



**ST. ANTONY'S**  
**PUBLIC SCHOOL**

CBSE AFFILIATION NO: 930037, SCHOOL NO: 75036



**CLASS XII**

**RECORD OF PROJECT WORK IN**  
**COMPUTER SCIENCE**

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**CBSE Roll No:**



# ST. ANTONY'S

## PUBLIC SCHOOL

CBSE AFFILIATION NO: 930037, SCHOOL NO: 75036

Project Report submitted in fulfilment of Class XII

Syllabus Requirement By

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### CERTIFICATE

This is to certify that this Project titled **School Library Management System** is the record of bonafide project work carried out by **Abhijith Saju**

Roll No. \_\_\_\_\_ of class **XII**, Section **E**, during the academic year **2023 – 2024**

Teacher in Charge

Principal

Examiner

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## **ABSTRACT**

School Library Management System is a system which maintains the information about the books present in the library, their authors, the students of the school to whom books are issued and proper management of user i.e. librarians. This is very difficult to organize manually. Maintenance of all these information manually is a very complex task. Owing to the advancement of technology, organization of a Digital Library System is a need for the school in order to save time and hassle due to manual library management. This School Library Management Software has been designed to computerize and automate the operations performed over the information about the members, book issues and returns and all other operations. This system aims to simplify library operations by providing a user-friendly interface for librarians to maintain and monitor the library's collection and ensure efficient circulation of books among students. It serves as a fundamental tool for maintaining an organized and functional school library.

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# **1. INTRODUCTION**

## **1.1 PROJECT AIM AND OBJECTIVES**

The project aims and objectives that will be achieved after completion of this project are discussed in this subchapter.

The aims and objectives are as follows:

- Student Management
- Book Management
- Search operations to basic details of the Students.
- Search operations to check the availability of books.
- Facility to issue and return a book.
- An Admin page where admin can add/remove books
- An Admin page where admin can add/remove students
- An Admin page which allows to edit details of books/students

## **1.2 BACKGROUND OF THE PROJECT**

School Library Management Systems have become an essential part of modern educational institutions as they play a crucial role in organizing and maintaining a library's resources efficiently. These systems are designed to meet the specific needs of school libraries, providing librarians, and students with tools to enhance the educational experience. In this computerized system, the librarian can issue and return the books efficiently and hassle-free by keeping the track of the students, to whom books are issued and returned from. By this software, loss of the book record and member record can be avoided to a major extent. The evolution of school library management systems can be traced back to the increasing complexity of library operations and the need to streamline these processes. All these modules will help the help librarian to manage the library in a convenient and efficient way as compared to the present manual system.

## **2. SYSTEM ANALYSIS**

In this chapter, we will discuss and analyze about the developing process of School Library Management System including software requirement specification (SRS) and comparison between existing and proposed system. The functional and non- functional requirements are included in SRS part to provide complete description and overview of system requirement before the developing process is carried out. Besides that, existing versus proposed provides a view of how the proposed system will be more efficient than the existing one

### **2.1 SOFTWARE REQUIREMENT SPECIFICATION :-**

Library Management System is a computerized system which helps the user(librarian) to manage the daily activities in the school library in an electronic format. It reduces the risk of paper work such as loss of registers, damage of registers and other time consuming activities in the library. It can help user to manage the transaction or record more effectively and in a time saving manner

#### **PROBLEM STATEMENT:**

Non-computerized school libraries face several challenges that can impact their ability to effectively support the educational needs of students and staff. Some common problems encountered by non-computerized school libraries include:

1. **Ineffective Space Utilization**

Non-computerized libraries may have difficulty optimizing the use of physical space for resource storage and student study areas. The problem becomes worse when the school library is small and is in a compact area,

2. **Inefficient Book Issuing and Book Returning Procedures:**

Manual processes for issuing and returning library materials can be cumbersome, leading to long wait times and potential errors. Difficulty increases as the number of books present in the library increases.

3. **Messy Inventory:**

Keeping track of book records and students will be tough when the library isn't computerized. Messy Inventory often leads to loss of the records as well as the loss of books in the library.

#### 4. Damaged records

When a computerized system is not there files are always lost due to some accident like spilling of water by some member on records accidentally. Besides some natural disaster like floods or fires may also damage the files . Also proper storage may also lead to the damage of records

#### 5. Cost consuming

As there is no computerized system, every year records/ registers will be required, which will increase the cost for the management of library.

## **2.2 EXISTING VERSUS PROPOSED SYSTEM**

- Existing System:

The existing system of a manual school library refers to a traditional, non-computerized method of managing library resources and operations within an educational institution. In this system, various processes are carried out manually, relying on physical records, card catalogues, and handwritten documentation. Issuing books and managing data of books and students are all done manually. The library's inventory is maintained through labour-intensive physical checks, and resource location can be challenging. In addition to its maintenance of member details, issue dates and return dates etc. manually is a complex task

- Proposed System:

To solve the inconveniences as mentioned in the existing system, a Digital School Library Software is proposed. The proposed system contains the following features.

- Get student information
- Get book details
- Check total books available
- Update both student and book details
- Produce member reports, book reports etc.

Also the proposed system will have a login system for library administrators ensuring enhanced data security. The proposed system can issue/return book in a matter of seconds comparing to the hassle to enter the records manually



## **2.3 SYSTEM SPECIFICATIONS**

### **HARDWARE SPECIFICATIONS**

The following is the hardware specification of the system on which the software has been developed:-

**Operating System** : Windows VISTA/ 7 /10 or UBUNTU

Windows 7 is used as the operating system as it is stable and supports more features and is more user- friendly.

**Machine** : Pentium Dual Core Processor 2.6 GHz or above,  
2 GB RAM or above ,  
500 GB Hard Disk or above

We used Intel core i5 2nd generation based system, it is fast than other processors and provide reliable and stable performance and we can run our pc for longtime. By using this processor, we can keep on developing our project without any worries. 4gb RAM is used as it will provide fast reading and writing capabilities and will support in processing.

### **SOFTWARE SPECIFICATIONS**

**Front End Used** : PYTHON 3.8.0 or above

**Backend Used** : Data Files

### 3. SYSTEM DESIGN

#### 3.1 DATA FILE/TABLE DESIGN

**MySQL Database Name : LIBRARY**

Table No 1: –BOOKS

Description: To Store the details of the books in the library

Field Name	Data Type	Description
BOOK_ID	VARCHAR(5)	Primary Key, Distinctive ID for each books
BOOK_NAME	VARCHAR(40)	Name of the Book
AUTHOR_NAME	VARCHAR(30)	Name of the Author
QUANTITY	INT(2)	Quantity of the books in the Library
ST_ID	VARCHAR(4)	ID of the student to whom book is issued
AVL_STATUS	CHAR(3)	Availability Status of the Book

Table No 2:- STUDENT

Description: To Store the details of the students in the library

Field Name	Data Type	Description
ST_ID	VARCHAR(4)	Primary Key, ID of the Student
STUDENT_NAME	VARCHAR(30)	Not Null, Name of the Student
CLASS	VARCHAR(3)	Not Null, Class of the Student
DIVISION	CHAR(1)	Not Null, Division of the Student
ROLL_NO	VARCHAR(3)	Roll No of the Student

Table No 3:- USER

Description :To store username and password for login

Field Name	Data Type	Description
USERNAME	VARCHAR(30)	Login Username
PASSWORD	VARCHAR(30)	Login Password

**Text File No:1-** help1.txt

Description: Help and Support for the program

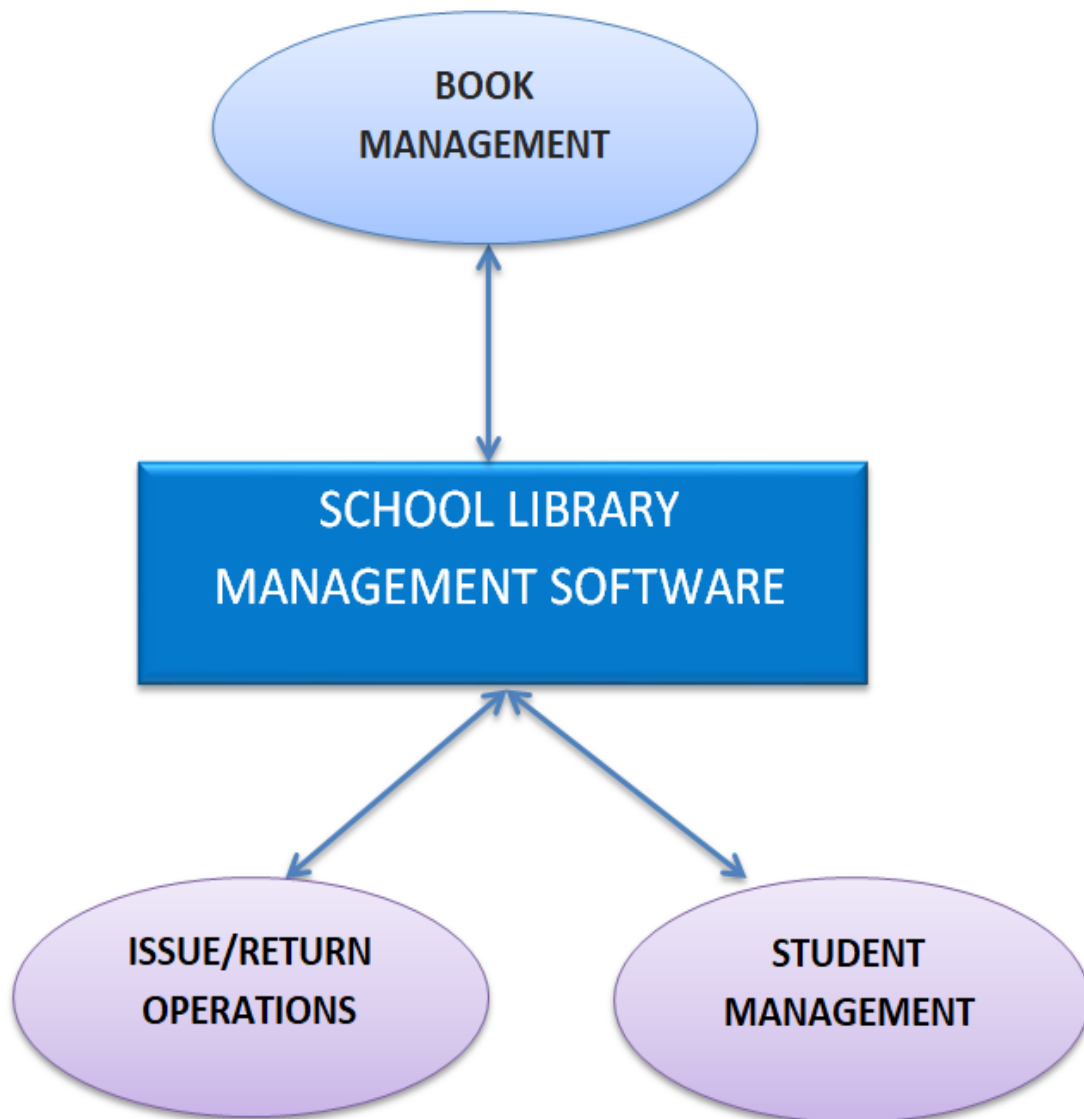
**Text File No:2-** about.txt

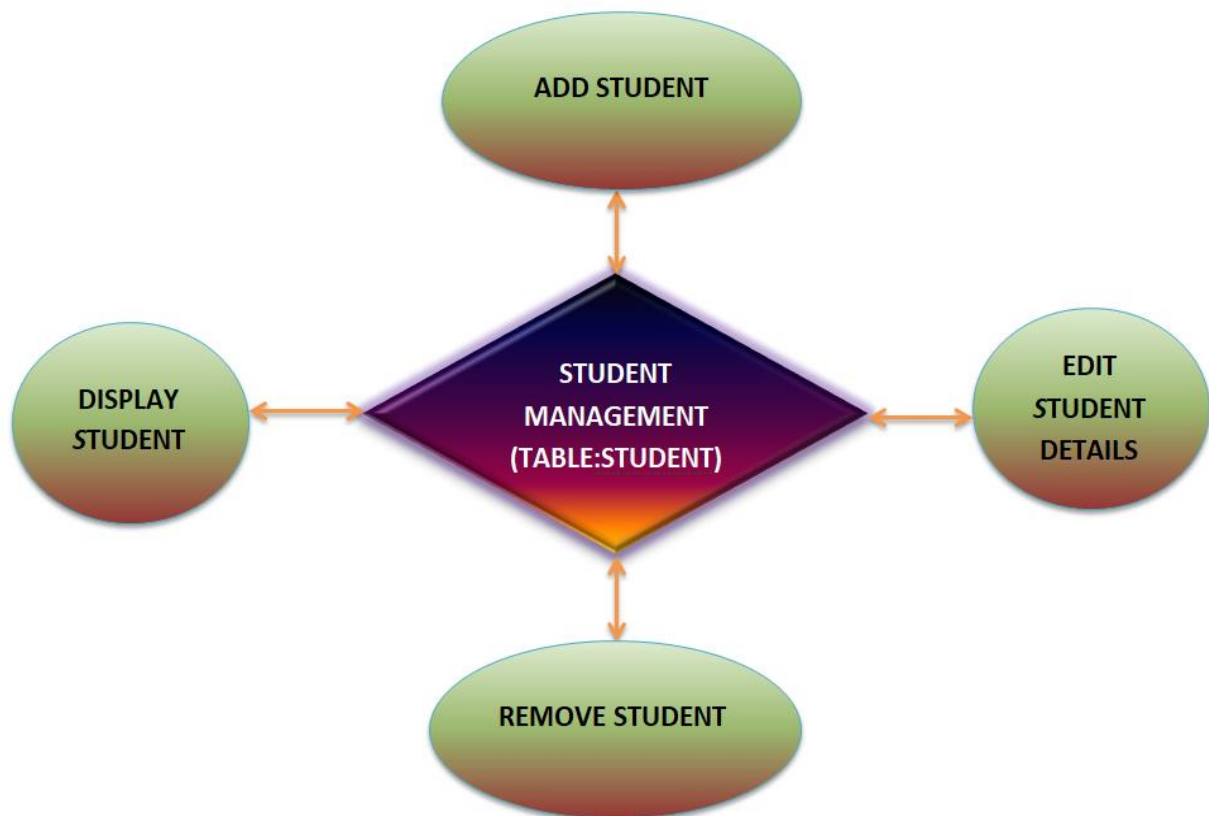
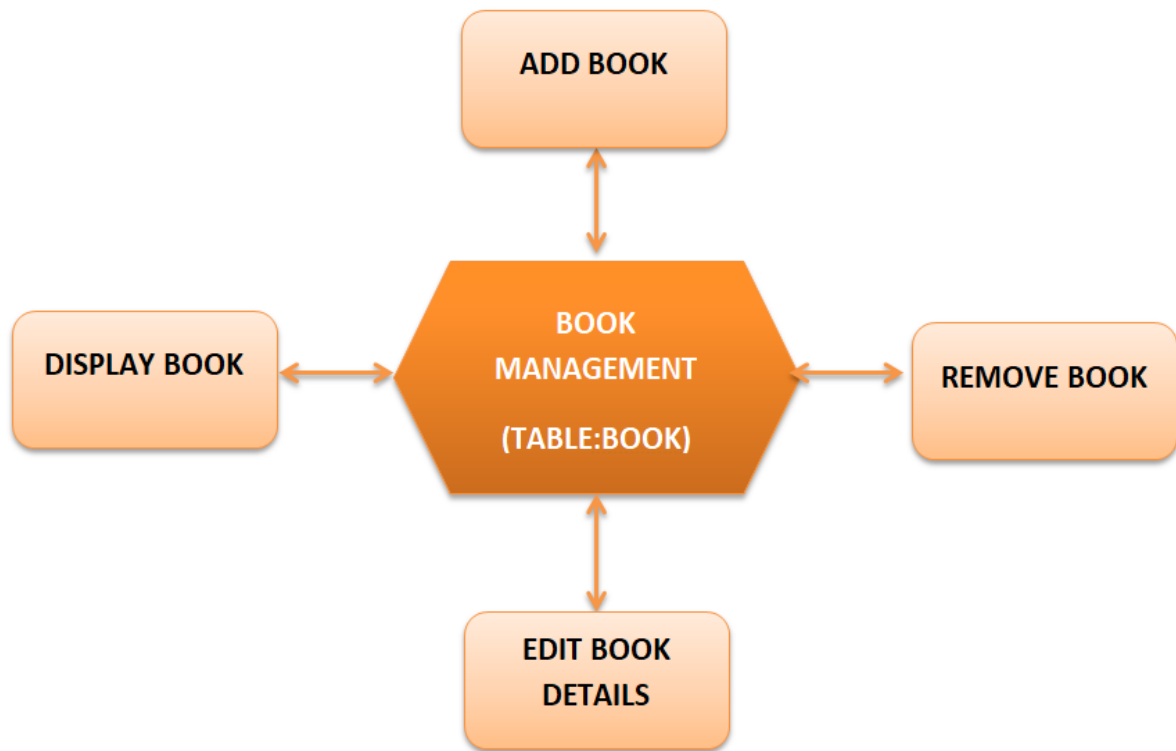
Description: About the program and Developing Credits

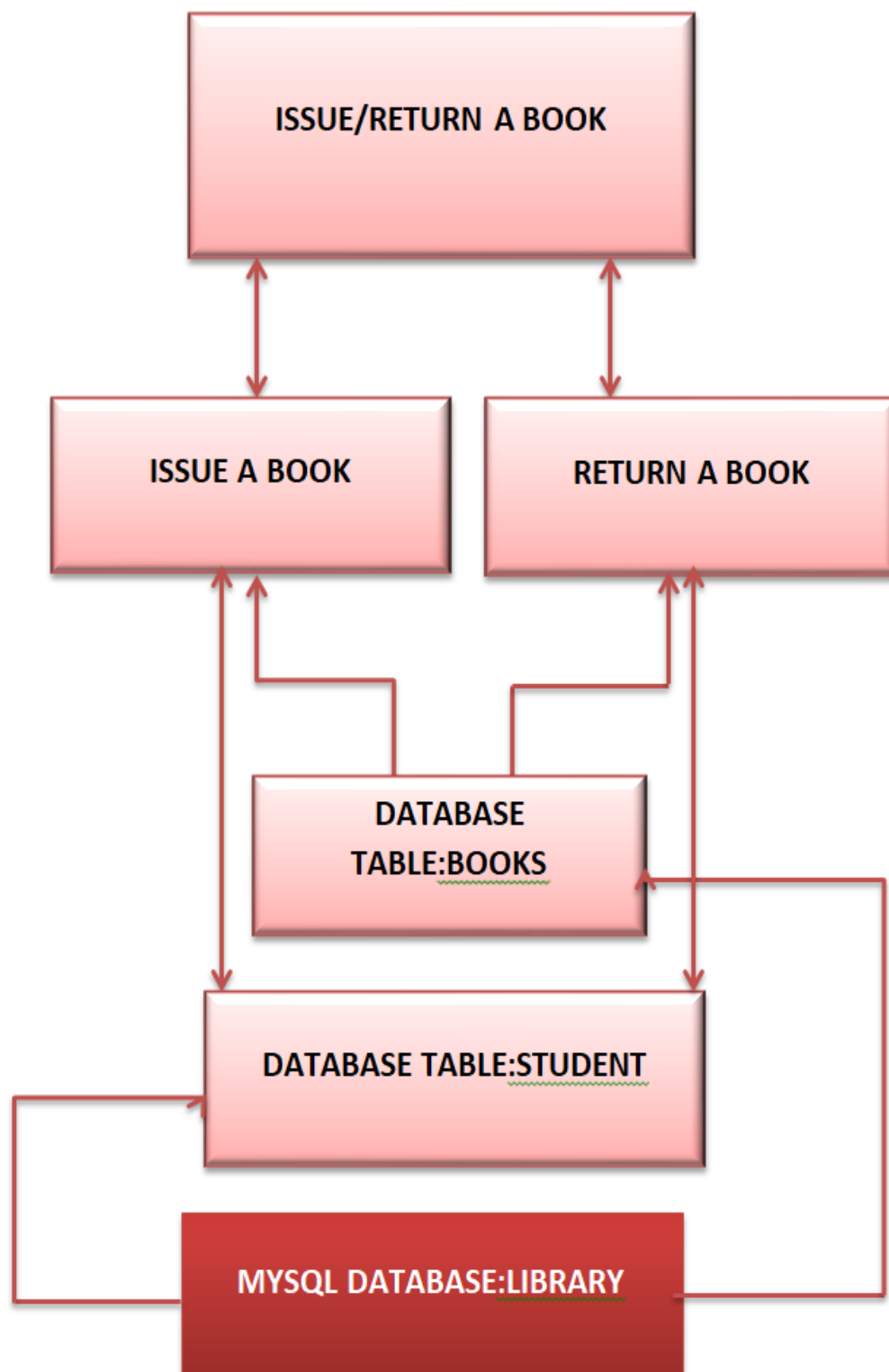
## **3.2 MENU STRUCTURE**

- **USER/BASIC MODE**
  - ISSUE A BOOK
  - RETURN A BOOK
  - DISPLAY ALL BOOK DETAILS
  - DISPLAY ALL STUDENT DETAILS
  - DISPLAY ISSUED BOOKS
  - DISPLAY AVAILABLE BOOKS
  - HELP
  - ABOUT
- **ADMIN MODE**
  - ADD A BOOK
  - REMOVE A BOOK
  - EDIT BOOK DETAILS
  - ADD A STUDENT
  - REMOVE A STUDENT
  - EDIT STUDENT DETAILS
  - HELP
  - ABOUT
- **HELP**
- **ABOUT**
- **EXIT**

### 3.3 DATA FLOW DIAGRAMS







## 4. SYSTEM IMPLEMENTATION

### 4.1 SOURCE CODE AND MODULE DESCRIPTION

**Module Name:** library23.py

**Description:** Here, We have used a single python module (library23.py) for database creation, table creation, data manipulation (storage, modification and organizing of data). Also the given Python Module also checks the connectivity between MySQL and Python. We have made maximum use of user-defined functions for the sake of easy viewing and editing of code during it's development.

The list of user defined function used in the module are:

No.	Name of User Defined Function	Description
1	addbook()	Adds the book details the database
2	addstud()	Adds the student details to the database
3	bookremove()	Removes book details from the database
4	studremove()	Removes Student Details from the database
5	issue()	Issues a book from the library
6	returna()	Returns a book back to the library
7	editstud()	Edit student details in the database
8	editbook()	Edit book details in the database
9	bookissue()	Displays the list of issued books from library
10	bookdisp()	Displays the list of all the books in the library
11	bookavlbl()	Displays the list of available books in the library
12	studentdet()	Displays the list of the students in the database
13	about()	Displays about and credits of the program
14	help1()	Displays help and support for the program

**Source Code:**

#### **#Connecting To MYSQL**

```
import mysql.connector as ms
con=ms.connect(host='localhost',user='root',passwd='tiger')
cur=con.cursor()
```

#### **#Database creation and execution**

```
cur.execute('create database if not exists library;')
cur.execute('use library;')
```

#### **#Creation of Book Details table**

```
query1="""CREATE TABLE IF NOT EXISTS BOOKS
        (BOOK_ID VARCHAR(5)PRIMARY KEY,
        BOOK_NAME VARCHAR(40),
```

```
AUTHOR_NAME VARCHAR(30),  
QUANTITY INT(2),  
ST_ID VARCHAR(4),  
AVL_STATUS CHAR(3)DEFAULT 'AVL');'''
```

### **#Creation of Student Details table**

```
query2="''CREATE TABLE IF NOT EXISTS STUDENT  
(ST_ID VARCHAR(4) PRIMARY KEY,  
STUDENT_NAME VARCHAR(30) NOT NULL,  
CLASS VARCHAR(3) NOT NULL,  
DIVISION CHAR(1) NOT NULL,  
ROLL_NO VARCHAR(3));''"
```

### **#Creation of Login Details Table**

```
user="''CREATE TABLE IF NOT EXISTS USER  
(USERNAME VARCHAR(30),  
PASSWORD VARCHAR(30));''"
```

### **#Creating a default username and password and the execution of above queries**

```
defaultpass="INSERT INTO USER VALUES('user','1234');"  
cur.execute(query2)  
cur.execute(query1)  
cur.execute(user)  
cur.execute(defaultpass)
```

### **#Function for Adding a Book to the database**

```
def addbook():  
    print("  ADDING BOOK DETAILS.....")  
    print("  *****")  
    print()  
    bk_id=input("Enter Book ID for the book to be added:")  
    bk_name=input("Enter Book Name for the book to be added:")  
    auth_name=input("Enter Author for the book to be added:")  
    qnty=int(input("Enter quantity of the respective book:"))  
    query = "INSERT INTO books (BOOK_ID, BOOK_NAME, AUTHOR_NAME, QUANTITY)  
VALUES (%s, %s, %s, %s)"  
    values = (bk_id, bk_name, auth_name, qnty)  
    cur.execute(query, values)  
    con.commit()
```



```
print()
print("Book Details is successfully added...")
print()
```

### **#Function for Adding Student Details to the database**

```
def addstud() :
    print("  ADDING STUDENT DETAILS.....")
    print("  *****")
    print()
    st_id=input("Enter Student ID to be added:")
    st_name=input("Enter the Name of the Student:")
    clas=input("Enter Class of the Student:")
    div=input("Enter Division of the Student:")
    rollno=input("Enter Roll Number of the Student:")
    query="INSERT INTO STUDENT(ST_ID,STUDENT_NAME,CLASS,DIVISION,ROLL_NO)
VALUES (%s, %s, %s, %s,%s)"
    values=(st_id,st_name,clas,div,rollno)
    cur.execute(query, values)
    con.commit()
    print()
    print("Student Details is successfully added...")
    print()
```

### **#Function for Removing student details from database**

```
def studremove():
    print("  REMOVING STUDENT DATA.....")
    print("  *****")
    print()
    st_id=input("Enter Student ID to be removed:")
    quer1="select * from student where ST_ID={0};".format(st_id)
    print("THE DETAILS OF THE STUDENT IS:")
    cur.execute(quer1)
    data=cur.fetchone()
    print(data)
    print()
    query="delete from student where ST_ID={0};".format(st_id)
    cur.execute(query)
    con.commit()
    print()
```

```
print("Student Data Successfully Deleted")
print()
```

### **#Function for Removing a book from library**

```
def bookremove():
    print(".....REMOVING BOOK DATA.....")
    print("*****")
    print()
    st_id=input("Enter Book ID to be removed:")
    quer1="select * from books where BOOK_ID={0};".format(st_id)
    print("THE DETAILS OF THE BOOK IS:")
    print('(BOOK_ID, BOOK_NAME, AUTHOR_NAME, QUANTITY,ST_ID,STATUS)')
    cur.execute(quer1)
    data=cur.fetchone()
    print(data)
    print()
    query="delete from books where BOOK_ID={0};".format(st_id)
    cur.execute(query)
    con.commit()
    print()
    print("Book Data Successfully Deleted")
    print()
```

### **# Function for Issuing a book**

```
def issue():
    print("  ISSUE A BOOK FROM LIBRARY.....")
    print("  *****")
    print()
    bk_id=input("Enter The ID of The Book to be issued:")
    st_id=input("Enter the ID of The Student to whom book is issued:")
    quer1="select * from books where BOOK_ID={0};".format(bk_id)
    print("THE DETAILS OF THE ISSUING BOOK IS:")
    cur.execute(quer1)
    data=cur.fetchone()
    print(data)
    if data:
        if data[3]>0:
            quer2="UPDATE BOOKS SET AVL_STATUS='ISD' WHERE
BOOK_ID={0};".format(bk_id)
```

```

        cur.execute(quer2)
        quer3="UPDATE BOOKS SET QUANTITY=QUANTITY-1 WHERE
BOOK_ID={0};".format(bk_id)
        cur.execute(quer3)
        quer4="UPDATE BOOKS SET ST_ID={0} WHERE BOOK_ID={1};".format(st_id,bk_id)
        cur.execute(quer4)
        con.commit()
        print()
        print("Book issued successfully.")
        print()
    else:
        print()
        print("No available copies of the book.")
        print()
else:
    print()
    print("Book not found.")
    print()

```

### **# Function for Returning a book to the library**

```

def returna():
    print("  RETURN A BOOK TO LIBRARY.....")
    print("  *****")
    print()
    bk_id=input("Enter The ID of The Book to be returned:")
    quer1="select * from books where BOOK_ID={0};".format(bk_id)
    print("THE DETAILS OF THE RETURNING BOOK IS:")
    cur.execute(quer1)
    data=cur.fetchone()
    print(data)
    quer2="UPDATE BOOKS SET AVL_STATUS='AVL' WHERE BOOK_ID={0};".format(bk_id)
    quer3="UPDATE BOOKS SET QUANTITY=QUANTITY+1 WHERE
BOOK_ID={0};".format(bk_id)
    quer4="UPDATE BOOKS SET ST_ID=NULL WHERE BOOK_ID={0};".format(bk_id)
    cur.execute(quer2)
    cur.execute(quer3)
    cur.execute(quer4)
    con.commit()
    print()

```

```
print("Book Return Command successfully completed....")
print()
```

### # Function for Editing book details

```
def editbook():
    print(".....UPDATE BOOK DETAILS.....")
    print("*****")
    print()
    print("WHAT INFORMATION DO YOU WANT TO UPDATE?")
    print(" 1.BOOK NAME")
    print(" 2.AUTHOR NAME")
    print(" 3.QUANTITY")
    print()
    opt=int(input("Select an option from the above menu:"))
    print()
    if opt==1:
        print(" .....EDITING BOOK NAME.....")
        print(" *****")
        print()
        bk_id=input("Enter The ID of The Book to be Edited:")
        quer1="select * from books where BOOK_ID={0};".format(bk_id)
        print("THE DETAILS OF THE BOOK IS:")
        cur.execute(quer1)
        data=cur.fetchone()
        print(data)
        newname=input("Enter the new name of the Book:")
        quer2="UPDATE BOOKS SET BOOK_NAME=('{0}') WHERE
BOOK_ID={1};".format(newname,bk_id)
        cur.execute(quer2)
        con.commit()
        print()
        print("BOOK NAME IS SUCCESSFULLY UPDATED")
        print()
    elif opt==2:
        print(" .....EDITING AUTHOR NAME.....")
        print(" *****")
        print()
        bk_id=input("Enter The ID of The Book to be Edited:")
        quer1="select * from books where BOOK_ID={0};".format(bk_id)
```

```

print("THE DETAILS OF THE BOOK IS:")
cur.execute(quer1)
data=cur.fetchone()
print(data)
newname=input("Enter the new Author name of the Book:")
quer2="UPDATE BOOKS SET AUTHOR_NAME=('{0}') WHERE
BOOK_ID=({1});".format(newname,bk_id)
cur.execute(quer2)
con.commit()
print()
print("AUTHOR NAME IS SUCCESSFULLY CHANGED")
print()
elif opt==3:
    print(" .....EDITING BOOK QUANTITY.....")
    print(" *****")
    print()
    bk_id=input("Enter The ID of The Book to be Edited:")
    quer1="select * from books where BOOK_ID=({0});".format(bk_id)
    print("THE DETAILS OF THE BOOK IS:")
    cur.execute(quer1)
    data=cur.fetchone()
    print(data)
    newqty=int(input("Enter the Quantity of the Book:"))
    quer2="UPDATE BOOKS SET QUANTITY=({0}) WHERE
BOOK_ID=({1});".format(newqty,bk_id)
    cur.execute(quer2)
    con.commit()
    print()
    print("QUANTITY IS SUCCESSFULLY UPDATED")
    print()

```

### **# Function for Editing student details**

```

def editstud():
    print(".....UPDATE STUDENT DETAILS.....")
    print("*****")
    print()
    print("WHAT INFORMATION DO YOU WANT TO UPDATE?")
    print(" 1.STUDENT NAME")
    print(" 2.CLASS")

```

```

print(" 3.DIVISION")
print(" 4.ROLL NO")
print()
opt=int(input("Select an option from the above menu:"))
print()
if opt==1:
    print(" .....UPDATING STUDENT NAME.....")
    print(" *****")
    print()
    bk_id=input("Enter The ID of The Student to be Updated:")
    quer1="select * from student where ST_ID={0};".format(bk_id)
    print("THE DETAILS OF THE STUDENT IS:")
    cur.execute(quer1)
    data=cur.fetchone()
    print(data)
    newname=input("Enter the new name of the Student:")
    quer2="UPDATE STUDENT SET STUDENT_NAME='{0}' WHERE
ST_ID={1};".format(newname,bk_id)
    cur.execute(quer2)
    con.commit()
    print()
    print("STUDENT NAME IS SUCCESSFULLY UPDATED!")
    print()
elif opt==2:
    print(" .....UPDATING STUDENT CLASS.....")
    print(" *****")
    print()
    bk_id=input("Enter The ID of The Student to be Updated:")
    quer1="select * from student where ST_ID={0};".format(bk_id)
    print("THE DETAILS OF THE STUDENT IS:")
    cur.execute(quer1)
    data=cur.fetchone()
    print(data)
    print()
    newcls=input("Enter the new CLASS of the Student:")
    quer2="UPDATE STUDENT SET CLASS=({0}) WHERE ST_ID=({1});".format(newcls,bk_id)
    cur.execute(quer2)
    con.commit()
    print()

```

```

print("STUDENT CLASS IS SUCCESSFULLY UPDATED")
print()
elif opt==3:
    print(" .....UPDATING STUDENT DIVISION.....")
    print(" *****")
    print()
    bk_id=input("Enter The ID of The Student to be Updated:")
    quer1="select * from student where ST_ID='{0}';".format(bk_id)
    print("THE DETAILS OF THE STUDENT IS:")
    cur.execute(quer1)
    data=cur.fetchone()
    print(data)
    print()
    newcls=input("Enter the new division of the Student:")
    quer2="UPDATE STUDENT SET DIVISION='{0}' WHERE
ST_ID={1};".format(newcls,bk_id)
    cur.execute(quer2)
    con.commit()
    print()
    print("STUDENT DIVISION IS SUCCESSFULLY UPDATED")
    print()
elif opt==4:
    print(" .....UPDATING STUDENT ROLL NUMBER.....")
    print(" *****")
    print()
    bk_id=input("Enter The ID of The Student to be Updated:")
    quer1="select * from student where ST_ID='{0}';".format(bk_id)
    print("THE DETAILS OF THE STUDENT IS:")
    cur.execute(quer1)
    data=cur.fetchone()
    print(data)
    print()
    newno=input("Enter the new roll number of the Student:")
    quer2="UPDATE STUDENT SET ROLL_NO={0} WHERE
ST_ID={1};".format(newno,bk_id)
    cur.execute(quer2)
    con.commit()
    print()
    print("ROLL NUMBER IS SUCCESSFULLY UPDATED")

```

```
print()
```

### # Function for Displaying details of all books

```
def bookdisp():
    print()
    quer="select * from books;"
    cur.execute(quer)
    data=cur.fetchall()
    print('    LIST OF ALL THE BOOKS IN THE LIBRARY')
    print('    *****')
    print()
    format_string = "%5s %25s %25s %7s %7s %13s"
    print(format_string %("BOOK_ID", "Book Name", "Auth Name", "Qty", "St_ID", "Status"))
    print('*'*90)
    for row in data:
        print('%5s'%(row[0]),'%25s'%(row[1]),'%25s'%(row[2]),'%7s'%(row[3]),'%7s'%(row[4])
        ,'%13s'%(row[5]))
```

### # Function for Displaying details of available books

```
def bookavlbl():
    print()
    quer="select * from books where AVL_STATUS='AVL';"
    cur.execute(quer)
    data=cur.fetchall()
    print('    LIST OF CURRENTLY AVAILABLE BOOKS')
    print('    *****')
    print()
    format_string = "%5s %25s %25s %7s %7s %13s"
    print(format_string %("BOOK_ID", "Book Name", "Auth Name", "Qty", "St_ID", "Status"))
    print('*'*90)
    for row in data:
        print('%5s'%(row[0]),'%25s'%(row[1]),'%25s'%(row[2]),'%7s'%(row[3]),'%7s'%(row[4])
        ,'%13s'%(row[5]))
```

### # Function for Displaying details of issued books

```
def bookissue():
    quer='''SELECT *
            FROM BOOKS NATURAL JOIN STUDENT
            WHERE AVL_STATUS='ISD';'''
```



```

try:
    cur.execute(quer)
    data=cur.fetchall()
    nrec=cur.rowcount
    print()
    print('    LIST OF ISSUED BOOKS FROM LIBRARY')
    print('    *****')
    print()
    print('(STUDENT_ID,BOOK_ID,BOOK NAME,AUTHOR NAME,QTY,STATUS,STUDENT
NAME,CLASS,DIVISION,ROLL NO)')
    print('-----')
    for row in data:
        print(row)
        print()
except Exception as e:
    print("Error:", e)

```

#### **# Function for Displaying details of students**

```

def studentdet():
    quer="SELECT * FROM STUDENT;"
    cur.execute(quer)
    data=cur.fetchall()
    nrec=cur.rowcount
    print('    LIST OF STUDENT DETAILS')
    print('    *****')
    print()
    format_string = "%5s %26s %6s %7s %7s"
    print(format_string %("STUDENT_ID", "Student Name","Class","Division", "Roll No"))
    print('*'*65)
    for row in data:
        print('%5s'%(row[0]),'%30s'%(row[1]),'%5s'%(row[2]),'%7s'%(row[3]),'%7s'%(row[4]))

```

#### **# Function for Displaying About the program**

```

def about():
    f=open("about.txt",'r')
    data=f.readlines()
    for each in data:
        print(each,end="")
    f.close()

```

### # Function for Displaying Help

```
def help1():  
    f=open("help1.txt",'r')  
    data=f.readlines()  
    for each in data:  
        print(each,end="")  
    f.close()
```

### #Main program

```
ch='y'  
while ch in['y','Y']:  
    print()  
    print("          WELCOME TO SCHOOL LIBRARY MANAGEMENT SOFTWARE")  
    print("          -----")  
    print()  
    print("          *****MAIN MENU*****")  
    print()  
    print('          1.USER/BASIC MODE')  
    print('          2.ADMIN MODE')  
    print('          3.HELP')  
    print('          4.ABOUT')  
    print('          5.CHECK MYSQL CONNECTION')  
    print('          6.EXIT THE PROGRAM')  
    print()  
    inp=int(input("Enter your desired option from above(1-5):"))  
    if inp==1:  
        cha='y'  
        while cha in['Y','y']:  
            print()  
            print()  
            print("          WELCOME TO SCHOOL LIBRARY MANAGEMENT SOFTWARE")  
            print("          -----")  
            print()  
            print("          *****USER MENU*****")  
            print()  
            print('          1.ISSUE A BOOK')  
            print('          2.RETURN A BOOK')  
            print('          3.DISPLAY ALL THE BOOKS')
```

```
print('          4.DISPLAY DETAILS OF ISSUED BOOKS')
print('          5.DISPLAY DETAILS OF AVAILABLE BOOKS')
print('          6.DISPLAY DETAILS OF STUDENTS')
print('          7.HELP')
print('          8.ABOUT')
print('          9.RETURN TO MAIN MENU')
print()
usinp=int(input("Enter your desired option from above(1-9):"))
if usinp==1:
    issue()
    cha=input("Do you want to continue to user menu(Y/N)?")
elif usinp==2:
    returna()
    cha=input("Do you want to continue to user menu(Y/N)?")
elif usinp==3:
    bookdisp()
    print()
    cha=input("Do you want to continue to user menu(Y/N)?")
elif usinp==4:
    bookissue()
    print()
    cha=input("Do you want to continue to user menu(Y/N)?")
elif usinp==5:
    bookavlbl()
    print()
    cha=input("Do you want to continue to user menu(Y/N)?")
elif usinp==6:
    studentdet()
    print()
    cha=input("Do you want to continue to user menu(Y/N)?")
elif usinp==7:
    help1()
    print()
    cha=input("Do you want to continue to user menu(Y/N)?")
    print()
elif usinp==8:
    about()
    print()
    cha=input("Do you want to continue to user menu(Y/N)?")
```

```

        print()
    elif usinp==9:
        print()
        cha='n'
elif inp==2:
    print()
    print("          WELCOME TO SCHOOL LIBRARY MANAGEMENT SOFTWARE")
    print("          -----")
    print()
    print("          *****WELCOME TO LOGIN MENU,PLEASE LOGIN*****")
    usr=input("Enter the user name:")
    print()
    pas=input("Enter the password:")
    cur.execute("select * from user;")
    for row in cur:
        username,password=row
    if usr==username and pas==password:
        print()
        print("*****LOGIN SUCCESS!*****")
        print()
        cha='y'
        while cha in['Y','y']:
            print("          WELCOME TO SCHOOL LIBRARY MANAGEMENT SOFTWARE")
            print("          -----")
            print()
            print("          *****ADMIN MENU*****")
            print()
            print('          1.ADD A BOOK')
            print('          2.REMOVE A BOOK')
            print('          3.EDIT BOOK DETAILS')
            print('          4.ADD A STUDENT')
            print('          5.REMOVE A STUDENT')
            print('          6.EDIT STUDENT DETAILS')
            print('          7.HELP')
            print('          8.ABOUT')
            print('          9.RETURN TO MAIN MENU')
            print()
            adinp=int(input("Enter your desired option from above(1-9):"))
            if adinp==1:

```

```

        addbook()
        cha=input("Do you want to continue to admin menu(Y/N)?")
elif adinp==2:
    bookremove()
    cha=input("Do you want to continue to admin menu(Y/N)?")
elif adinp==3:
    editbook()
    cha=input("Do you want to continue to admin menu(Y/N)?")
elif adinp==4:
    addstud()
    cha=input("Do you want to continue to admin menu(Y/N)?")
elif adinp==5:
    studremove()
    cha=input("Do you want to continue to admin menu(Y/N)?")
elif adinp==6:
    editstud()
    cha=input("Do you want to continue to admin menu(Y/N)?")
elif adinp==7:
    help1()
    print()
    cha=input("Do you want to continue to admin menu(Y/N)?")
    print()
elif adinp==8:
    about()
    print()
    cha=input("Do you want to continue to admin menu(Y/N)?")
    print()
elif adinp==9:
    print()
    cha='n'
else:
    print()
    print('    ***INCORRECT LOGIN DETAILS***')
    print()
    print("    Login Failed, Try Again!!!!!! ")
    print()
elif inp==3:
    cha='y'
    while cha in['Y','y']:

```

```

    help1()
    print()
    cha=input("Please enter any key to return to main menu:")
    print()
elif inp==4:
    cha='y'
    while cha in['Y','y']:
        about()
        print()
        cha=input("Please enter any key to return to main menu:")
        print()
elif inp==5:
    cha='y'
    while cha in['Y','y']:
        connection =
            ms.connect(host='localhost',database='library',user='root',passwd='tiger')
        if connection.is_connected():
            db_Info = connection.get_server_info()
            print("Connected to MySQL Server version ", db_Info)
        else:
            print("Connection Failed")
        print()
        cha=input("Please enter any key to return to main menu:")
        print()
elif inp==6:
    print()
    print("Are you sure?Press any other key to cancel")
    print()
    final=input("Enter N to confirm exit,or else press other key to cancel:")
    if final in['N','n']:
        ch='N'
        print()
        print('-----PROGRAM ENDED,THANK YOU-----')
        print()
        print('*****')
        print('Thank you for using our School Library Management System')
        print('*****')
        print()
        print("(Please execute the program again to use again!!!!)")

```

## 4.2 SCREENSHOTS

WELCOME TO SCHOOL LIBRARY MANAGEMENT SOFTWARE

-----

\*\*\*\*\*MAIN MENU\*\*\*\*\*

- 1.USER/BASIC MODE
- 2.ADMIN MODE
- 3.HELP
- 4.ABOUT
- 5.CHECK MYSQL CONNECTION
- 6.EXIT THE PROGRAM

Enter your desired option from above(1-5):1

WELCOME TO SCHOOL LIBRARY MANAGEMENT SOFTWARE

-----

\*\*\*\*\*USER MENU\*\*\*\*\*

- 1.ISSUE A BOOK
- 2.RETURN A BOOK
- 3.DISPLAY ALL THE BOOKS
- 4.DISPLAY DETAILS OF ISSUED BOOKS
- 5.DISPLAY DETAILS OF AVAILABLE BOOKS
- 6.DISPLAY DETAILS OF STUDENTS
- 7.HELP
- 8.ABOUT
- 9.RETURN TO MAIN MENU

Enter your desired option from above(1-9):1

ISSUE A BOOK FROM LIBRARY.....

\*\*\*\*\*

Enter The ID of The Book to be issued:109

Enter the ID of The Student to whom book is issued:10

THE DETAILS OF THE ISSUING BOOK IS:

('109', 'The Count of Monte Cristo', 'Alexandre Dumas', 1, None, 'AVL')

Book issued successfully.

Do you want to continue to user menu(Y/N)?y

WELCOME TO SCHOOL LIBRARY MANAGEMENT SOFTWARE

-----

\*\*\*\*\*USER MENU\*\*\*\*\*

- 1.ISSUE A BOOK
- 2.RETURN A BOOK
- 3.DISPLAY ALL THE BOOKS
- 4.DISPLAY DETAILS OF ISSUED BOOKS
- 5.DISPLAY DETAILS OF AVAILABLE BOOKS
- 6.DISPLAY DETAILS OF STUDENTS
- 7.HELP
- 8.ABOUT
- 9.RETURN TO MAIN MENU

Enter your desired option from above(1-9):2

RETURN A BOOK TO LIBRARY.....  
\*\*\*\*\*

Enter The ID of The Book to be returned:90  
THE DETAILS OF THE RETURNING BOOK IS:  
( '90', 'Diary of a Young Girl', 'Anne Frank', 0, '670', 'ISD' )  
  
Book Return Command successfully completed....  
  
Do you want to continue to user menu(Y/N)?Y

WELCOME TO SCHOOL LIBRARY MANAGEMENT SOFTWARE  
-----

\*\*\*\*\*USER MENU\*\*\*\*\*

- 1.ISSUE A BOOK
- 2.RETURN A BOOK
- 3.DISPLAY ALL THE BOOKS
- 4.DISPLAY DETAILS OF ISSUED BOOKS
- 5.DISPLAY DETAILS OF AVAILABLE BOOKS
- 6.DISPLAY DETAILS OF STUDENTS
- 7.HELP
- 8.ABOUT
- 9.RETURN TO MAIN MENU

Enter your desired option from above(1-9):3

LIST OF ALL THE BOOKS IN THE LIBRARY  
\*\*\*\*\*

BOOK_ID	Book Name	Auth Name	Qty	St_ID	Status
109	The Count of Monte Cristo	Alexandre Dumas	0	10	ISD
180	Diary of a Wimpy Kid	Jeff Kinney	1	None	AVL
381	Harry Potter	J K Rowling	1	None	AVL
76	The Great Train Journey	Ruskin Bond	2	None	AVL
90	Diary of a Young Girl	Anne Frank	1	None	AVL

Do you want to continue to user menu(Y/N)?Y

WELCOME TO SCHOOL LIBRARY MANAGEMENT SOFTWARE  
-----

\*\*\*\*\*USER MENU\*\*\*\*\*

- 1.ISSUE A BOOK
- 2.RETURN A BOOK
- 3.DISPLAY ALL THE BOOKS
- 4.DISPLAY DETAILS OF ISSUED BOOKS
- 5.DISPLAY DETAILS OF AVAILABLE BOOKS
- 6.DISPLAY DETAILS OF STUDENTS
- 7.HELP
- 8.ABOUT
- 9.RETURN TO MAIN MENU

Enter your desired option from above(1-9):4

LIST OF ISSUED BOOKS FROM LIBRARY  
\*\*\*\*\*

(STUDENT\_ID,BOOK\_ID,BOOK NAME,AUTHOR NAME,QTY,STATUS,STUDENT NAME,CLASS,DIVISION,ROLL NO)  
-----  
( '10', '109', 'The Count of Monte Cristo', 'Alexandre Dumas', 0, 'ISD', 'Ajay Gopal', '12', 'D', '10' )



Do you want to continue to user menu(Y/N)?Y

WELCOME TO SCHOOL LIBRARY MANAGEMENT SOFTWARE

\*\*\*\*\*USER MENU\*\*\*\*\*

- 1.ISSUE A BOOK
- 2.RETURN A BOOK
- 3.DISPLAY ALL THE BOOKS
- 4.DISPLAY DETAILS OF ISSUED BOOKS
- 5.DISPLAY DETAILS OF AVAILABLE BOOKS
- 6.DISPLAY DETAILS OF STUDENTS
- 7.HELP
- 8.ABOUT
- 9.RETURN TO MAIN MENU

Enter your desired option from above(1-9):5

LIST OF CURRENTLY AVAILABLE BOOKS

\*\*\*\*\*

BOOK_ID	Book Name	Auth Name	Qty	St_ID	Status
180	Diary of a Wimpy Kid	Jeff Kinney	1	None	AVL
381	Harry Potter	J K Rowling	1	None	AVL
76	The Great Train Journey	Ruskin Bond	2	None	AVL
90	Diary of a Young Girl	Anne Frank	1	None	AVL

Do you want to continue to user menu(Y/N)?Y

WELCOME TO SCHOOL LIBRARY MANAGEMENT SOFTWARE

\*\*\*\*\*USER MENU\*\*\*\*\*

- 1.ISSUE A BOOK
- 2.RETURN A BOOK
- 3.DISPLAY ALL THE BOOKS
- 4.DISPLAY DETAILS OF ISSUED BOOKS
- 5.DISPLAY DETAILS OF AVAILABLE BOOKS
- 6.DISPLAY DETAILS OF STUDENTS
- 7.HELP
- 8.ABOUT
- 9.RETURN TO MAIN MENU

Enter your desired option from above(1-9):6

LIST OF STUDENT DETAILS

\*\*\*\*\*

STUDENT_ID	Student Name	Class	Division	Roll No
10	Ajay Gopal	12	D	10
670	Poonam Sharma	11	J	24
850	Akshay Singh	10	A	4

Do you want to continue to user menu(Y/N)?Y

WELCOME TO SCHOOL LIBRARY MANAGEMENT SOFTWARE

-----

\*\*\*\*\*USER MENU\*\*\*\*\*

- 1.ISSUE A BOOK
- 2.RETURN A BOOK
- 3.DISPLAY ALL THE BOOKS
- 4.DISPLAY DETAILS OF ISSUED BOOKS
- 5.DISPLAY DETAILS OF AVAILABLE BOOKS
- 6.DISPLAY DETAILS OF STUDENTS
- 7.HELP
- 8.ABOUT
- 9.RETURN TO MAIN MENU

Enter your desired option from above(1-9):7

\*\*\*\*\*LIBRARY MANAGEMENT SOFTWARE\*\*\*\*\*

Version 1.0.0.1

-----HELP AND SUPPORT-----

Thank you for using our Library Management Software

If you are encountering with error messages in the software,  
Please make sure that you:

- 1.Input into the software using suitable characters
- 2.Make sure that your input devices are working
- 3.Make sure that you login with correct credentials

We recommend you to use the program with Windows 7 or Windows 10 with  
Core i3 or i5 having Python 3.8 or above for optimum performance

```
*****
*****          For Help and Support contact          *****
*****          librarymanagementsaps@gmail.com        *****
*****          Or give a Missed call to:              *****
*****          1800-1800-1800                          *****
*****
```

Â©2023-Library Management System

Developed by Class XII-E Saps Anakkal

Do you want to continue to user menu(Y/N)?Y

WELCOME TO SCHOOL LIBRARY MANAGEMENT SOFTWARE

\*\*\*\*\*USER MENU\*\*\*\*\*

- 1.ISSUE A BOOK
- 2.RETURN A BOOK
- 3.DISPLAY ALL THE BOOKS
- 4.DISPLAY DETAILS OF ISSUED BOOKS
- 5.DISPLAY DETAILS OF AVAILABLE BOOKS
- 6.DISPLAY DETAILS OF STUDENTS
- 7.HELP
- 8.ABOUT
- 9.RETURN TO MAIN MENU

Enter your desired option from above(1-9):8

"SCHOOL LIBRARY MANAGEMENT SYSTEM"

\*\*\*\*\*

Version 1.0.0.1

Developed on October 2023

by Students of Group 1, Class XII E-Computer Science Project  
of St.Antony's Public School,Anakkal,Kanjirappally  
as a part of Project Requirement Fulfilment of AISSCE-Class 12  
for the academic year 2023-2024

List of Students contributed to the Project:

- 1.Abhijith Saju
- 2.Rahul Rajesh
- 3.M N Muhammad Farzan
- 4.Amal Aneesh

Special thanks to Mrs.Thanuja Mathew,Our Computer Teacher  
for the valuable suggestions which helped in making our project  
a great success!!

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Do you want to continue to user menu(Y/N)?Y

WELCOME TO SCHOOL LIBRARY MANAGEMENT SOFTWARE

\*\*\*\*\*USER MENU\*\*\*\*\*

- 1.ISSUE A BOOK
- 2.RETURN A BOOK
- 3.DISPLAY ALL THE BOOKS
- 4.DISPLAY DETAILS OF ISSUED BOOKS
- 5.DISPLAY DETAILS OF AVAILABLE BOOKS
- 6.DISPLAY DETAILS OF STUDENTS
- 7.HELP
- 8.ABOUT
- 9.RETURN TO MAIN MENU

Enter your desired option from above(1-9):9

WELCOME TO SCHOOL LIBRARY MANAGEMENT SOFTWARE

\*\*\*\*\*MAIN MENU\*\*\*\*\*

- 1.USER/BASIC MODE
- 2.ADMIN MODE
- 3.HELP
- 4.ABOUT
- 5.CHECK MYSQL CONNECTION
- 6.EXIT THE PROGRAM

Enter your desired option from above(1-5):2

WELCOME TO SCHOOL LIBRARY MANAGEMENT SOFTWARE

\*\*\*\*\*WELCOME TO LOGIN MENU,PLEASE LOGIN\*\*\*\*\*

Enter the user name:user

Enter the password:1234

\*\*\*\*\*LOGIN SUCCESS!\*\*\*\*\*

WELCOME TO SCHOOL LIBRARY MANAGEMENT SOFTWARE

\*\*\*\*\*ADMIN MENU\*\*\*\*\*

- 1.ADD A BOOK
- 2.REMOVE A BOOK
- 3.EDIT BOOK DETAILS
- 4.ADD A STUDENT
- 5.REMOVE A STUDENT
- 6.EDIT STUDENT DETAILS
- 7.HELP
- 8.ABOUT
- 9.RETURN TO MAIN MENU

Enter your desired option from above(1-9):1

ADDING BOOK DETAILS.....

\*\*\*\*\*

Enter Book ID for the book to be added:381

Enter Book Name for the book to be added:Harry Potter

Enter Author for the book to be added:J K Rowling

Enter quantity of the respective book:1

Book Details is successfully added...

Do you want to continue to admin menu(Y/N)?Y

WELCOME TO SCHOOL LIBRARY MANAGEMENT SOFTWARE

\*\*\*\*\*ADMIN MENU\*\*\*\*\*

- 1.ADD A BOOK
- 2.REMOVE A BOOK
- 3.EDIT BOOK DETAILS
- 4.ADD A STUDENT
- 5.REMOVE A STUDENT
- 6.EDIT STUDENT DETAILS
- 7.HELP
- 8.ABOUT
- 9.RETURN TO MAIN MENU

Enter your desired option from above(1-9):2

.....REMOVING BOOK DATA.....

\*\*\*\*\*

Enter Book ID to be removed:380

THE DETAILS OF THE BOOK IS:

(BOOK\_ID, BOOK\_NAME, AUTHOR\_NAME, QUANTITY,ST\_ID,STATUS)  
('380', 'The Alchemist', 'Paulo Coelho', 1, None, 'AVL')

Book Data Successfully Deleted

Do you want to continue to admin menu(Y/N)?Y

WELCOME TO SCHOOL LIBRARY MANAGEMENT SOFTWARE

\*\*\*\*\*ADMIN MENU\*\*\*\*\*

- 1.ADD A BOOK
- 2.REMOVE A BOOK
- 3.EDIT BOOK DETAILS
- 4.ADD A STUDENT
- 5.REMOVE A STUDENT
- 6.EDIT STUDENT DETAILS
- 7.HELP
- 8.ABOUT
- 9.RETURN TO MAIN MENU

Enter your desired option from above(1-9):3

.....UPDATE BOOK DETAILS.....

\*\*\*\*\*

WHAT INFORMATION DO YOU WANT TO UPDATE?

- 1.BOOK NAME
- 2.AUTHOR NAME
- 3.QUANTITY

Select an option from the above menu:1

.....EDITING BOOK NAME.....  
\*\*\*\*\*

Enter The ID of The Book to be Edited:76

THE DETAILS OF THE BOOK IS:

('76', 'Train Ride', 'Amy Jane Eastwood', 1, None, 'AVL')

Enter the new name of the Book:The Great Train Journey

BOOK NAME IS SUCCESSFULLY UPDATED

Do you want to continue to admin menu(Y/N)?Y

WELCOME TO SCHOOL LIBRARY MANAGEMENT SOFTWARE

-----

\*\*\*\*\*ADMIN MENU\*\*\*\*\*

- 1.ADD A BOOK
- 2.REMOVE A BOOK
- 3.EDIT BOOK DETAILS
- 4.ADD A STUDENT
- 5.REMOVE A STUDENT
- 6.EDIT STUDENT DETAILS
- 7.HELP
- 8.ABOUT
- 9.RETURN TO MAIN MENU

Enter your desired option from above(1-9):3

.....UPDATE BOOK DETAILS.....  
\*\*\*\*\*

WHAT INFORMATION DO YOU WANT TO UPDATE?

- 1.BOOK NAME
- 2.AUTHOR NAME
- 3.QUANTITY

Select an option from the above menu:2

.....EDITING AUTHOR NAME.....  
\*\*\*\*\*

Enter The ID of The Book to be Edited:76

THE DETAILS OF THE BOOK IS:

('76', 'The Great Train Journey', 'Amy Jane Eastwood', 1, None, 'AVL')

Enter the new Author name of the Book:Ruskin Bond

AUTHOR NAME IS SUCCESSFULLY CHANGED

Do you want to continue to admin menu(Y/N)?Y

WELCOME TO SCHOOL LIBRARY MANAGEMENT SOFTWARE

\*\*\*\*\*ADMIN MENU\*\*\*\*\*

- 1.ADD A BOOK
- 2.REMOVE A BOOK
- 3.EDIT BOOK DETAILS
- 4.ADD A STUDENT
- 5.REMOVE A STUDENT
- 6.EDIT STUDENT DETAILS
- 7.HELP
- 8.ABOUT
- 9.RETURN TO MAIN MENU

Enter your desired option from above(1-9):3

.....UPDATE BOOK DETAILS.....  
\*\*\*\*\*

WHAT INFORMATION DO YOU WANT TO UPDATE?

- 1.BOOK NAME
- 2.AUTHOR NAME
- 3.QUANTITY

Select an option from the above menu:3

.....EDITING BOOK QUANTITY.....  
\*\*\*\*\*

Enter The ID of The Book to be Edited:76

THE DETAILS OF THE BOOK IS:

('76', 'The Great Train Journey', 'Ruskin Bond', 1, None, 'AVL')

Enter the Quantity of the Book:2

QUANTITY IS SUCCESSFULLY UPDATED

Do you want to continue to admin menu(Y/N)?Y

WELCOME TO SCHOOL LIBRARY MANAGEMENT SOFTWARE

\*\*\*\*\*ADMIN MENU\*\*\*\*\*

- 1.ADD A BOOK
- 2.REMOVE A BOOK
- 3.EDIT BOOK DETAILS
- 4.ADD A STUDENT
- 5.REMOVE A STUDENT
- 6.EDIT STUDENT DETAILS
- 7.HELP
- 8.ABOUT
- 9.RETURN TO MAIN MENU

Enter your desired option from above(1-9):4

ADDING STUDENT DETAILS.....

\*\*\*\*\*

Enter Student ID to be added:850

Enter the Name of the Student:Akshay Singh

Enter Class of the Student:10

Enter Division of the Student:A

Enter Roll Number of the Student:4

Student Details is successfully added...

Do you want to continue to admin menu(Y/N)?y

WELCOME TO SCHOOL LIBRARY MANAGEMENT SOFTWARE

-----

\*\*\*\*\*ADMIN MENU\*\*\*\*\*

- 1.ADD A BOOK
- 2.REMOVE A BOOK
- 3.EDIT BOOK DETAILS
- 4.ADD A STUDENT
- 5.REMOVE A STUDENT
- 6.EDIT STUDENT DETAILS
- 7.HELP
- 8.ABOUT
- 9.RETURN TO MAIN MENU

Enter your desired option from above(1-9):5

REMOVING STUDENT DATA.....

\*\*\*\*\*

Enter Student ID to be removed:89

THE DETAILS OF THE STUDENT IS:

('89', 'Ramdas K', '12', 'D', '11')

Student Data Successfully Deleted

Do you want to continue to admin menu(Y/N)?Y

WELCOME TO SCHOOL LIBRARY MANAGEMENT SOFTWARE

-----

\*\*\*\*\*ADMIN MENU\*\*\*\*\*

- 1.ADD A BOOK
- 2.REMOVE A BOOK
- 3.EDIT BOOK DETAILS
- 4.ADD A STUDENT
- 5.REMOVE A STUDENT
- 6.EDIT STUDENT DETAILS
- 7.HELP
- 8.ABOUT
- 9.RETURN TO MAIN MENU

Enter your desired option from above(1-9):6



.....UPDATE STUDENT DETAILS.....  
\*\*\*\*\*

WHAT INFORMATION DO YOU WANT TO UPDATE?

- 1.STUDENT NAME
- 2.CLASS
- 3.DIVISION
- 4.ROLL NO

Select an option from the above menu:1

.....UPDATING STUDENT NAME.....  
\*\*\*\*\*

Enter The ID of The Student to be Updated:670

THE DETAILS OF THE STUDENT IS:

('670', 'Ravi Sharma', '10', 'F', '17')

Enter the new name of the Student:Poonam Sharma

STUDENT NAME IS SUCCESSFULLY UPDATED!

Do you want to continue to admin menu(Y/N)?Y

WELCOME TO SCHOOL LIBRARY MANAGEMENT SOFTWARE

-----

\*\*\*\*\*ADMIN MENU\*\*\*\*\*

- 1.ADD A BOOK
- 2.REMOVE A BOOK
- 3.EDIT BOOK DETAILS
- 4.ADD A STUDENT
- 5.REMOVE A STUDENT
- 6.EDIT STUDENT DETAILS
- 7.HELP
- 8.ABOUT
- 9.RETURN TO MAIN MENU

Enter your desired option from above(1-9):6

.....UPDATE STUDENT DETAILS.....  
\*\*\*\*\*

WHAT INFORMATION DO YOU WANT TO UPDATE?

- 1.STUDENT NAME
- 2.CLASS
- 3.DIVISION
- 4.ROLL NO

Select an option from the above menu:2

.....UPDATING STUDENT CLASS.....  
\*\*\*\*\*

Enter The ID of The Student to be Updated:670

THE DETAILS OF THE STUDENT IS:

('670', 'Poonam Sharma', '10', 'F', '17')

Enter the new CLASS of the Student:11

STUDENT CLASS IS SUCCESSFULLY UPDATED

Do you want to continue to admin menu(Y/N)?Y

WELCOME TO SCHOOL LIBRARY MANAGEMENT SOFTWARE

\*\*\*\*\*ADMIN MENU\*\*\*\*\*

- 1.ADD A BOOK
- 2.REMOVE A BOOK
- 3.EDIT BOOK DETAILS
- 4.ADD A STUDENT
- 5.REMOVE A STUDENT
- 6.EDIT STUDENT DETAILS
- 7.HELP
- 8.ABOUT
- 9.RETURN TO MAIN MENU

Enter your desired option from above(1-9):6

.....UPDATE STUDENT DETAILS.....  
\*\*\*\*\*

WHAT INFORMATION DO YOU WANT TO UPDATE?

- 1.STUDENT NAME
- 2.CLASS
- 3.DIVISION
- 4.ROLL NO

Select an option from the above menu:3

.....UPDATING STUDENT DIVISION.....  
\*\*\*\*\*

Enter The ID of The Student to be Updated:670

THE DETAILS OF THE STUDENT IS:

('670', 'Poonam Sharma', '11', 'F', '17')

Enter the new division of the Student:J

STUDENT DIVISION IS SUCCESSFULLY UPDATED

Do you want to continue to admin menu(Y/N)?Y

WELCOME TO SCHOOL LIBRARY MANAGEMENT SOFTWARE

\*\*\*\*\*ADMIN MENU\*\*\*\*\*

- 1.ADD A BOOK
- 2.REMOVE A BOOK
- 3.EDIT BOOK DETAILS
- 4.ADD A STUDENT
- 5.REMOVE A STUDENT
- 6.EDIT STUDENT DETAILS
- 7.HELP
- 8.ABOUT
- 9.RETURN TO MAIN MENU

Enter your desired option from above(1-9):6  
.....UPDATE STUDENT DETAILS.....  
\*\*\*\*\*

WHAT INFORMATION DO YOU WANT TO UPDATE?  
1.STUDENT NAME  
2.CLASS  
3.DIVISION  
4.ROLL NO

Select an option from the above menu:4

.....UPDATING STUDENT ROLL NUMBER.....  
\*\*\*\*\*

Enter The ID of The Student to be Updated:670  
THE DETAILS OF THE STUDENT IS:  
( '670', 'Poonam Sharma', '11', 'J', '29' )

Enter the new roll number of the Student:24

ROLL NUMBER IS SUCCESSFULLY UPDATED

Do you want to continue to admin menu(Y/N)?Y

WELCOME TO SCHOOL LIBRARY MANAGEMENT SOFTWARE  
-----

\*\*\*\*\*ADMIN MENU\*\*\*\*\*

- 1.ADD A BOOK
- 2.REMOVE A BOOK
- 3.EDIT BOOK DETAILS
- 4.ADD A STUDENT
- 5.REMOVE A STUDENT
- 6.EDIT STUDENT DETAILS
- 7.HELP
- 8.ABOUT
- 9.RETURN TO MAIN MENU

Enter your desired option from above(1-9):9

WELCOME TO SCHOOL LIBRARY MANAGEMENT SOFTWARE  
-----

\*\*\*\*\*MAIN MENU\*\*\*\*\*

- 1.USER/BASIC MODE
- 2.ADMIN MODE
- 3.HELP
- 4.ABOUT
- 5.CHECK MYSQL CONNECTION
- 6.EXIT THE PROGRAM

Enter your desired option from above(1-5):5  
Connected to MySQL Server version 8.0.33

Please enter any key to return to main menu:

WELCOME TO SCHOOL LIBRARY MANAGEMENT SOFTWARE

\*\*\*\*\*MAIN MENU\*\*\*\*\*

- 1.USER/BASIC MODE
- 2.ADMIN MODE
- 3.HELP
- 4.ABOUT
- 5.CHECK MYSQL CONNECTION
- 6.EXIT THE PROGRAM

Enter your desired option from above(1-5):6

Are you sure?Press any other key to cancel

Enter N to confirm exit,or else press other key to cancel:N

-----PROGRAM ENDED,THANK YOU-----

\*\*\*\*\*  
Thank you for using our School Library Management System  
\*\*\*\*\*

(Please execute the program again to use again!!!!)

## **5. SYSTEM TESTING**

Software Testing is an empirical investigation conducted to provide stakeholders with information about the quality of the product, with respect to the context in which it is intended to operate. Software Testing also provides an objective, independent view of the software to allow the management to appreciate and understand the risks during the implementation of the software.

The aim of the system testing process was to determine all defects in our project. The program was subjected to a series of trial operations with test inputs and various observations were made and based on these observations, changes were made and again tested for better results. Our Project went through two levels of testing

1. Unit testing
2. Integration testing

### **5.1 UNIT TESTING**

Unit testing was undertaken when a module has been created and successfully reviewed. In order to test a single module, we need to provide a complete working environment.

### **5.2 INTEGRATION TESTING**

After integrating the entire modules developed, we performed various checks by providing different set of test input. The primary objective is to test all the modules in order to ensure that no errors are occurring when one module invokes the other module.

## **6. CONCLUSION**

The School Library Management System Software is found to be working efficiently. The software appears very flexible since it is menu driven with user-friendly screens. No Formal programming knowledge is required for the user. Also, the user is not burdened with data storing and data retrieval procedures as both are done internally. In conclusion, a well-implemented School Library Management System is indispensable for enhancing the efficiency, accessibility, and overall functionality of a school library as it streamlines day to day operations in a library.

## **7. REFERENCES**

- 1) Computer Science with Python By Sumita Arora
- 2) Python The Complete Reference By Martin C Brown
- 3) Programming & Problem Solving Through Python By Sathish Jain & Shashi Singh
- 4) Python for Beginners By Prof. Rahul E. Borate
- 5) Computer Science with Python Language Made simple By Sathish Jain & Shashi Singh