

Vision

Provide skilled professionals in Computer Engineering to contribute towards the advancement of technology useful for society and industrial environment.

Mission

M1.Impart need based and value based education by providing exposure of latest tools and Technologies in the area of computer engineering to satisfy the stakeholders.

M2.Upgrade and maintain facilities for quality technical education with continuous effort for excellence in Computer Engineering.

M3. Train students with Computer Engineering knowledge to apply it in the general disciplines of design, deployment of software and integration of existing technologies for E-governance and for benefit of society.

M4. Provide a learning ambience to enhance innovations, problem solving skills, leadership qualities, team spirit and ethical responsibilities.

M5. Provide an academic environment and consultancy services to the industry and society in the area of Computer Engineering.

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MICRO-PROJECT REPORT ON
Develop Application for Library Management System

**In Partial fulfilment of Diploma in Computer Engineering
(Fifth Semester)**

**In the subject of
Advanced Java Programming (FC5464)**

By

19CM016- Pragati Dhage

Submitted To
Government Polytechnic Amravati

(An Autonomous Institute of Govt. of Maharashtra)

**Under the guidance of
Prof. P.R.Satav Sir**

**Lecturer in COMPUTER ENGINEERING
DEPARTMENT OF COMPUTER ENGINEERING
Government Polytechnic Amravati
(2021-2022)**

Government Polytechnic Amravati, (2020-2021)



Government Polytechnic, Amravati.

(An Autonomous Institute of Govt. of Maharashtra)

Department of Computer Engineering

Certificate

This is to certify that Miss. Pragati Shrikrushna Dhage of Identity Code 19CM016 of fifth Semester Diploma in Computer Engineering has satisfactorily completed the practical in Advanced Java Programming (FC5464) for the Academic year 2021-22 as prescribed in curriculum.

Place: Amravati

Lecturer in

Computer Engineering

Date: / /2021

Annexure-I

PART A- Plan (About 1-2 pages) Micro-Project Proposal

Title of Micro Project:

Develop Application for Library Management System

1.0 Brief Introduction:

Library management system is a simple and totally complete book library system and it requires the database in MS Access as backend. This whole system is designed in JCreator pro IDE. This system helps the system to keep the book and student records. Our project, covers the following concepts:

1. Concept of Swing
2. Event Handling
3. Creating GUI interface
4. Use of JDBC

2.0 This Micro-Project aims at:

Develop Application for Library Management System

3.0 Actual Procedure followed:

- a. Required studies were done using sources available on internet and from other books as possible.
- b. Reference of practical was taken need fully.
- c. An word document file was created to present the project.
- d. Report was updated with respective steps and the final copy was made

No	Details of activity	Planned start date	Planned Finish date	I. Code &Name of Team Members
1	Creating a code and Word File	20/11/2021	15/12/2021	19CM012:Harshita Chhangani
2	Code and Creating annexure.	20/11/2021	15/12/2021	19CM013: Harish Chopade
3	Creating Code and Info Collection	20/11/2021	15/12/2021	19CM014: Ganesh Damre
4	Code and Creating synopsis and ideas about the project planning	20/11/2021	15/12/2021	19CM016: Pragati Dhage
5	making final copy for Submission	10/12/2021	20/12/2021	19CM017:Tejas Dhande

Resources Required (major resources such as raw material, some machining facility, software etc)

S.N.	Name of Resource/material	Specifications	Qty	Remarks
1	Computer / laptop	Intel core i3.version 7 1	-	-
2	Java development kit	Jdk-17	-	-
3	IDE	JCreator Pro	-	-
4	Database	MS Access	-	-
5	Internet	www.google.com	-	-

Guideline for Assessment of Micro-Project

Evaluation as per suggested Rubric for Assessment of Micro-Project

Assessment Parameter	Characteristic to be assessed	Average (1 mark)	Good (1.5 mark)	Excellent (2 mark)
Process Assessment (06)				
Product Assessment (04)				

NAME OF GROUP MEMBERS

19CM012: Harshita Chhangani

19CM013: Harish Chopade

19CM014: Ganesh Damre

19CM016: Pragati Dhage

19CM017: Tejas Dhande

Annexure-II

PART B- (Outcomes after Execution)

Brief Introduction:

Library management system is a simple and totally complete book library system and it requires the database in MS Access as backend. This whole system is designed in JCreator pro IDE. This system helps the system to keep the book and student records. Our project, covers the following concepts:

5. Concept of Swing
6. Event Handling
7. Creating GUI interface
8. Use of JDBC

Title of Micro Project:

Develop Application for Library Management System

4.0 Actual Procedure Followed.

- 4.1 Required studies were done using sources available on internet and from other books as possible.
- 4.2 Reference of practical was taken need fully and word document file was created to present the project.
- 4.3 Report was updated with respective steps and the final copy was made

4.0 Outputs of the Micro-Projects-

1. We have developed a Library Management system The System is providing GUI interface which provides ease
2. It can perform all the required details and information accordingly.

5.0 Skill Developed / Learning outcome of this Micro-Project

After doing the microproject our group will able to-

1. learned core and advanced java concepts.
2. learned to use the GUI interface and able to use java concept

NAME OF GROUP MEMBERS

19CM012: Harshita Chhangani

19CM013: Harish Chopade

19CM014: Ganesh Damre

19CM016: Pragati Dhage

19CM017: Tejas Dhande

Aim:

Develop an application for Library Management System.

Group Members:

19CM012: Harshita Chhangani

19CM013: Harish Chopade

19CM014: Ganesh Damre

19CM016: Pragati Dhage

19CM017: Tejas Dhande

Software Used:

1. Jdk-17
2. JCreator pro
3. MS Access for Database

Course Outcome (CO) Covered:

1. Implement a Swing class component in Java Program.
2. Implement an Event Handling in java Program.
3. Develop an interactive program using JDBC for Database.

Objectives:

- The objective of the library management system is to design a application in java that can manage a library.
- An easy and user-friendly interface that is easy to operate and understand for the students as well as for librarians.
- Easy platform to manage books and the records of books like the issued book and the student records.

Introduction:

Library management system is a simple and totally complete book library system and it requires the database in MS Access as backend. This whole system is designed in JCreator pro IDE.

This system helps the system to keep the book records. Here in this project, you can add books and can issue them to the registered users. Also, the admin can add different books and can delete them later. The admin has to first register the student before issuing the book. You can view the book details that are available in the library.

Users of the System:

1. Admin
2. Librarian

Functional Requirements:

1. Admin

1. Can add/view/delete librarian
2. Can logout

3. Librarian

1. Can add/view books
2. Can issue books
3. View issued books
4. Return Books
5. Can logout

Front End and Back End:

Front End: Java Swing

Back End: MS Access

Data-Base Tables:

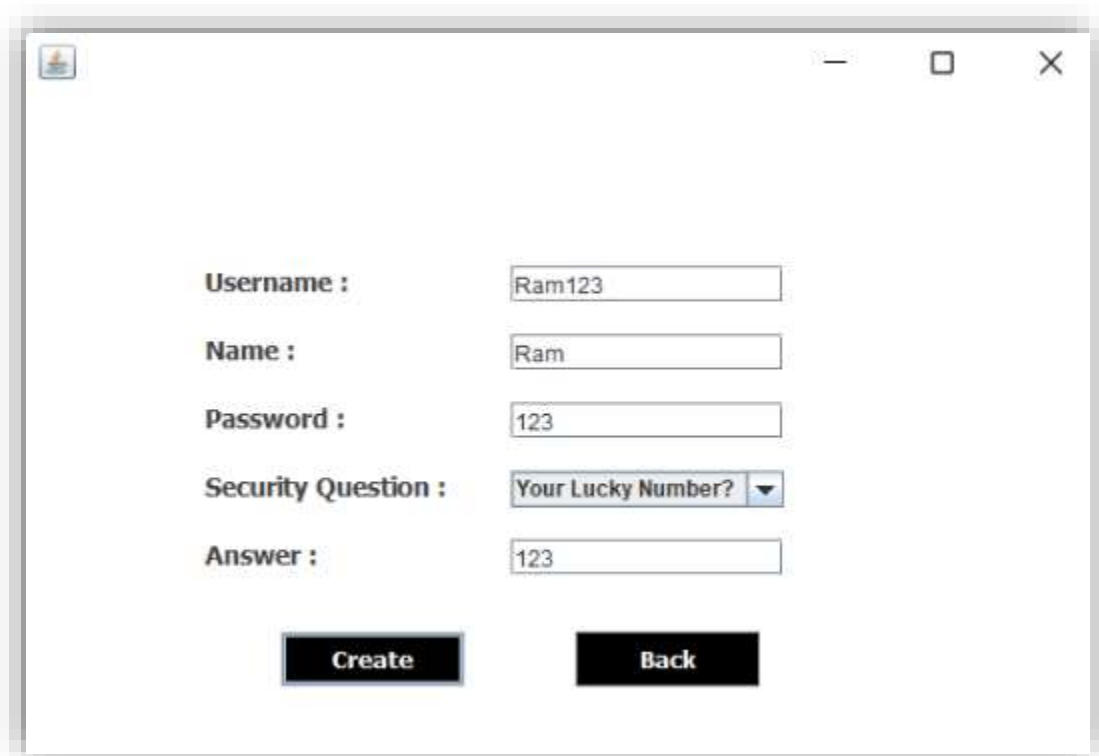
1. account
2. book
3. issueBook
4. returnBook
5. student

Outputs.....

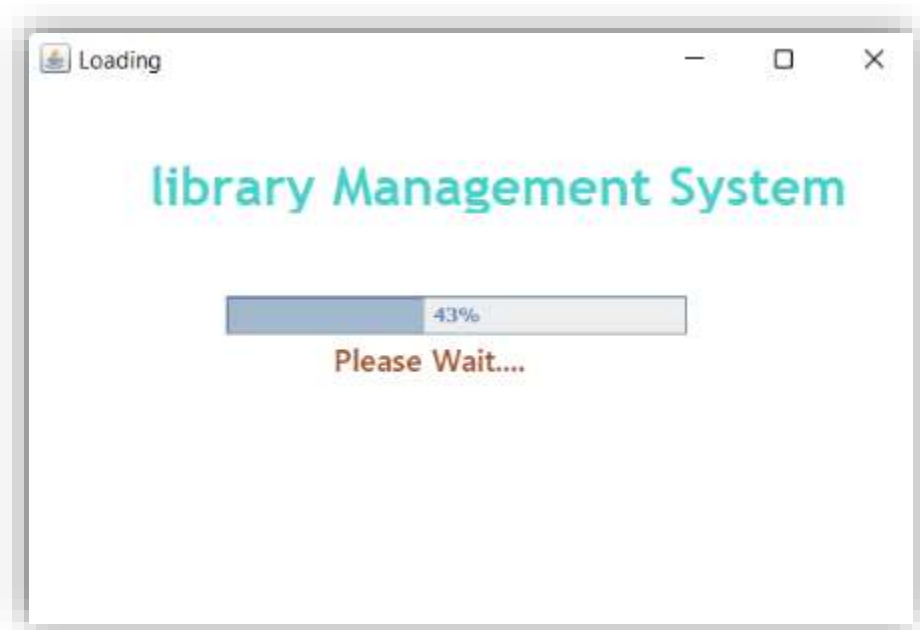
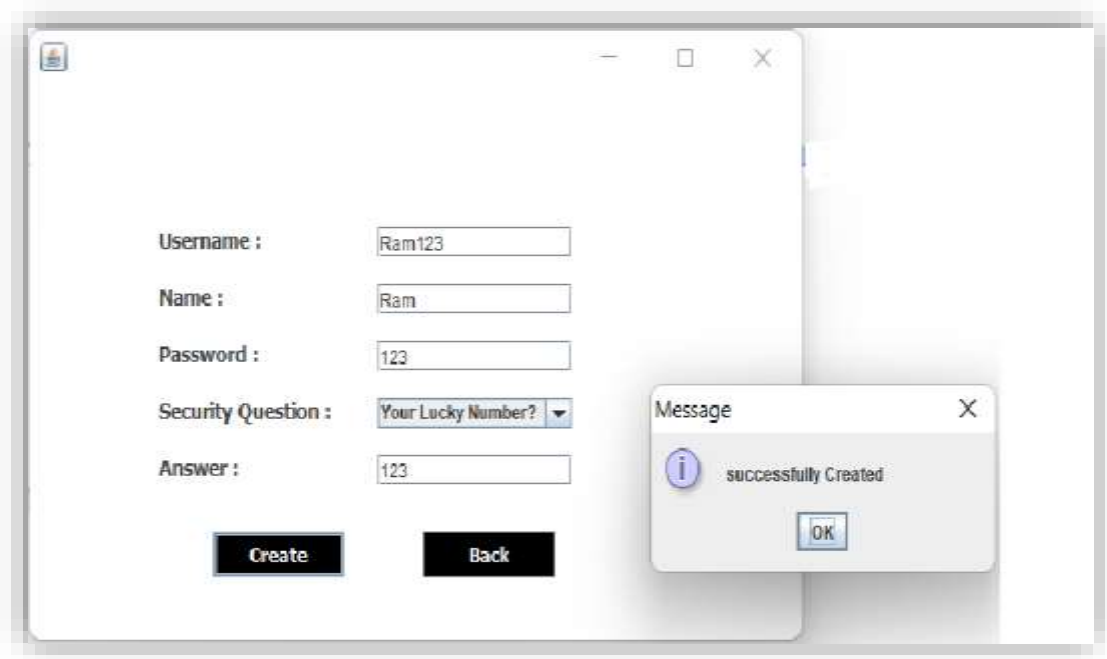
After debugging.....



Then Click Next... and Create a User by entering the following details.

A screenshot of a user creation form within a software application. The form is titled 'Create a User' and contains several input fields and buttons. The fields are: 'Username :' with the value 'Ram123', 'Name :' with the value 'Ram', 'Password :' with the value '123', 'Security Question :' with a dropdown menu showing 'Your Lucky Number?', and 'Answer :' with the value '123'. At the bottom, there are two buttons: 'Create' and 'Back'. The form is enclosed in a window with standard Windows window controls (minimize, maximize, close) in the top right corner.

After Creating user it shows that user is successfully created..

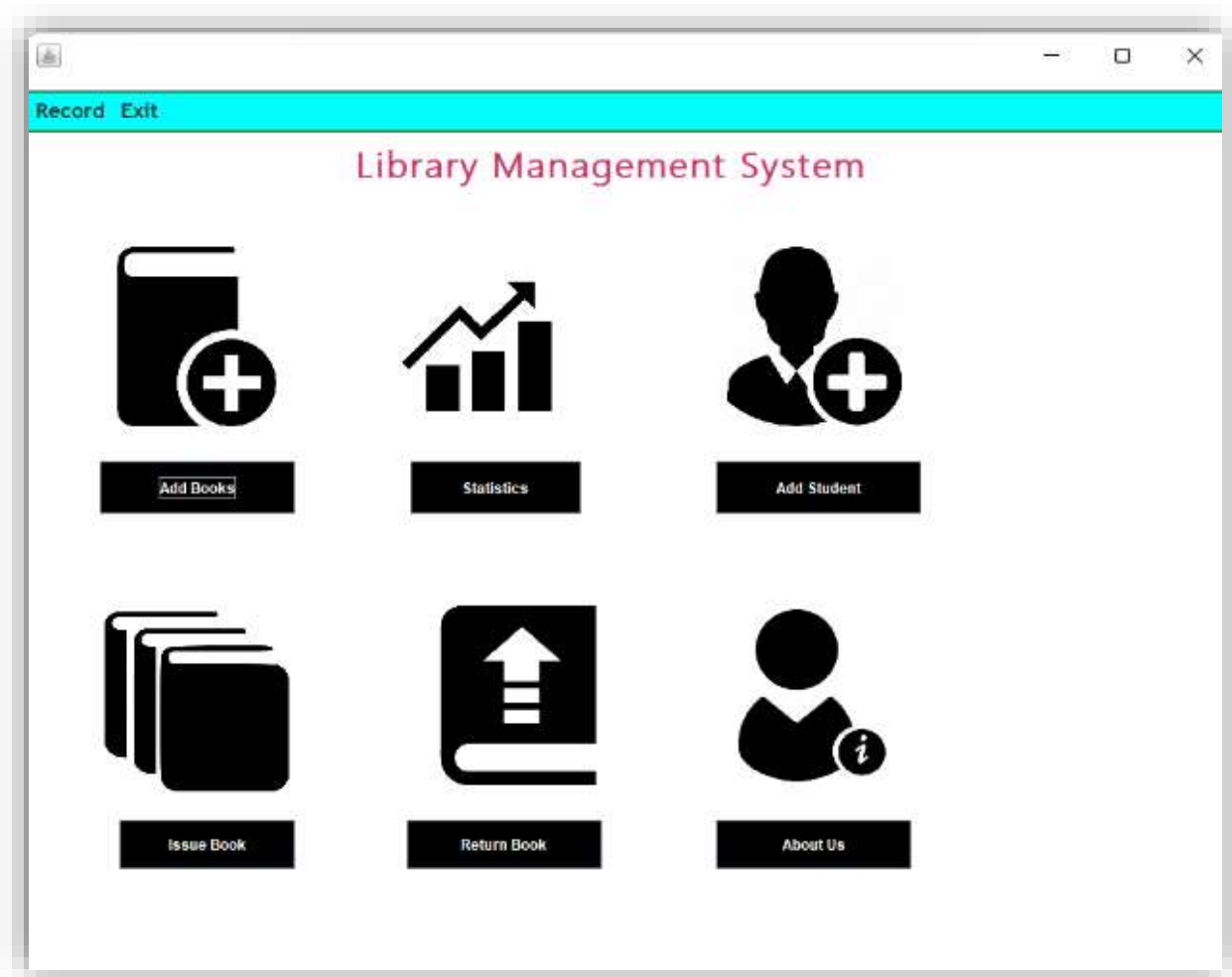


After the progress bar completes the home page opens which contains the following options:

1. Add Books
2. Statistics
3. Add Student

4. Issue Book
5. Return Book
6. About Us

And Menu bar contains option to see records of students or books and a option to exit the system.



After going to Add Books option the following form opens which asks for the required information of books and after clicking on add the book gets registered in the database.

The screenshot shows a software window titled "Add Book" with a subtitle "**Add Book Form**". It contains several input fields: "Book_id" (1), "Name" (OS), "ISBN" (1), "Publisher" (Nirali), "Edition" (1), "Price" (130), and "Pages" (234). Below these fields are two buttons: "Add" and "Back". A smaller "Message" dialog box is overlaid on the right, displaying an information icon, the text "Successfully Added", and an "OK" button.

Then in Add Student option the form for student information opens and we have to register the student accordingly...

The screenshot shows a software window titled "Add Student". It contains several input fields: "Student_id" (1), "Name" (Rahul), "Father's Name" (Raj), "Course" (Diploma), "Branch" (IT), "Year" (Third), and "Semester" (5th). Below these fields are two buttons: "ADD" and "Back". A smaller "Message" dialog box is overlaid on the right, displaying an information icon, the text "Successfully Added", and an "OK" button.

In Issue Book option we have to fill the information of both book and student and then book will be issued....

The screenshot shows a web application window for issuing a book. It contains two columns of input fields. The left column is for book details: Book_id (1), Name (OS), ISBN (1), Publisher (Nirali), Edition (1), Price (130), and Pages (234). The right column is for student details: Student_id (1), Name (Rahul), Father's Name (Raj), Course (Diploma), Branch (IT), Year (Third), and Semester (5th). Below these fields is a 'Date of Issue' field with the value 15/12/2021. At the bottom are 'Issue' and 'Back' buttons. A 'Message' dialog box is open in the foreground, displaying 'Successfully Book Issued..!' with an 'OK' button.

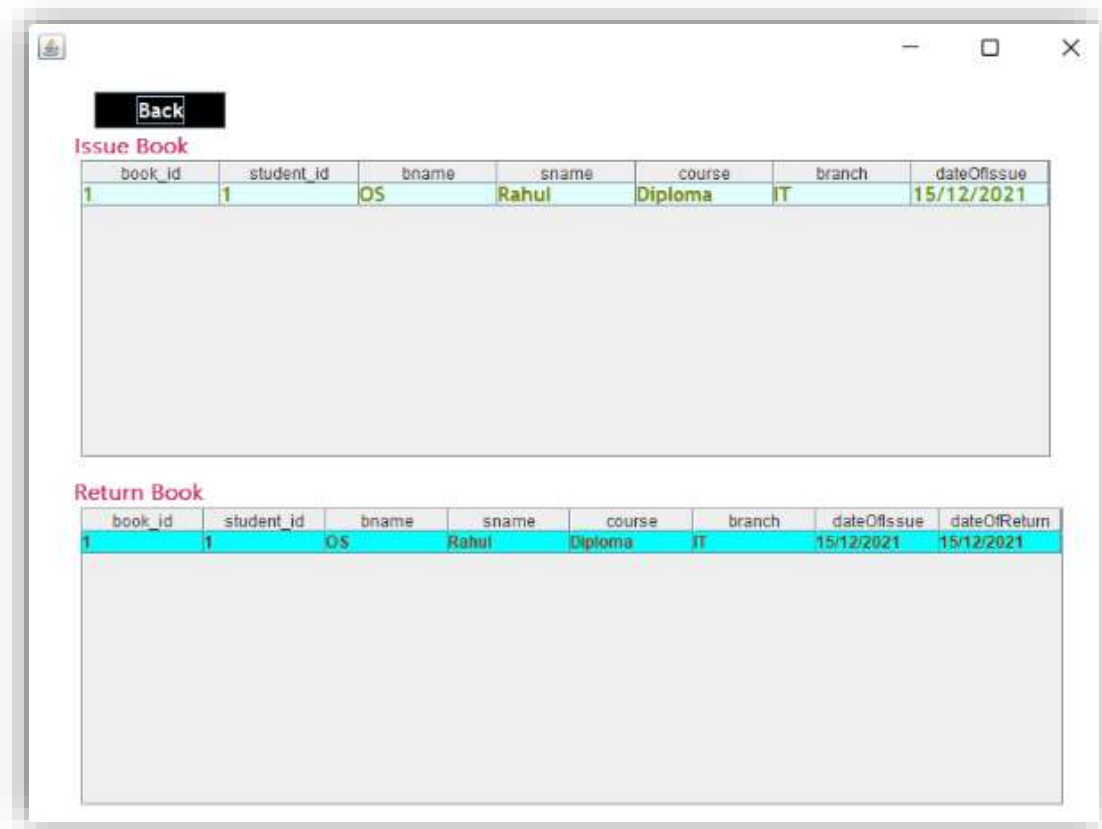
Field	Value
Book_id	1
Name	OS
ISBN	1
Publisher	Nirali
Edition	1
Price	130
Pages	234
Student_id	1
Name	Rahul
Father's Name	Raj
Course	Diploma
Branch	IT
Year	Third
Semester	5th
Date of Issue	15/12/2021

Then in the return book option after filling required informations the book will be successful returned the the data will be saved accordingly...

The screenshot shows a web application window for returning a book. It contains input fields for Book_id (1), Student_id (1), Book (OS), Name (Rahul), Course (Diploma), Branch (IT), Date of Issue (15/12/2021), and Date of Return (15/12/2021). There are 'Return' and 'Back' buttons. A 'Message' dialog box is open in the foreground, displaying 'Saved...' with an 'OK' button.

Field	Value
Book_id	1
Student_id	1
Book	OS
Name	Rahul
Course	Diploma
Branch	IT
Date of Issue	15/12/2021
Date of Return	15/12/2021

Below displayed is the statistics of Issued books and returned book by the students....



The screenshot shows a web application window with a title bar containing a 'Back' button. The window displays two tables. The first table, titled 'Issue Book', has columns: book_id, student_id, bname, sname, course, branch, and dateOfIssue. It contains one row with values: 1, 1, OS, Rahul, Diploma, IT, and 15/12/2021. The second table, titled 'Return Book', has columns: book_id, student_id, bname, sname, course, branch, dateOfIssue, and dateOfReturn. It contains one row with values: 1, 1, OS, Rahul, Diploma, IT, 15/12/2021, and 15/12/2021.

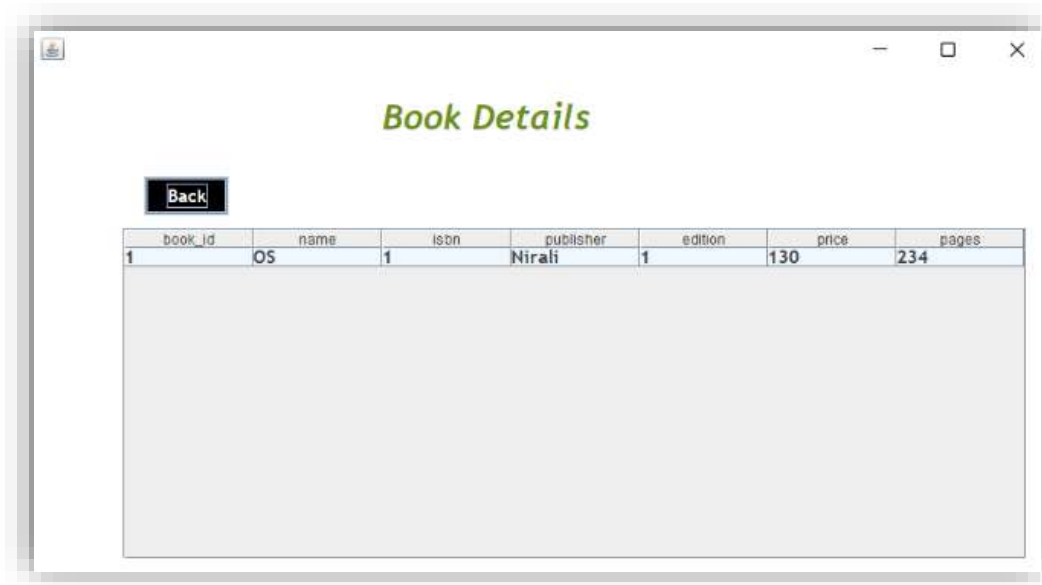
book_id	student_id	bname	sname	course	branch	dateOfIssue
1	1	OS	Rahul	Diploma	IT	15/12/2021

book_id	student_id	bname	sname	course	branch	dateOfIssue	dateOfReturn
1	1	OS	Rahul	Diploma	IT	15/12/2021	15/12/2021

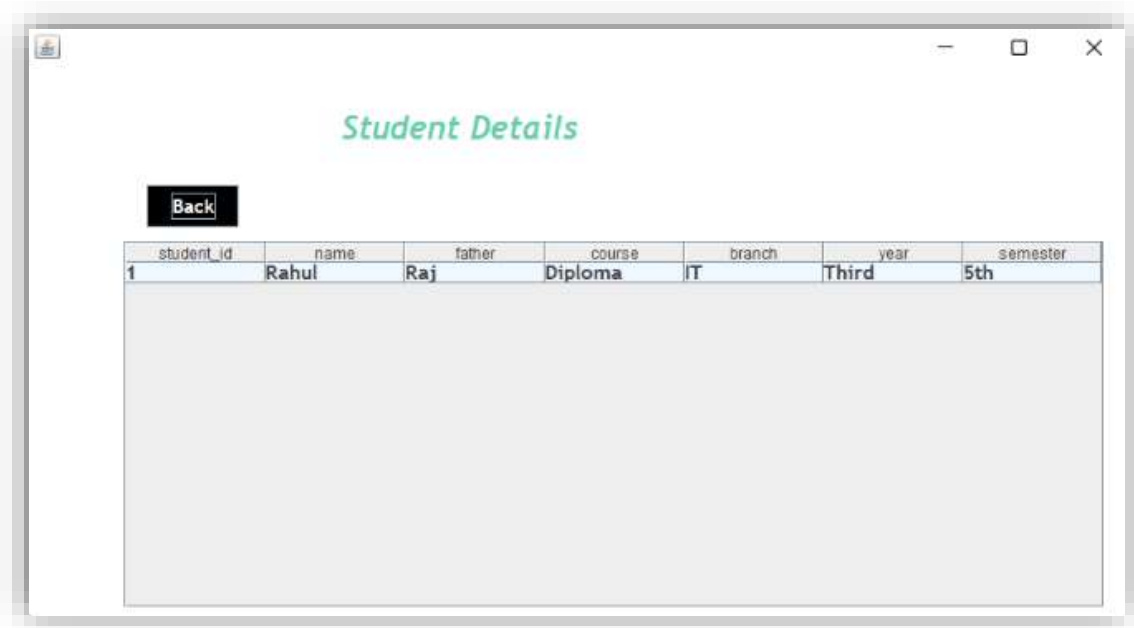
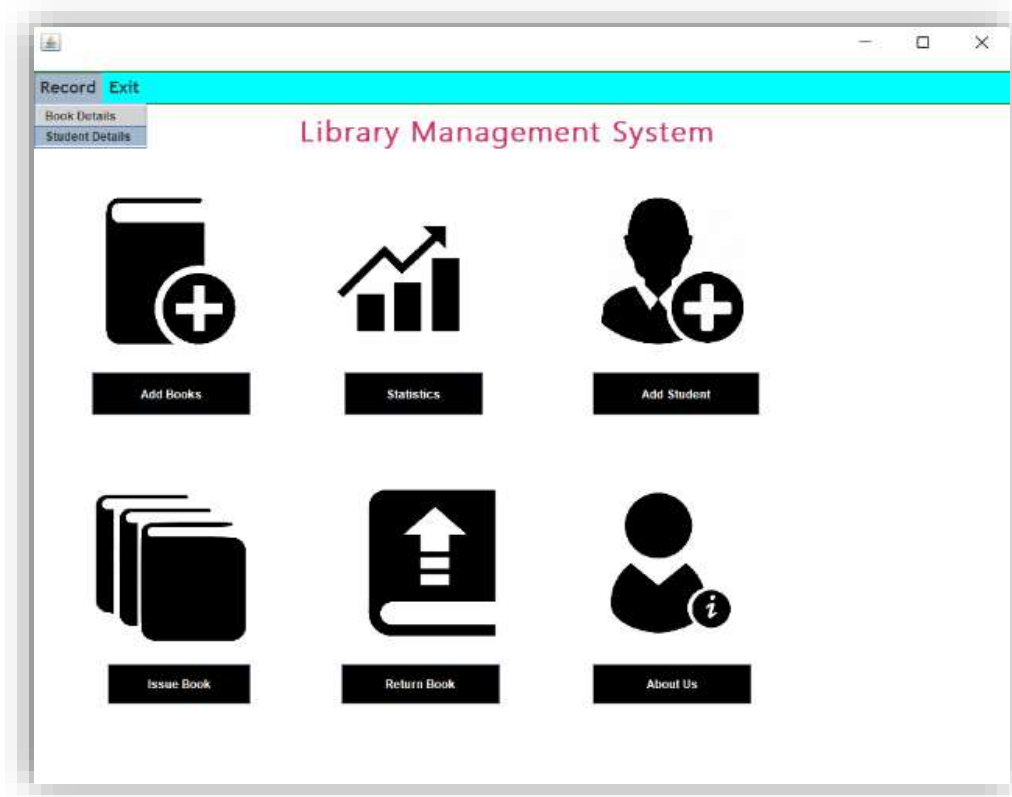
Then in menu bar there is menu which contains two options Book Details and Student Details

The Option shows the full records of books and Students which are registered in the library.

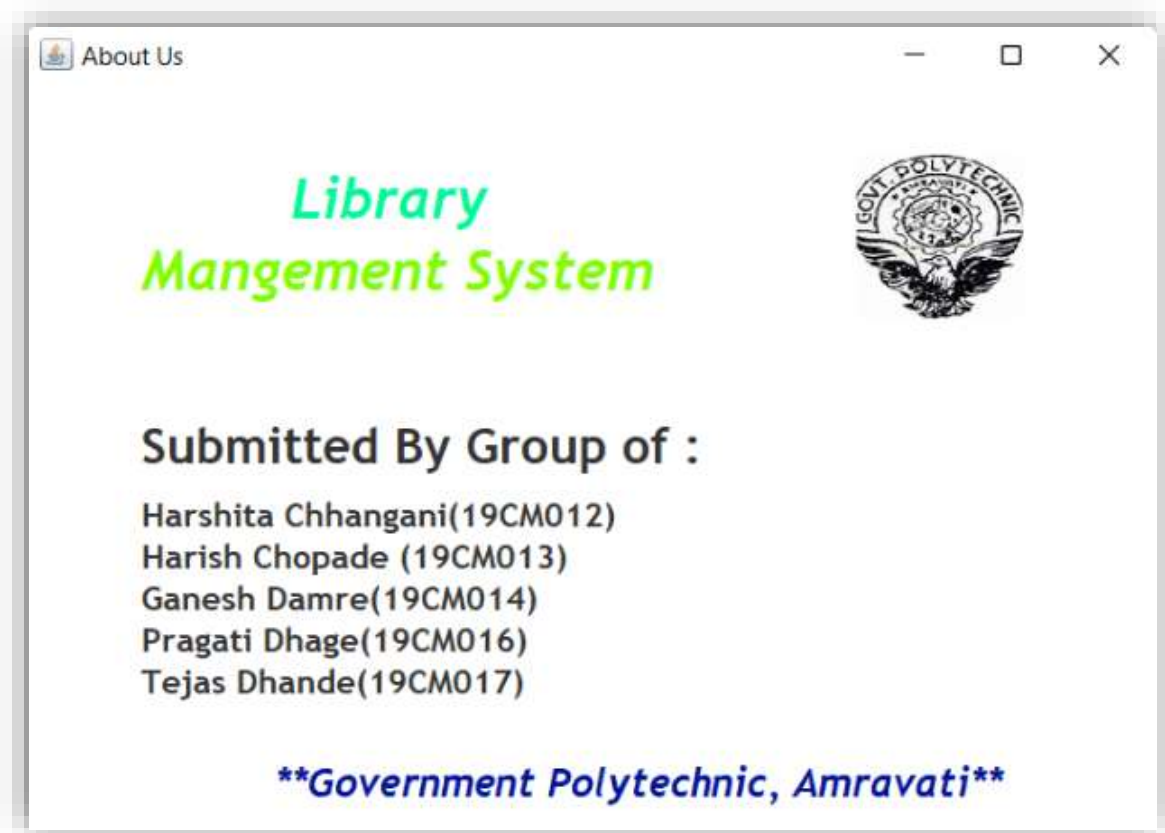
1. Books Details.....



2. Students Details...



Lastly there's a option that's About Us....



So, This was the Library management Project made by us.

Conclusion:

- In this project, an Java based user interactive Library management system is successfully developed, which is much applicable to University or school libraries.
- Using this software any user without having any knowledge of Java could easily be able to understand the graphical reports of various transactions like availability of books, number of copies, fine etc.

- This software can be run on any operating system having Java virtual machine.
- From a proper analysis of positive points and constraints, it can be concluded that this is a highly efficient GUI based software.
- This library management system is working properly and meeting to all user requirements according to the educational institutions.