

LIBRARY MANAGEMENT SYSTEM

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PROBLEM DEFINITION

- ❑ A **library management software** is a project that manages and stores books information electronically according to students needs. The system helps both students and library manager to keep a constant track of all the books available in the library.
- ❑ It allows both the **admin** and the **student** to search for the desired book. It becomes necessary for colleges to keep a continuous check on the books issued and returned and even calculate fine. This task if carried out manually will be tedious and includes chances of mistakes
- ❑ These **errors are avoided** by allowing the system to keep track of information such as issue date, last date to return the book and even fine information and thus there is no need to keep manual track of this information which thereby avoids chances of mistakes.
- ❑ Thus this system **reduces manual work** to a great extent allows smooth flow of library activities by removing chances of errors in the details.
- ❑ The objective of this project is to develop a library database system in which a user can supply a specific book or keyword(s) within a book given a continuously expanding library. **Efficiency** requires that the processing time should stay relatively the same as the library content increases.
- ❑ This program is interactive and convenient to use for the user. The user can make the desired choice and the output will be executed accordingly.

The user is allowed to do the following things:

- i. **Register an account** to get a unique Customer ID
 - ii. **Search for a desired book** in accordance to the Author Name, Book name, Genre, language, edition and price.
 - iii. **Check the availability** of the book and lend or buy the book.
 - iv. **Return a book**; if late to return, then fine has to be paid.
- ❑ The manual system of managing library has now become little slow and inefficient. The chances of making an error is more and it is also time consuming to write records in a register manually. As the size of the library increases, it almost becomes impossible to manually handle all the records.

IMPACT AND BENEFITS:

- This tool provides **increased efficiency** to librarians and library customers alike.
- This project allows a user to **fluidly build a customised library**. They can continue to add or remove content as desired over time without limitations.
- The query function will allow the users to access desired books and content in the **most efficient manner** possible.

BASIC PROBLEM ANALYSIS

- This application will be done with the help of Python interface with MySQL.
- The objective of this program is to allow the user to access the library database system and lend books in the most convenient way.
- It also provides the admin of the library to modify the database and manage all the books and accounts of each customer.
- The program first allows the user to choose between Admin and Customer.

If the user is an Admin:

1. He/she will be asked for the **admin id and password**.
2. If the password is correct, then the user will be allowed access to the complete library database.
3. The admin will now have the option to **DELETE, MODIFY or ADD new records** into the database.
4. The admin can also check the customer record and find out how many books are currently lent and how many customers are late to return the book.
5. The admin can also **add discount** to the price of the books.
6. The admin can also **check the history** of the customer.
7. The admin can check **how many books are borrowed** on that particular day and how often a particular book is being borrowed.

8. The admin can also check the **customer demand** for a particular book.

9. The admin can check the list of all books to be returned anytime and he/she can also access the **list of damaged or lost books**.

If the user is a customer:

He/she will be asked for **customer id**. If the user doesn't already have a customer id, he/she will be asked to register the mobile number to obtain a unique customer id. Once the user has a customer id, he/she can login.

1. He/she can **search for the required books**.
2. He/she can use certain conditions to search as well such as Author Name, Genre, Edition, price etc.
3. The customer has the choice to **buy or lend** the book from the library.
4. The user will also be shown some other **suggestions** based on his/her search.
5. He/she will be given the **date to return** the book if it is lent.

If the user is a customer and he/she wants to return a lent book:

1. He/she can check **whether the return date is due or not**.
2. If the return date is due, then the customer will be **asked to pay fine**.
3. If return date is not due then the book will be returned and the database will be updated.

HARDWARE AND SOFTWARE REQUIREMENT

- OS - Microsoft Windows 10
- System type- X64-64bit based processor
- Processor- Intel® core™ i5-6006U
- CPU - 2.00 GHz
- Memory (RAM) - 4.00GB
- Front end - Python v3.8.2:7b3ab59, MSCv.1916 64-bit
- Back End - MySQL Version 8.0

FUTURE ENHANCEMENTS

- Incorporating an interface using tkinter module to enhance the user experience.
- Creating a webpage for the library so that the program can be accessed remotely.
- Adding a “FORGOT PASSWORD” option to allow users to change their password if required after verification.
- Inserting job description, salary and date of joining to employees table to accommodate future growth.
- Allowing users to search for books by author name or book genre and apply various filters.
- Linking the users email ID, so that timely reminders can be sent to ensure books are returned without delay.
- Including options to allow multiple copies of a particular book to be available in the database.
- Addition of the option to buy a book, in case a user loses a book or wishes to purchase it.
- Allowing users to borrow multiple books and borrow books for more than the specified period with confirmation from the admin.

SOURCE CODE

❑ TABLE CREATION

```
1 • create database LIBRARY_MANAGEMENT;
2 • create TABLE Books(
3     Book_Id varchar(20) primary key ,
4     Book_Name varchar(50) ,
5     Price float ,
6     Author varchar(50),
7     Availability varchar(50) );

use library_management;

create table Admins(
    Admin_Id varchar(20) primary key,
    Mobile_No varchar(20),
    Admin_Name varchar(30) );

create table Users(
    User_Id varchar(20) primary key,
    Mobile_No varchar(20) ,
    User_Name varchar(20),
    Book_Borrowed varchar(20),
    Due_Date date default Null );
```

❑ TABLES

1. BOOKS

| Book_Id | Book_Name | Price | Author | Availability |
|---------|----------------------------|-------|-----------------------------|--------------|
| A0001 | Adventures of Tom Sawyer | 50 | Mark Twain | Available |
| A0002 | Agni Veena | 70 | Kazi Nazrul Islam | Available |
| A0003 | Animal Farm | 80 | George Orwell | Unavailable |
| A0004 | Ben Hur | 90 | Lewis Wallace | Available |
| A0005 | Baburnama | 50 | Babur | Available |
| A0006 | Arthashastra | 40 | Kautilya | Available |
| A0007 | Anand Math | 60 | Bankimchandra Chattopadhyay | Available |
| A0008 | The Vicar of Wakefield | 120 | Oliver Goldsmith | Available |
| A0009 | Time Machine | 80 | H.G.Wells | Available |
| A0010 | A passage to India | 110 | E.M.Foster | Available |
| A0011 | Far from the Madding Crowd | 100 | Thomas Hardy | Available |
| A0012 | The Merchant of Venice | 90 | Shakespeare | Available |
| A0013 | Antony and Cleopatra | 70 | Shakespeare | Available |
| A0014 | Geetanjali | 40 | Rabindranath Tagore | Available |
| A0015 | Utopia | 80 | Sir Thomas Moor | Available |
| A0016 | Crime and Punishment | 80 | Dostoevsky | Available |
| A0017 | Chitra | 50 | Rabindranath Tagore | Available |
| A0018 | Bisarjan | 40 | Rabindranath Tagore | Available |
| A0019 | Divine Comedy | 80 | Dante | Available |
| A0020 | Ancient Mariner | 100 | Coleridge | Unavailable |
| A0021 | Arms and the Man | 40 | G.B.Shaw | Available |

| | | | | |
|-------|-------------------------------|----|-------------------------|-----------|
| A0022 | Around the World in Eight... | 60 | Jules Verne | Available |
| A0023 | Pride and Prejudice | 30 | Jane Austen | Available |
| A0024 | A Dangerous Place | 40 | D.P.Moynihan | Available |
| A0025 | The Lady of the Last Minstrel | 50 | Sir Walter Scott | Available |
| A0026 | Raghuvamsa | 30 | Kalidasa | Available |
| A0027 | Shakuntala | 40 | Kalidasa | Available |
| A0028 | Discovery of India | 50 | Pandit jawaharlal Nehru | Available |
| A0029 | My Experiments with Truth | 50 | Mahatma Gandhi | Available |
| A0030 | The Wild Iris | 30 | Louis Gluck | Available |
| B0001 | Fahrenheit 431 | 50 | Ray Bradbury | Available |
| B0002 | The Paying Guests | 50 | Sarah Waters | Available |
| B0003 | Jane Eyre | 60 | Charlotte Bronte | Available |
| B0004 | Watership Down | 40 | Richard Adams | Available |
| B0005 | Lord of the Flies | 50 | William Golding | Available |
| B0006 | A Town Like Alice | 30 | Nevil Shute | Available |
| B0007 | The Vegetarian | 50 | Han Kang | Available |
| B0008 | The Adventures of Huckle... | 60 | Mark Twain | Available |
| B0009 | The Alchemist | 50 | Paulo Coelho | Available |
| B0010 | The Colour Purple | 30 | Alice Walker | Available |
| B0011 | Frankenstein | 60 | Mary Shelley | Available |
| B0013 | All the Light We Cannot See | 70 | Anthony Doerr | Available |

| | | | | |
|-------|-------------------------------|----|-------------------|-------------|
| B0014 | The Handmaid's Tale | 40 | Margaret Atwood | Available |
| B0015 | Animal Farm | 30 | George Orwell | Unavailable |
| B0016 | Atonement | 50 | Ian McEwan | Available |
| B0017 | Barney's Version | 30 | Mordecai Richler | Available |
| B0018 | The Beetle | 40 | Lewis Carroll | Available |
| B0019 | The Bell Jar | 30 | Sylvia Plath | Available |
| B0020 | The Book Thief | 50 | Markus Zusak | Available |
| B0021 | The Giver | 40 | Lois Lowry | Available |
| B0022 | Brave New World | 40 | Aldous Huxley | Available |
| B0023 | Breakfast of Champions | 30 | Kurt Vonnegut | Available |
| B0024 | Catch-22 | 40 | Joseph Heller | Available |
| B0025 | Charlotte's Web | 30 | E.B.White | Available |
| B0026 | City of Theives | 30 | David Benioff | Available |
| B0027 | Clockwork Orange | 30 | Anthony Burgess | Available |
| B0028 | Disgrace | 20 | J.M.Coetzee | Available |
| B0029 | Dracula | 30 | Bram Stoker | Available |
| B0030 | The Girl With the Dragon T... | 50 | Stieg Larsson | Available |
| B0031 | The God of Small Things | 30 | Arundhati Roy | Available |
| B0032 | Gone With The Wind | 50 | Margaret Mitchell | Available |
| B0033 | Grapes of Wrath | 40 | John Steinbeck | Available |
| B0034 | Great Expectations | 30 | Charles Dickens | Available |

| | | | | |
|-------|--------------------------------|----|--------------------------|-----------|
| B0035 | The Great Gatsby | 60 | F. Scott Fitzgerald | Available |
| B0036 | Ham on Rye | 30 | Charles Bukowski | Available |
| B0037 | The Help | 30 | Kathryn Stockett | Available |
| B0038 | The Hitchiker's Guide to th... | 60 | Douglas Adams | Available |
| B0039 | Invisible Man | 80 | Ralph Ellison | Available |
| B0040 | The Kite Runner | 40 | Khaled Hosseini | Available |
| B0041 | Les Miserables | 80 | Victor Hugo | Available |
| B0042 | Life of Pi | 50 | Yann Martel | Available |
| B0043 | The Little Prince | 40 | Antoine de Saint-Exupery | Available |
| B0044 | Maus | 50 | Art Spiegelman | Available |
| B0045 | Middlemarch | 30 | George Eliot | Available |
| B0046 | Midnight's Children | 50 | Salman Rushdie | Available |
| B0047 | Moby Dick | 60 | Herman Melville | Available |
| B0048 | Ulysses | 30 | James Joyce | Available |
| B0049 | Native Son | 30 | Richard Wright | Available |
| B0050 | North and South | 50 | Elizabeth Gaskell | Available |
| B0051 | Of Nice and Men | 30 | John Steinbeck | Available |
| B0052 | The Old Man and the Sea | 40 | Ernest Hemingway | Available |
| B0053 | Pride and Prejudice | 40 | Jane Austen | Available |
| B0054 | The Road | 50 | Cormac McCarthy | Available |
| B0055 | The Shining | 80 | Stephen King | Available |

| | | | | |
|-------|-------------------------------|-----|-------------------------|-----------|
| B0056 | 1984 | 50 | George Orwell | Available |
| B0057 | The Sound and the Fury | 50 | William Faulkner | Available |
| B0058 | The Giving Tree | 40 | Shel Silverstein | Available |
| B0059 | Things Fall Apart | 30 | Chinua Achebe | Available |
| B0060 | To Kill A Mockingbird | 60 | Harper Lee | Available |
| B0061 | The Trial | 50 | Franz Kafka | Available |
| B0062 | Tropic of Cancer | 40 | Henry Miller | Available |
| B0063 | War and Peace | 30 | Leo Tolstoy | Available |
| B0064 | The Secret Garden | 20 | Frances Hodgson Burnett | Available |
| B0065 | Untamed | 40 | Glennon Doyle | Available |
| B0066 | 5 AM Club | 50 | Robin Sharma | Available |
| B0067 | Born a Crime | 60 | Trevor Noah | Available |
| B0068 | The Courage to be Disliked | 40 | Fumitake Koga | Available |
| C0001 | Harry Potter and the Sorc... | 100 | J.K.Rowling | Available |
| C0002 | Harry Potter and the Cha... | 100 | J.K.Rowling | Available |
| C0003 | Harry Potter and the Priso... | 100 | J.K.Rowling | Available |
| C0004 | Harry Potter and the Gobl... | 120 | J.K.Rowling | Available |
| C0005 | Harry Potter and the Orde... | 120 | J.K.Rowling | Available |
| C0006 | Harry Potter and the Half ... | 120 | J.K.Rowling | Available |
| C0007 | Harry Potter and the Deat... | 150 | J.K.Rowling | Available |
| C0008 | Harry Potter and the Curs... | 120 | J.K.Rowling | Available |
| C0009 | The Hunger Games | 100 | Suzanne Collins | Available |
| C0010 | Catching Fire | 100 | Suzanne Collins | Available |
| C0011 | Mockingjay | 100 | Suzanne Collins | Available |
| C0012 | The Ballad of Songbirds an... | 120 | Suzanne Collins | Available |
| C0013 | The Fault in Our Stars | 120 | John Green | Available |
| C0014 | Paper Towns | 100 | John Green | Available |
| C0015 | The Hobbit | 120 | J.R.R.Tolkien | Available |
| C0016 | The Lord of the Rings | 250 | J.R.R.Tolkien | Available |
| C0017 | Looking for Alaska | 100 | John Green | Available |
| C0018 | Divergent | 100 | Veronica Roth | Available |
| C0019 | Insurgent | 100 | Veronica Roth | Available |
| C0020 | Alliegant | 100 | Veronica Roth | Available |
| C0021 | Thirteen Reasons Why | 100 | Jay Asher | Available |
| C0022 | Twilight | 80 | Stephanie Meyer | Available |
| C0023 | New Moon | 80 | Stephanie Meyer | Available |
| C0024 | Eclipse | 80 | Stephanie Meyer | Available |
| C0025 | Midnight Sun | 80 | Stephanie Meyer | Available |
| C0026 | Percy Jackson and the Lig... | 100 | Rick Riordan | Available |
| C0027 | Percy Jackson and the Se... | 100 | Rick Riordan | Available |
| C0028 | Percy Jackson and the Tit... | 100 | Rick Riordan | Available |
| C0029 | Percy Jackson and the Bat... | 100 | Rick Riordan | Available |
| C0030 | Percy Jackson and the Las... | 100 | Rick Riordan | Available |
| C0031 | The Adventurs of Sherlock... | 80 | Arthur Conan Doyle | Available |
| C0032 | Dune | 120 | Frank Herbert | Available |
| C0033 | Dune Messiah | 100 | Frank Herbert | Available |
| C0034 | Children of Dune | 100 | Frank Herbert | Available |
| C0035 | God Emperor of Dune | 100 | Frank Herbert | Available |
| C0036 | Heretics of Dune | 100 | Frank Herbert | Available |
| C0037 | Chapter House Dune | 100 | Frank Herbert | Available |
| C0038 | Kane and Abel | 70 | Jeffrey Archer | Available |
| C0039 | Only Time Will Tell | 100 | Jeffrey Archer | Available |
| C0040 | The Sins of the Father | 100 | Jeffrey Archer | Available |
| C0041 | Cometh The Hour | 80 | Jeffrey Archer | Available |
| C0042 | The Prodigal Daughter | 80 | Jeffrey Archer | Available |
| C0043 | The Da Vinci Code | 100 | Dan Brown | Available |
| C0044 | Angels and Demons | 100 | Dan Brown | Available |
| C0045 | Inferno | 100 | Dan Brown | Available |
| C0046 | The Lost Symbol | 100 | Dan Brown | Available |
| C0047 | Digital Fortress | 100 | Dan Brown | Available |

2. ADMINS

| Admin_Id | Mobile_No | Admin_Name |
|----------|------------|------------|
| A001 | 9874646323 | SAMPLE1 |
| A002 | 9876765654 | SAMPLE2 |
| A003 | 9383999293 | SAMPLE3 |
| A004 | 8994093849 | SAMPLE4 |
| A005 | 9488849304 | SAMPLE5 |

3. USERS

| User_Id | Mobile_No | User_Name | Book_Borrowed | Due_Date |
|---------|------------|----------------|---------------|------------|
| A0001 | 9833244223 | Varun Kumar | A0003 | 2021-09-02 |
| A0002 | 9899928832 | Saiyam Jain | A0020 | 2022-03-06 |
| A0003 | 9923899200 | Bharat R | None | 2022-03-06 |
| A0004 | 9930488554 | Hari Krishnan | None | NULL |
| A0005 | 9038573992 | Aditya S | None | 2021-05-01 |
| A0006 | 9284889390 | Jamal K | None | 2021-05-01 |
| A0007 | 9384999093 | Sejal Babel | None | 2021-05-01 |
| A0008 | 9899382001 | Mayur S | None | 2021-05-01 |
| A0009 | 9383929012 | Priyanka R | None | 2021-05-01 |
| A0010 | 8839020394 | Gina Chopra | None | 2021-05-01 |
| A0011 | 8392394433 | Vishal Menda | None | 2021-05-05 |
| A0012 | 9389308434 | Vijay Shekar | None | 2021-05-05 |
| A0013 | 9382028000 | Narendra Joshi | None | 2021-05-05 |
| A0014 | 8990392032 | Jitendra Kumar | None | 2021-05-05 |
| A0015 | 9009309489 | Vaibhav Bha... | None | 2021-05-05 |
| J233 | 9876543210 | Rajkumar Sh... | None | NULL |

❏ PYTHON CODE

```
#LIBRARY MANAGEMENT SYSTEM

import mysql.connector as sqltor
mycon = sqltor.connect(host = "localhost" , user = "root" , passwd = "flitjee@40625" , database = "library_management")
import random
import sys
import time

alpha = ['A', 'B', 'C', 'D', 'E', 'F', 'G', 'H', 'I', 'J', 'K', 'L', 'M', 'N', 'O', 'P', 'Q', 'R', 'S', 'T', 'U', 'V', 'W', 'X', 'Y', 'Z']

def CUST_LR():
    ch=int(input("Press 1 if you are a member or press 2 if you wish to register yourself ;"))
    if ch==1:
        CUST_LOGIN()
    elif ch==2:
        CUST_REG()

def CUST_LOGIN():
    user_id = input("Please Enter your User ID : ")
    passwd = input("Please Enter your Password : ")
    print()
    cursor2 = mycon.cursor()
    cursor2.execute("select User_Id , Mobile_No from users;")
    data1 = cursor2.fetchall()

    t = (user_id , passwd)

    if t in data1:
        print("LOGIN SUCCESSFUL!")
        time.sleep(2)
        CUST_MENU()
    else:
        print("LOGIN UNSUCCESSFUL! PLEASE TRY AGAIN! \n")
        time.sleep(2)
        CUST_LOGIN()

def CUST_REG():
    print("LET US REGISTER YOUR ACCOUNT INTO OUR DATABASE!")
    print()

    cursor = mycon.cursor()
    cursor.execute("select User_Id from users")
    uid_data = cursor.fetchall()

    def USER_ID_CHECK():

        #writing new user_id
        r_alpha = alpha[random.randint(1,26)]
        r_no = random.randint(1,9999)
        dummy = str(r_alpha) + str(r_no)

        if dummy in uid_data:
            USER_ID_CHECK()
        else:
            user_id = dummy

    m_no = input("Enter your Mobile Number : ")
    print()

    u_name = input("Enter your Name : ")
    print()
    book_borrowed = "None"

    #INSERTING RECORD IN MYSQL
    cursor1 = mycon.cursor()
    query1 = "insert into users (User_Id , Mobile_No , User_Name , Book_Borrowed) values(%,%,%,%s)"
    t = (user_id , m_no , u_name , book_borrowed)
    cursor1.execute(query1, t)
    mycon.commit()
    print("CONGRAGULATIONS! Your account has been successfully registered!")
    print()
    print("Your User ID is " , user_id , "and your password is " , m_no )
    print()
    print("Now you will be taken back to the LOGIN PAGE! Thank You! \n")
    time.sleep(2)
    print()
    CUST_LOGIN()

    USER_ID_CHECK()

def CUST_MENU():
    print("Welcome to NSSF Library".center(89 , '*'))
    print('1. Search for books to borrow'.center(155))
    print("\n")
    print('2. Return books'.center(155))
    print("\n")
    print('3. Check due date and fine'.center(155))
    print("\n")
```

```
print('4. Logout of website'.center(155))
ch2=int(input("Enter your choice :"))
print()
```

```
if ch2==1:
    SEARCH_BOOK()
elif ch2==2:
    RETURN_BOOK()
elif ch2==3:
    CHECK_DUE()
elif ch2==4:
    LOGOUT()
```

```
def SEARCH_BOOK():
```

```
    cur = mycon.cursor()
    cur.execute("Select Book_Id , Book_Name, Price from books WHERE availability='Available';")
```

```
def GET_BOOK():
```

```
    data = cur.fetchmany(20)
    for i in data:
        print(i)
    print()
    ch3=(input('Do you want to borrow any of the above books ? Enter y/n '))
    print()
    if ch3.lower()=="y":
        data2=cur.fetchall()
        BORROW_BOOK()
```

```
    elif ch3.lower()=="n":
        x=input("Do you want to see some more books? (y/n)").lower()
        print()
        if x=="y":
            GET_BOOK()

        else:
            data2=cur.fetchall()
            CUST_MENU()
    GET_BOOK()
```

```
def RETURN_BOOK():
```

```
    cursor1=mycon.cursor()
    mobileno=input("Enter your mobile no. ") #Use the mobile no given during log in
```

```
    cursor1.execute("Select book_borrowed from users where mobile_no = {}".format(mobileno,))
```

```
    book_borr = cursor1.fetchone()
```

```
    if book_borr[0]=="None":
        print("YOU HAVE NOT LENT ANY BOOK YET. You will be taken back to the menu. Thank You! \n")
        time.sleep(2)
        CUST_MENU()
```

```
    q="SELECT book_name , due_date FROM books , users WHERE users.book_borrowed=books.book_id AND users.mobile_no={}".format(mobileno,)
```

```
    cursor1.execute(q)
    info=cursor1.fetchone()
    bname=info[0]
    duedate=info[1]
```

```
    cursor2=mycon.cursor()
    q2="SELECT CURDATE()"
    cursor2.execute(q2)
    info2=cursor2.fetchone()
    todate=info2[0]
```

```
    f1=10 #fine for each extra day
```

```
    if todate<=duedate:
        print("The book you have borrowed",bname, "is due on",duedate)
        ch=input("Do you wish to return the book today? (y/n)")
```

```
    if ch=="y":
        cursor3=mycon.cursor()
        q3="UPDATE books SET availability = 'Available' WHERE book_name ='{}'.format(bname,)"
        cursor3.execute(q3)
        mycon.commit()
        q4="UPDATE users SET book_borrowed = 'None' , due_date= NULL WHERE Mobile_no= '{}'.format(mobileno,)"
        cursor3.execute(q4)
        mycon.commit()
        print("Thank you for coming to NSSS Library. Have a great day ! \n")
        time.sleep(2)
        CUST_MENU()
```

```
    elif ch=="n":
        print("Thank you for coming to NSSS Library. Have a great day ! \n")
        time.sleep(2)
```

```

CUST_MENU()

else:
    #Calculating the fine
    fine=str(f1*(todate-duedate))
    fine=int(fine[0:-14])
    print()
    print("The book you have borrowed",bname, "has crossed the due date",duedate)
    print()
    print("To return the book today, kindly pay the fine of",fine,"rupees to the librarian. \n")
    time.sleep(2)
    CUST_MENU()

def CHECK_DUE():
    cursor1=mycon.cursor()
    mobileno=input("Enter your mobile no. ") #Use the mobile no given during log in

    cursor1.execute("Select book_borrowed from users where mobile_no = {}".format(mobileno,))

    book_borr = cursor1.fetchone()

    if book_borr[0]=="None":
        print("YOU HAVE NOT LENT ANY BOOK YET. You will be taken back to Choice menu. Thank You! \n")
        time.sleep(2)
        CUST_MENU()

    q="SELECT book_name , due_date FROM books , users WHERE users.book_borrowed=books.book_id AND users.mobile_no={}".format(mobileno,)

    cursor1.execute(q)
    info=cursor1.fetchone()
    bname=info[0]
    duedate=info[1]

    cursor2=mycon.cursor()
    q2="SELECT CURDATE()"
    cursor2.execute(q2)
    info2=cursor2.fetchone()
    todate=info2[0]

    f1=10 #fine for each extra day
    if todate<=duedate:
        print("The book you have borrowed",bname,"is due on",duedate)
        print("The fine for each subsequent day is",f1,"rupees")
        print()
        time.sleep(2)
        CUST_MENU()
    else:
        #Calculating the fine
        fine=str(f1*(todate-duedate))
        fine=int(fine[0:-14])
        print()
        print("The book you have borrowed",bname, "has crossed the due date",duedate)
        print()
        print("To return the book today, kindly pay the fine of",fine,"rupees to the librarian. \n")
        time.sleep(2)
        CUST_MENU()

def BORROW_BOOK():
    mobileno=input("Enter your mobileno :") #Use from login info variable passwd
    cursor2=mycon.cursor()
    q2="SELECT book_borrowed FROM users WHERE mobile_no ='{}'.format(mobileno,)"
    cursor2.execute(q2)
    info=cursor2.fetchone()
    checkpt=info[0]
    if checkpt!="None":
        print("Kindly return the book you have already borrowed in order to borrow a new book. \n")
        time.sleep(2)
        CUST_MENU()

    b_id=input("Enter the book id of the book you wish to borrow :)") #Get it using a query from user input
    cursor1=mycon.cursor()
    q1="SELECT book_name , availability FROM books WHERE book_id ='{}'.format(b_id,)"
    cursor1.execute(q1)
    info=cursor1.fetchone()
    bname=info[0]
    avail=info[1]

    if avail=="Available" or avail=="available":
        print("The book you have requested",bname, "is currently available.", "Kindly collect your book from the librarian.")
        cursor3=mycon.cursor()
        q3="UPDATE books SET availability = 'Unavailable' WHERE book_name = '{}'.format(bname,)"
        cursor3.execute(q3)
        mycon.commit()
        q4="UPDATE users SET book_borrowed = '{}', due_date= DATE_ADD( CURDATE() , INTERVAL 7 DAY) WHERE Mobile_no= '{}'.format(b_id,mobileno,)"
        cursor3.execute(q4)
        mycon.commit()
        print("Thank you for coming to NSSS Library. Have a great day ! \n")
        time.sleep(2)
        CUST_MENU()

```

```

elif avail=="Unavailable" or avail == "unavailable":
    print("Unfortunately the book ",bname,"which you have requested is unavailable currently.")
    print()
    ch=input("Would you like to find another book ? (y/n)")

    if ch.lower()=="y":
        SEARCH_BOOK()
    elif ch=="n":
        print("Thank you for coming to NSSS Library. Have a great day ! \n")
        time.sleep(2)
        CUST_MENU()

def LOGOUT():
    print("THANK YOU FOR VISITING!" )

    sys.exit()

def ADMIN_MENU():
    print("WELCOME!")
    print()
    print("PLEASE SELECT WHAT YOU WISH TO DO")
    print()
    a = int(input("Press 1 if you want to ADD a book, press 2 if you want to Remove a book and press 0 if you want to Exit the Library : "))

    if a == 1: #admins wants to add a book
        cursor5 = mycon.cursor()
        cursor5.execute("select Book_Id from books;")
        ids = cursor5.fetchall()

def IDS():
    #writing new book_id
    r_alpha = alpha[random.randint(1,26)]

    r_no = random.randint(1,9999)
    dummy = str(r_alpha) + str(r_no)
    if dummy in ids:
        IDS()
    else:
        book_id = dummy

    book_name= input("Enter the name of the book : ")
    price= float(input("Enter the price of the book : "))
    author= input("Enter the author of the book : ")
    avail = "Available"

    query4 = "insert into books (Book_Id , Book_Name , Price, Author , Availability) values (%s,%s, %s, %s,%s)"
    t = (book_id , book_name , price, author , avail)
    cursor6 = mycon.cursor()
    cursor6.execute(query4 , t)
    mycon.commit()

    print("BOOK HAS BEEN SUCCESSFULLY ADDED TO THE DATABASE!")
    print()
    print("The Book ID is " , book_id )
    print()
    print("YOU WILL BE TAKEN BACK TO THE MAIN MENU. \n")
    time.sleep(2)
    ADMIN_MENU()

IDS()

elif a ==2 : #admin wants to delete a book
    cursor8 = mycon.cursor()
    book_id = input("Enter the Book ID of the book which you want to remove : ")

    cursor8.execute("select Book_Id from books")
    b_ids = cursor8.fetchall()
    t = (book_id,)
    if t not in b_ids:
        print("Sorry! Book_Id does not exist! You will be taken back to the Menu! \n")
        time.sleep(2)
        ADMIN_MENU()
    else:

        q = "select * from books where Book_Id = '%s'" % (book_id)
        cursor8.execute(q)
        data = cursor8.fetchall()
        for i in data:
            print(i)
            print()
        rep = input("Are you sure you want to delete this record ? Press y/n ")

        if rep == "y":

            query = "delete from books where Book_Id = '%s'" %(book_id)
            cursor8.execute(query)
            mycon.commit()
            print("RECORD SUCCESSFULLY REMOVED!")
            print()
            print("YOU WILL BE TAKEN BACK TO THE MAIN MENU.")
            time.sleep(2)
            ADMIN_MENU()

```



```

        elif rep == "n":
            print("You will be taken back to menu! \n")
            time.sleep(2)
            ADMIN_MENU()

    elif a == 0:
        LOGOUT()

def ADMIN_LR():
    r3 = int(input("Press '0' if you want to register as ADMIN and press '1' if you want to log-in : "))
    print()
    if r3==0:
        ADMIN_REG()
    elif r3==1:
        ADMIN_LOGIN()

def ADMIN_REG():
    print("LET US REGISTER YOUR ACCOUNT IN OUR DATABASE!")
    print()

    def ADMIN_ID_CHECK():

        ncursor = mycon.cursor()
        query = "select Admin_Id from Admins;"
        ncursor.execute(query)
        id_data = ncursor.fetchall()

        #writing new Admin_Id

```

```

        r_alpha = "A"
        r_no = random.randint(1,100)
        dummy = r_alpha + str(r_no)
        if dummy in id_data:
            ADMIN_ID_CHECK()
        else:
            admin_id = dummy

        mo_no = input("Enter Your Mobile Number : ")
        print()
        Admin_name = input("Enter your Name : ")
        print()

        #INSERTING RECORD IN MYSQL

        cursor3 = mycon.cursor()
        query = "insert into Admins (Admin_Id , Mobile_No , Admin_Name ) values(%s ,%s, %s)"

        t = (admin_id , mo_no , Admin_name)
        cursor3.execute(query, t)
        mycon.commit()
        print("CONGRAGULATIONS! Your account has been successfully registered!")
        print()
        print("Your Admin ID is " , admin_id , "and your password is " , mo_no )
        print()
        print("Now you will be taken back to the LOGIN PAGE! Thank You! \n")
        print()
        time.sleep(2)
        ADMIN_LOGIN()

ADMIN_ID_CHECK()

```

```

def ADMIN_LOGIN():
    Admin_Id = input("Please Enter your Admin ID : ")
    passwd = input("Please Enter your Password : ")
    print()
    cursor4 = mycon.cursor()
    cursor4.execute("select Admin_Id , Mobile_No from Admins;")
    data = cursor4.fetchall()

    t = (Admin_Id , passwd)

    if t in data:
        print("LOGIN SUCCESSFUL! \n")
        time.sleep(2)
        ADMIN_MENU()

    else:
        print("LOGIN UNSUCCESSFUL! PLEASE TRY AGAIN! \n")
        time.sleep(2)
        ADMIN_LOGIN()

```

```
def MAIN_LOGIN():
    print("HELLO THERE!! WELCOME TO NSSS LIBRARY!" , end = "\n")
    print()
    print("Enter '1' if you are a Customer and Enter '2' if you are an Admin" , end="\n")
    print()
    r1 = int(input("Enter '1' or '2' : "))
    print()
    if r1==1:
        CUST_LR()
    elif r1==2:
        ADMIN_LR()

MAIN_LOGIN()
```

OUTPUT

❑ Main Login

```
HELLO THERE!! WELCOME TO NSSS LIBRARY!

Enter '1' if you are a Customer and Enter '2' if you are an Admin

Enter '1' or '2' : |
```

❑ ADMIN LR

```
HELLO THERE!! WELCOME TO NSSS LIBRARY!

Enter '1' if you are a Customer and Enter '2' if you are an Admin

Enter '1' or '2' : 2

Press '0' if you want to register as ADMIN and press '1' if you want to log-in :
```

❑ ADMIN REGISTRATION

```
HELLO THERE!! WELCOME TO NSSS LIBRARY!

Enter '1' if you are a Customer and Enter '2' if you are an Admin

Enter '1' or '2' : 2

Press '0' if you want to register as ADMIN and press '1' if you want to log-in : 0

LET US REGISTER YOUR ACCOUNT IN OUR DATABASE!

Enter Your Mobile Number : 9846373849

Enter your Name : SAMPLE10

CONGRAGULATIONS! Your account has been successfully registered!

Your Admin ID is  A14 and your password is  9846373849

Now you will be taken back to the LOGIN PAGE! Thank You!

Please Enter your Admin ID : A14
Please Enter your Password : 9846373849

LOGIN SUCCESSFUL!

WELCOME!

PLEASE SELECT WHAT YOU WISH TO DO

Press 1 if you want to ADD a book, press 2 if you want to Remove a book and press 0 if you want to Exit the Library : |
```

| | Admin_Id | Mobile_No | Admin_Name |
|---|----------|------------|------------|
| ▶ | A001 | 9874646323 | SAMPLE1 |
| | A002 | 9876765654 | SAMPLE2 |
| | A003 | 9383999293 | SAMPLE3 |
| | A004 | 8994093849 | SAMPLE4 |
| | A005 | 9488849304 | SAMPLE5 |
| | A14 | 9846373849 | SAMPLE10 |
| ✱ | NULL | NULL | NULL |

ADMIN LOGIN

```
HELLO THERE!! WELCOME TO NSSS LIBRARY!

Enter '1' if you are a Customer and Enter '2' if you are an Admin

Enter '1' or '2' : 2

Press '0' if you want to register as ADMIN and press '1' if you want to log-in : 1

Please Enter your Admin ID : A14
Please Enter your Password : 9846373849

LOGIN SUCCESSFUL!

WELCOME!

PLEASE SELECT WHAT YOU WISH TO DO

Press 1 if you want to ADD a book, press 2 if you want to Remove a book and press 0 if you want to Exit the Library :
```

ADDING BOOKS

```
HELLO THERE!! WELCOME TO NSSS LIBRARY!

Enter '1' if you are a Customer and Enter '2' if you are an Admin

Enter '1' or '2' : 2

Press '0' if you want to register as ADMIN and press '1' if you want to log-in : 1

Please Enter your Admin ID : A14
Please Enter your Password : 9846373849

LOGIN SUCCESSFUL!

WELCOME!

PLEASE SELECT WHAT YOU WISH TO DO

Press 1 if you want to ADD a book, press 2 if you want to Remove a book and press 0 if you want to Exit the Library : 1
Enter the name of the book : NCERT PHYSICS
Enter the price of the book : 50
Enter the author of the book : CBSE
BOOK HAS BEEN SUCCESSFULLY ADDED TO THE DATABASE!

The Book ID is D8678

YOU WILL BE TAKEN BACK TO THE MAIN MENU.

WELCOME!

PLEASE SELECT WHAT YOU WISH TO DO

Press 1 if you want to ADD a book, press 2 if you want to Remove a book and press 0 if you want to Exit the Library :
```

| | | | | |
|-------|-----------------------|------|----------------|-----------|
| C0041 | Cometh The Hour | 80 | Jeffrey Archer | Avaialble |
| C0042 | The Prodigal Daughter | 80 | Jeffrey Archer | Available |
| C0043 | The Da Vinci Code | 100 | Dan Brown | Available |
| C0044 | Angels and Demons | 100 | Dan Brown | Available |
| C0045 | Inferno | 100 | Dan Brown | Available |
| C0046 | The Lost Symbol | 100 | Dan Brown | Available |
| C0047 | Digital Fortress | 100 | Dan Brown | Avaialble |
| D8678 | NCERT PHYSICS | 50 | CBSE | Available |
| NULL | NULL | NULL | NULL | NULL |

❑ DELETING BOOKS

HELLO THERE!! WELCOME TO NSSS LIBRARY!

Enter '1' if you are a Customer and Enter '2' if you are an Admin

Enter '1' or '2' : 2

Press '0' if you want to register as ADMIN and press '1' if you want to log-in : 1

Please Enter your Admin ID : A14

Please Enter your Password : 9846373849

LOGIN SUCCESSFUL!

WELCOME!

PLEASE SELECT WHAT YOU WISH TO DO

Press 1 if you want to ADD a book, press 2 if you want to Remove a book and press 0 if you want to Exit the Library : 2

Enter the Book ID of the book which you want to remove : D8678
('D8678', 'NCERT PHYSICS ', 50.0, 'CBSE', 'Available')

Are you sure you want to delete this record ? Press y/n y

RECORD SUCCESSFULLY REMOVED!

YOU WILL BE TAKEN BACK TO THE MAIN MENU.

WELCOME!

PLEASE SELECT WHAT YOU WISH TO DO

Press 1 if you want to ADD a book, press 2 if you want to Remove a book and press 0 if you want to Exit the Library : 0

THANK YOU FOR VISITING!

| | Book_Id | Book_Name | Price | Author | Availability |
|---|---------|------------------------------|-------|--------------------|--------------|
| | C0026 | Percy Jackson and the Lig... | 100 | Rick Riordan | Available |
| | C0027 | Percy Jackson and the Se... | 100 | Rick Riordan | Available |
| | C0028 | Percy Jackson and the Tit... | 100 | Rick Riordan | Available |
| | C0029 | Percy Jackson and the Bat... | 100 | Rick Riordan | Available |
| | C0030 | Percy Jackson and the Las... | 100 | Rick Riordan | Available |
| | C0031 | The Adventurs of Sherlock... | 80 | Arthur Conan Doyle | Avaiable |
| | C0032 | Dune | 120 | Frank Herbert | Available |
| | C0033 | Dune Messiah | 100 | Frank Herbert | Available |
| | C0034 | Children of Dune | 100 | Frank Herbert | Available |
| | C0035 | God Emperor of Dune | 100 | Frank Herbert | Available |
| | C0036 | Heretics of Dune | 100 | Frank Herbert | Available |
| | C0037 | Chapter House Dune | 100 | Frank Herbert | Available |
| | C0038 | Kane and Abel | 70 | Jeffrey Archer | Avaiable |
| | C0039 | Only Time Will Tell | 100 | Jeffrey Archer | Available |
| | C0040 | The Sins of the Father | 100 | Jeffrey Archer | Available |
| | C0041 | Cometh The Hour | 80 | Jeffrey Archer | Avaiable |
| | C0042 | The Prodigal Daughter | 80 | Jeffrey Archer | Available |
| | C0043 | The Da Vinci Code | 100 | Dan Brown | Available |
| | C0044 | Angels and Demons | 100 | Dan Brown | Available |
| | C0045 | Inferno | 100 | Dan Brown | Available |
| | C0046 | The Lost Symbol | 100 | Dan Brown | Available |
| | C0047 | Digital Fortress | 100 | Dan Brown | Avaiable |
| * | NULL | NULL | NULL | NULL | NULL |

❑ REGISTRATION OF A USER

HELLO THERE!! WELCOME TO NSSS LIBRARY!

Enter '1' if you are a Customer and Enter '2' if you are an Admin

Enter '1' or '2' : 1

Press 1 if you are a member or press 2 if you wish to register yourself ;2
LET US REGISTER YOUR ACCOUNT INTO OUR DATABASE!

Enter your Mobile Number : 9876543210

Enter your Name : Rajkumar Shukla

CONGRAGULATIONS! Your account has been successfully registered!

Your User ID is J233 and your password is 9876543210

Now you will be taken back to the LOGIN PAGE! Thank You!

Result Grid

Filter Rows:

Edit:

| User_Id | Mobile_No | User_Name | Book_Borrowed | Due_Date |
|---------|------------|----------------|---------------|------------|
| A0012 | 9389308434 | Vijay Shekar | None | 2021-05-05 |
| A0013 | 9382028000 | Narendra Joshi | None | 2021-05-05 |
| A0014 | 8990392032 | Jitendra Kumar | None | 2021-05-05 |
| A0015 | 9009309489 | Vaibhav Bha... | None | 2021-05-05 |
| J233 | 9876543210 | Rajkumar Sh... | None | NULL |

❑ UNSUCCESSFUL LOGIN

HELLO THERE!! WELCOME TO NSSS LIBRARY!

Enter '1' if you are a Customer and Enter '2' if you are an Admin

Enter '1' or '2' : 1

Press 1 if you are a member or press 2 if you wish to register yourself ;1

Please Enter your User ID : 12345

Please Enter your Password : 123

LOGIN UNSUCCESSFUL! PLEASE TRY AGAIN!

Please Enter your User ID : |

❑ SEARCHING FOR BOOKS

(i) The user has not borrowed a book yet

HELLO THERE!! WELCOME TO NSSS LIBRARY!

Enter '1' if you are a Customer and Enter '2' if you are an Admin

Enter '1' or '2' : 1

Press 1 if you are a member or press 2 if you wish to register yourself ;1

Please Enter your User ID : J233

Please Enter your Password : 9876543210

LOGIN SUCCESSFUL!

*****Welcome to NSSS Library*****

1. Search for books to borrow

2. Return books

3. Check due date and fine

4. Logout of website

Enter your choice :1

('A0001', 'Adventures of Tom Sawyer', 50.0)
('A0002', 'Agni Veena', 70.0)
('A0004', 'Ben Hur', 90.0)
('A0005', 'Baburnama', 50.0)
('A0006', 'Arthashastra', 40.0)
('A0007', 'Anand Math', 60.0)
('A0008', 'The Vicar of Wakefield', 120.0)
('A0009', 'Time Machine', 80.0)
('A0010', 'A passage to India', 110.0)
('A0011', 'Far from the Madding Crowd', 100.0)
('A0012', 'The Merchant of Venice', 90.0)
('A0013', 'Antony and Cleopatra', 70.0)
('A0014', 'Geetanjali', 40.0)
('A0015', 'Utopia', 80.0)
('A0016', 'Crime and Punishment', 80.0)
('A0017', 'Chitra', 50.0)
('A0018', 'Bisarjan', 40.0)
('A0019', 'Divine Comedy', 80.0)
('A0021', 'Arms and the Man', 40.0)
('A0022', 'Around the World in Eighty Days', 60.0)

Do you want to borrow any of the above books ? Enter y/n n

Do you want to see some more books? (y/n)y

('A0023', 'Pride and Prejudice', 30.0)
('A0024', 'A Dangerous Place', 40.0)
('A0025', 'The Lady of the Last Minstrel', 50.0)
('A0026', 'Raghuvamsa', 30.0)
('A0027', 'Shakuntala', 40.0)
('A0028', 'Discovery of India', 50.0)
('A0029', 'My Experiments with Truth', 50.0)
('A0030', 'The Wild Iris', 30.0)
('B0001', 'Farenheit 431', 50.0)
('B0002', 'The Paying Guests', 50.0)
('B0003', 'Jane Eyre', 60.0)
('B0004', 'Watership Down', 40.0)
('B0005', 'Lord of the Flies', 50.0)
('B0006', 'A Town Like Alice', 30.0)
('B0007', 'The Vegetarian', 50.0)
('B0008', 'The Adventures of Huckleberry Finn', 60.0)
('B0009', 'The Alchemist', 50.0)
('B0010', 'The Colour Purple', 30.0)
('B0011', 'Frankenstein', 60.0)
('B0013', 'All the Light We Cannot See', 70.0)

Do you want to borrow any of the above books ? Enter y/n y

Enter your mobileno :9876543210

Enter the book id of the book you wish to borrow :B0005

The book you have requested Lord of the Flies is currently available. Kindly collect your book from the librarian .

Thank you for coming to NSSS Library. Have a great day !

| Result Grid | | | | | |
|--------------|---------|------------|----------------|---------------|------------|
| Filter Rows: | | | | | |
| | User_Id | Mobile_No | User_Name | Book_Borrowed | Due_Date |
| | A0012 | 9389308434 | Vijay Shekar | None | 2021-05-05 |
| | A0013 | 9382028000 | Narendra Joshi | None | 2021-05-05 |
| | A0014 | 8990392032 | Jitendra Kumar | None | 2021-05-05 |
| | A0015 | 9009309489 | Vaibhav Bha... | None | 2021-05-05 |
| | J233 | 9876543210 | Rajkumar Sh... | B0005 | 2022-03-13 |
| | NULL | NULL | NULL | NULL | NULL |

| Result Grid | | | | | |
|--------------|------------------------------------|-------|------------------|--------------|--|
| Filter Rows: | | | | | |
| Book_Id | Book_Name | Price | Author | Availability | |
| B0002 | The Paying Guests | 50 | Sarah Waters | Available | |
| B0003 | Jane Eyre | 60 | Charlotte Bronte | Available | |
| B0004 | Watership Down | 40 | Richard Adams | Available | |
| B0005 | Lord of the Flies | 50 | William Golding | Unavailable | |
| B0006 | A Town Like Alice | 30 | Nevil Shute | Available | |
| B0007 | The Vegetarian | 50 | Han Kang | Available | |
| B0008 | The Adventures of Huckleberry Finn | 60 | Mark Twain | Available | |

(ii) The user already has a book

*****Welcome to NSSS Library*****

1. Search for books to borrow

2. Return books

3. Check due date and fine

4. Logout of website

Enter your choice :1

('A0001', 'Adventures of Tom Sawyer', 50.0)
 ('A0002', 'Agni Veena', 70.0)
 ('A0004', 'Ben Hur', 90.0)
 ('A0005', 'Baburnama', 50.0)
 ('A0006', 'Arthashastra', 40.0)
 ('A0007', 'Anand Math', 60.0)
 ('A0008', 'The Vicar of Wakefield', 120.0)
 ('A0009', 'Time Machine', 80.0)
 ('A0010', 'A passage to India', 110.0)
 ('A0011', 'Far from the Madding Crowd', 100.0)
 ('A0012', 'The Merchant of Venice', 90.0)
 ('A0013', 'Antony and Cleopatra', 70.0)
 ('A0014', 'Geetanjali', 40.0)
 ('A0015', 'Utopia', 80.0)
 ('A0016', 'Crime and Punishment', 80.0)
 ('A0017', 'Chitra', 50.0)
 ('A0018', 'Bisarjan', 40.0)
 ('A0019', 'Divine Comedy', 80.0)
 ('A0021', 'Arms and the Man', 40.0)
 ('A0022', 'Around the World in Eighty Days', 60.0)

Do you want to borrow any of the above books ? Enter y/n y

Enter your mobilenno :9833244223

Kindly return the book you have already borrowed in order to borrow a new book.

Ln: 90 Col: 19

| User_Id | Mobile_No | User_Name | Book_Borrowed | Due_Date |
|---------|------------|---------------|---------------|------------|
| A0001 | 9833244223 | Varun Kumar | A0003 | 2021-09-02 |
| A0002 | 9899928832 | Saiyam Jain | A0020 | 2022-03-06 |
| A0003 | 9923899200 | Bharat R | None | 2022-03-06 |
| A0004 | 9930488554 | Hari Krishnan | None | NULL |
| A0005 | 9038573992 | Aditya S | None | 2021-05-01 |
| A0006 | 9284889390 | Jamal K | None | 2021-05-01 |
| A0007 | 9284889390 | Saijal Patel | None | 2021-05-01 |

❑ CHECKING DUE DATE

(i) The user has a book that is not due yet

*****Welcome to NSSS Library*****
1. Search for books to borrow

2. Return books

3. Check due date and fine

4. Logout of website

Enter your choice :3

Enter your mobile no. 9876543210

The book you have borrowed, Lord of the Flies is due on 2022-03-13

The fine for each subsequent day is 10 rupees

| Result Grid | | | | | |
|--------------|------------|----------------|---------------|------------|--|
| Filter Rows: | | | | | |
| Edit: | | | | | |
| User_Id | Mobile_No | User_Name | Book_Borrowed | Due_Date | |
| A0012 | 9389308434 | Vijay Shekar | None | 2021-05-05 | |
| A0013 | 9382028000 | Narendra Joshi | None | 2021-05-05 | |
| A0014 | 8990392032 | Jitendra Kumar | None | 2021-05-05 | |
| A0015 | 9009309489 | Vaibhav Bha... | None | 2021-05-05 | |
| J233 | 9876543210 | Rajkumar Sh... | B0005 | 2022-03-13 | |
| NULL | NULL | NULL | NULL | NULL | |

(ii) The user has not borrowed a book yet

*****Welcome to NSSS Library*****
1. Search for books to borrow

2. Return books

3. Check due date and fine

4. Logout of website

Enter your choice :3

Enter your mobile no. 9876543210

YOU HAVE NOT LENT ANY BOOK YET. You will be taken back to Choice menu. Thank You!

| Result Grid | | | | | |
|--------------|---------|------------|----------------|---------------|------------|
| Filter Rows: | | | | | |
| | User_Id | Mobile_No | User_Name | Book_Borrowed | Due_Date |
| | A0012 | 9389308434 | Vijay Shekar | None | 2021-05-05 |
| | A0013 | 9382028000 | Narendra Joshi | None | 2021-05-05 |
| | A0014 | 8990392032 | Jitendra Kumar | None | 2021-05-05 |
| | A0015 | 9009309489 | Vaibhav Bha... | None | 2021-05-05 |
| | J233 | 9876543210 | Rajkumar Sh... | None | NULL |
| | NULL | NULL | NULL | NULL | NULL |

(iii) The user has a book that is past due

*****Welcome to NSSS Library*****

1. Search for books to borrow

2. Return books

3. Check due date and fine

4. Logout of website

Enter your choice :3

Enter your mobile no. 9833244223

The book you have borrowed Animal Farm has crossed the due date 2021-09-02

To return the book today, kindly pay the fine of 1850 rupees to the librarian.

| | User_Id | Mobile_No | User_Name | Book_Borrowed | Due_Date |
|---|---------|------------|---------------|---------------|------------|
| ▶ | A0001 | 9833244223 | Varun Kumar | A0003 | 2021-09-02 |
| | A0002 | 9899928832 | Saiyam Jain | A0020 | 2022-03-06 |
| | A0003 | 9923899200 | Bharat R | None | 2022-03-06 |
| | A0004 | 9930488554 | Hari Krishnan | None | NULL |
| | A0005 | 9038573992 | Aditya S | None | 2021-05-01 |
| | A0006 | 9284889390 | Jamal K | None | 2021-05-01 |
| | A0007 | 9384000003 | Gopal Patel | None | 2021-05-01 |

❑ RETURNING A BOOK

(i) The due date has not passed

*****Welcome to NSSS Library*****
1. Search for books to borrow

2. Return books

3. Check due date and fine

4. Logout of website

Enter your choice :2

Enter your mobile no. 9876543210

The book you have borrowed Lord of the Flies is due on 2022-03-13

Do you wish to return the book today? (y/n)y

Thank you for coming to NSSS Library. Have a great day !

| | User_Id | Mobile_No | User_Name | Book_Borrowed | Due_Date |
|---|---------|------------|----------------|---------------|------------|
| | A0012 | 9389308434 | Vijay Shekar | None | 2021-05-05 |
| | A0013 | 9382028000 | Narendra Joshi | None | 2021-05-05 |
| | A0014 | 8990392032 | Jitendra Kumar | None | 2021-05-05 |
| | A0015 | 9009309489 | Vaibhav Bha... | None | 2021-05-05 |
| | J233 | 9876543210 | Rajkumar Sh... | None | NULL |
| * | NULL | NULL | NULL | NULL | NULL |

(ii) The due date has passed

*****Welcome to NSSS Library*****

1. Search for books to borrow

2. Return books

3. Check due date and fine

4. Logout of website

Enter your choice :2

Enter your mobile no. 9833244223

The book you have borrowed Animal Farm has crossed the due date 2021-09-02

To return the book today, kindly pay the fine of 1850 rupees to the librarian.

| | User_Id | Mobile_No | User_Name | Book_Borrowed | Due_Date |
|---|---------|------------|---------------|---------------|------------|
| ▶ | A0001 | 9833244223 | Varun Kumar | A0003 | 2021-09-02 |
| | A0002 | 9899928832 | Saiyam Jain | A0020 | 2022-03-06 |
| | A0003 | 9923899200 | Bharat R | None | 2022-03-06 |
| | A0004 | 9930488554 | Hari Krishnan | None | NULL |
| | A0005 | 9038573992 | Aditya S | None | 2021-05-01 |
| | A0006 | 9284889390 | Jamal K | None | 2021-05-01 |
| | A0007 | 9284889390 | Saijal Patel | None | 2021-05-01 |

(iii) The user has not borrowed a book yet

*****Welcome to NSSS Library*****

1. Search for books to borrow

2. Return books

3. Check due date and fine

4. Logout of website

Enter your choice :2

Enter your mobile no. 9876543210

YOU HAVE NOT LENT ANY BOOK YET. You will be taken back to the menu. Thank You!

| | User_Id | Mobile_No | User_Name | Book_Borrowed | Due_Date |
|---|---------|------------|----------------|---------------|------------|
| | A0012 | 9389308434 | Vijay Shekar | None | 2021-05-05 |
| | A0013 | 9382028000 | Narendra Joshi | None | 2021-05-05 |
| | A0014 | 8990392032 | Jitendra Kumar | None | 2021-05-05 |
| | A0015 | 9009309489 | Vaibhav Bha... | None | 2021-05-05 |
| | J233 | 9876543210 | Rajkumar Sh... | None | NULL |
| * | NULL | NULL | NULL | NULL | NULL |

❑ LOGOUT

*****Welcome to NSSS Library*****

1. Search for books to borrow

2. Return books

3. Check due date and fine

4. Logout of website

Enter your choice :4

THANK YOU FOR VISITING!

>>>|

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