatically generated with medium confidence to datagridview

The button Graphical user interface, application

Description automatically generated to print the datatable in datagridview to file pdf

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Return process \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Firstly, you have to click at the cell to return and click edit. Next, you can set the return by clicking on the button and you can choose return now or an other day Graphical user interface, application

Description automatically generated

Icon

Description automatically generated

Then you click the **edit** button use to change interface for update Borrowed books and can set return day or set the time at that time you edit . It looks like that:

Graphical user interface, application

Description automatically generated

Ask for returning now or other day:

Graphical user interface, text, application, chat or text message

Description automatically generated

+ if you **click yes**, it will set the return day at the time you edit.

+ if you **click no,** it will show a message that you have to edit the date time picker to the day you want.

Text

Description automatically generated

Then, you click on the **save button** or **print bill button** and it will calculate the Extra fee and money that you have to pay.

+ if you **click save,** it will save your bill in the database

+ if you **click print**, it will save your bill like a pdf file and delete it in the database and the number of books will increase 1 book and number of books this reader hold will decrease 1 book

* It will change the number of books in BOOK and the number of books that readers hold
* Depending on the state of the book and whether it is lost or not, the day the reader holds the book will calculate a different bill and money.