

**DELHI PUBLIC SCHOOL RUBY PARK, KOLKATA**

**ACADEMIC YEAR: 2020-21**

**PROJECT REPORT ON LIBRARY MANAGEMENT SYSTEM**

**Computer science**

**NAME: RUCHIRÀ NASKAR**

**CLASS: 12-I**



## **CERTIFICATE**

**This is to certify that Ms. Ruchira Naskar, a bonafide student of Class XII-I has successfully completed the project titled “LIBRARY MANAGEMENT SYSTEM” in the Computer Lab during the Year 2020 – 2021 for the A.I.S.S.C.E Computer Science Practical Examination - 2021.**

**It is further certified that this project is the individual work of the Candidate.**

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**External Examiner**

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**Internal Examiner**

**DATED:** \_\_\_\_\_

**SEAL :** \_\_\_\_\_

## **ACKNOWLEDGEMENT**

I gratefully acknowledge my sincere thanks to our Computer Science Teacher Mrs. Dhrita Adhya for her remarkable, valuable guidance and supervision throughout the project work. I'm also utmost indebted to all my batch mates for their encouragement, help, suggestion and readily helpful service in the successful completion of the project.

I wish to express my deep gratitude and sincere thanks to the Principal, Mrs. Joyoti Chaudhuri, Delhi Public School, School, Ruby Park for her encouragement and for all the facilities that she provided for this project work.

**Ruchira Naskar**

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## **HARDWARE AND SOFTWARE REQUIREMENTS**

### **HARDWARE REQUIREMENTS**

Processor: Intel® Celeron® CPU 2.66 GHz

Memory: 1GB (2x512MB)DDR2-667 RAM

Hard Disk: 80 GB (SATA)

### **SOFTWARE REQUIREMENTS**

Operating System : Windows 10 OS

Programming IDE : Python

Database Management System: MySQL

## **OBJECTIVES OF THE PROJECT**

The objective of this project is to let the students apply the programming knowledge into a real-world situation/problem and exposed the students how programming skills helps in developing a good software.

1. Write programs utilizing modern software tools.
2. Apply object oriented programming principles effectively
3. Write effective procedural code to solve small to medium sized problems.
4. Students will demonstrate a breadth of knowledge in computer science
5. To conduct a research or applied Computer Science project, requiring writing and presentation skills which exemplify scholarly style in computer science.

## USER-DEFINED MODULES AND THEIR PURPOSE

**differdays module:** function- differdays() : to input two dates and then store it in the form of 'YYYY-MM-DD' and then slice it to store in a numeric tuple (YYYY, MM, DD). Then a subtraction operation is done on the tuples and then date function is used to convert it into a date. This gives the difference between two dates. datetime module of Python needs to be imported to implement this module.

```
import datetime
from datetime import date
def differdays(p,q):
    d0=date(int(p[0:4]),int(p[5:7]),int(p[8:10]))
    d1=date(int(q[0:4]),int(q[5:7]),int(q[8:10]))
    print('today',int(p[0:4]),'-',int(p[5:7]),'-',int(p[8:10]))
    print('return date',int(q[0:4]),'-',int(q[5:7]),'-',int(q[8:10]))
    delta=d0-d1
    print('number of days done away=',delta.days)
    return delta.days
```

## **USER-DEFINED FUNCTIONS AND THEIR PURPOSE**

- **Showbooks():** to show the table of the available collection.
- **Readers():** to show the table of the library members.
- **entry():** to make new entries in Readers table
- **bookentry():** to enter distinct new books
- **update():** to update number of copies of a book already present in the collection
- **ShowLate():** to retrieve Late records from Late table
- **ShowLost():** to retrieve Lost records from Lost table
- **lateInput():** to enter a new record in Late table; displays error message if reader id is invalid or book is not taken by the member
- **lateOut():** to delete a record from the Late table; displays error message if record is not in Late table; increases the number of copies of a book by unity
- **lostInput():** to enter a new record in Lost table and sets book status in availability table as 'L' to mark it as a copy lost ; displays error message if reader id is invalid or book is not taken by the member
- **lostOut():** to delete a record from the Lost table; displays error message if record is not in Lost table; increases the number of copies of a book by unity: updates the book status in availability to 'y'
- **readbook():** to find out which reader has taken a certain book; displays error message if book is not available in collection; if book is not taken yet, displays 'book not taken'
- **findreader():** to find out the details of a reader; displays error message if reader is not entered; if the reader has not taken a book yet, displays 'book not taken' and displays only the reader's details.
- **Showall():** to display a user-interactive environment and the tables can be viewed with a click.
- **cont():** to call the other functions in the program and it is used as the main function that is repeatedly called to perform some action.

## SOURCE CODE

```
import datetime
from datetime import date
import tkinter as tk
from tkinter import *
import mysql.connector as sqltor
mycon=sqltor.connect(host='localhost',user='root',passwd='hp',database='library1')
if mycon.is_connected():
    print('successfully connected mysql and python')
cursor=mycon.cursor()
import differdays
#storing the BookNo, BookNames and publication in lists
bnum=[]
cursor.execute('select distinct BookNo from Availability')
data=cursor.fetchall()
for row in data:
    bnum.append(row)
#creating a list with the book numbers only
bnumint=[]
for i in bnum:
    bnumint.append(int(list(i)[0]))
bname=[]
cursor.execute('select Name from Availability')
data=cursor.fetchall()
for row in data:
    bname.append(row)
bpub=[]
cursor.execute('select Publisher from Availability')
data=cursor.fetchall()
for row in data:
    bpub.append(row)
#storing the memberid in a list
mn=[]
cursor.execute('select id from Readers')
data=cursor.fetchall()
for row in data:
    mn.append(row)
mnint=[]
for i in mn:
    mnint.append(int(list(i)[0]))
def Showbooks():
    #to show the availability table
    print('books:-')
    cursor.execute('select * from Availability')
    data=cursor.fetchall()
    for row in data:
        print(row)
    if data==[]:
        print('no record')
    print('\n')
def Readers():
    print('readers:-')
    #to show the Readers table
    cursor.execute('select * from readers')
    data=cursor.fetchall()
    for row in data:
        print(row)
    if data==[]:
        print('no record')
    print('\n')
def entry():
    #new entry in Readers table
    nm=input('enter member name')
    id=int(list(mn[len(mn)-1])[0])+1
    mn.append((id,))
    mnint.append(id)
    st="insert into Readers(Name,Id,BookIssued,DateOfIssue,DateOfReturn) values('{}',{},{},{},{})".format(nm,id,0,'00-00-00','00-00-00')
    cursor.execute(st)
    mycon.commit()
```

```

def bookentry():
    #to enter distinct new books
    n=int(input('enter number of distinct books to be added'))
    for i in range (n):
        nm=input('enter book name')
        id=int(list(bnum[len(bnum)-1])[0])+1
        au=input('enter author name')
        publ=input('enter name of publisher')
        cost=int(input('enter cost'))
        copies=int(input('enter number of copies'))
        status=input('enter status')
        if ((nm,) in bname and (publ,) in bpub):
            continue
        else:
            st="insert into Availability(BookNo,Name,Author,Publisher,Cost,NoOfCopies,Status) values({},{},{},{},{},{},{})".format(id,nm,au,publ,cost,copies,status)
            cursor.execute(st)
            mycon.commit()
            bnum.append((id,))
            bnumint.append(id)
            bname.append((nm,))
            bpub.append((publ,))

def update():
    #to update number of copies of a book
    nm=input('enter book name')
    n=int(input('enter number of copies of the book to be added'))
    m="select NoOfCopies from Availability where Name='%s'"%(nm,)
    cursor.execute(m)
    data=cursor.fetchall()
    if len(data)==0:
        print('no records found')
    else:
        for row in data:
            j=int(row[0])
            st="update Availability set NoOfCopies={} where Name='{}'".format(j+n,nm)
            cursor.execute(st)
            mycon.commit()

def ShowLate():
    print('late records:-')
    #to show Late records
    cursor.execute("select * from Late")
    data=cursor.fetchall()
    for row in data:
        print(row)
    if data==[]:
        print('no record')
    print('\n')

def ShowLost():
    print('lost records:-')
    #to show Lost records
    cursor.execute("select * from Lost")
    data=cursor.fetchall()
    for row in data:
        print(row)
    if data==[]:
        print('no record')
    print('\n')

def lateInput():
    #to mark late fines
    id=int(input('enter member id'))
    x="select BookIssued from Readers where Id={} and DateOfIssue not like '{}'.format(id,'0000-00-00')"
    cursor.execute(x)
    data=cursor.fetchall()
    if len(data)==0:
        print('Book not issued to this reader')
    else:
        y=0
        for row in data:
            y=int(row[0])
            bookno=y
            m="select DateOfReturn from Readers where Id='{}'".format(id)
            cursor.execute(m)
            data=cursor.fetchall()
            j=''
            for row in data:
                j=str(row[0])
            print('tentative date of return was',j)
            today=input("enter today's date in the format: YYYY-MM-DD")
            print('Today is',today)
            s=differdays.differdays(today,j)
            if s<0:
                print('not possible, number of days cannot be negative',s)
            else:
                fine=s*2
                st="insert into Late(BookNo,Id,Finereqd)values({},{},{})".format(bookno,id,fine)
                cursor.execute(st)
                mycon.commit()
                ShowLate()
                st="update Readers set BookIssued={}, DateOfIssue='{}', DateOfReturn='{}' where Id={}".format(0,'00-00-00','00-00-00',id)
                cursor.execute(st)
                mycon.commit()
                Readers()
                #Readers table updated

```

```

def lateOut():
    #to delete late record and return book
    id=int(input('enter member id'))
    bookno="select BookNo from Late where Id={}".format(id)
    cursor.execute(bookno)
    data=cursor.fetchall()
    if len(data)==0:
        print('no records found in late list')
    else:
        bookie=''
        for row in data:
            bookie=int(row[0])
        st="delete from Late where Id={}".format(id)
        cursor.execute(st)
        mycon.commit()
        ShowLate()
        j=0
        m="select NoOfCopies from Availability where BookNo='{}'".format(bookie,)
        cursor.execute(m)
        data=cursor.fetchall()
        for row in data:
            j=int(row[0])
        st="update Availability set NoOfCopies={} where BookNo={}".format(j+1,bookie)
        cursor.execute(st)
        mycon.commit()
        print('removing member from LateFine list')
        print('showing the resultant stock')
        Showbooks()
    #Availability table updated

def lostInput():
    #to put name into lost list
    id=int(input('enter member id'))
    if id not in mnint:
        print('invalid id')
    x="select BookIssued from Readers where Id={} and DateOfIssue not like '{}'.format(id,'0000-00-00')"
    cursor.execute(x)
    data=cursor.fetchall()
    if len(data)==0:
        print('no records found in lost')
    else:
        y=0
        for row in data:
            y=int(row[0])
        bookno=y
        m="select DateOfReturn from Readers where Id='{}'".format(id)
        cursor.execute(m)
        data=cursor.fetchall()
        j=''
        for row in data:
            j=str(row[0])
        print('tentative date of return was',j)
        today=input("enter today's date in the format: YYYY-MM-DD")
        print('Today is',today)
        s=differdays.differdays(today,j)
        if s<0:
            print('not possible, number of days cannot be negative',s)
        else:
            fine=s*2
            st="insert into Lost(BookNo,Id,Finereqd) values({},{},{})".format(bookno,id,fine)
            cursor.execute(st)
            mycon.commit()
            ShowLost()
            print('please abide by the above mentioned fine and the replace the book')
            #marking the lost book in Availability
            st="update Availability set Status='{}' where BookNo={}".format('L',bookno)
            cursor.execute(st)
            mycon.commit()
            Showbooks()
            st="update Readers set BookIssued={}, DateOfIssue='{}', DateOfReturn='{}' where Id={}".format(0,'00-00-00','00-00-00',id)
            cursor.execute(st)
            mycon.commit()
            Readers()
    #Readers table updated

```

```

def lostOut():
    id=int(input('enter member id'))
    print('removing member from Lost list')
    bookno='select BookNo from Lost where id={}'.format(id)
    cursor.execute(bookno)
    data=cursor.fetchall()
    if len(data)==0:
        print('no records found')
    else:
        y=0
        for row in data:
            y=int(row[0])
        bookie=y
        print(bookie)
        st="delete from Lost where id={}".format(id)
        cursor.execute(st)
        mycon.commit()
        yt="update Availability set Status='{}' where BookNo={}".format('y',bookie)
        cursor.execute(yt)
        mycon.commit()
        ShowLost()
        j=0
        m="select NoOfCopies from Availability where BookNo='{}'".format(bookie)
        cursor.execute(m)
        data=cursor.fetchall()
        for row in data:
            j=int(row[0])
        st="update Availability set NoOfCopies={} where BookNo={}".format(j+1,bookie)
        cursor.execute(st)
        mycon.commit()
        print('showing the resultant stock')
        Showbooks()
#Availability table updated

def readbook():
    name=input('enter book name')
    m="select Bookno from Availability where Name='{}'".format(name)
    cursor.execute(m)
    data=cursor.fetchall()
    j=0
    for i in data:
        j=int(i[0])
    if len(data)==0:
        print('invalid book name')
    else:
        x="select * from Readers, Availability where Bookno={} and Readers.Bookissued=availability.BookNo".format(j)
        cursor.execute(x)
        data=cursor.fetchall()
        if len(data)==0:
            print('book not taken')
        else:
            for row in data:
                print(row)

def findreader():
    name=input('enter reader name')
    m="select id from readers where Name='{}'".format(name)
    cursor.execute(m)
    data=cursor.fetchall()
    j=0
    for i in data:
        j=int(i[0])
    if len(data)==0:
        print('invalid reader name')
    else:
        x="select * from Readers, Availability where id={} and Readers.Bookissued=availability.BookNo".format(j)
        cursor.execute(x)
        data=cursor.fetchall()
        if len(data)==0:
            print('book not taken')
            st="select * from readers where Name='{}'".format(name)
            cursor.execute(st)
            data=cursor.fetchall()
            for row in data:
                print(row)
        else:
            for row in data:
                print(row)

```

```

def Showall():
    root = tk.Tk()
    root.geometry("800x300")
    root.title("LIBRARY")
    root.configure(bg="sky blue")

    submitbtn1 = tk.Button(root, text ="Showing the book records",
                          bg ='blue', command = Showbooks)
    submitbtn1.place(x = 150, y = 75, width = 500)

    submitbtn2= tk.Button(root, text ="Showing the readers records",
                          bg ='red', command = Readers)
    submitbtn2.place(x = 150, y = 100, width = 500)

    submitbtn3 = tk.Button(root, text ="Showing the late records",
                          bg ='yellow', command = ShowLate)
    submitbtn3.place(x = 150, y = 125, width = 500)

    submitbtn4 = tk.Button(root, text ="Showing the lost records",
                          bg ='green', command = ShowLost)
    submitbtn4.place(x = 150, y = 150, width = 500)

    root.mainloop()

def cont():
    print('list of book ids',bnumint)
    print('list of member ids',mnint)
    #Selecting course of action
    print('Please select any of the following options to proceed')
    print('1.Manually Browse the Library''\n''2. Ask for the book status as per specifications''\n''3.Become a member''\n''4.Take Book''\n''5.Return Book'
    print('6.Add new books''\n''7.Accept fines''\n''8.Check which reader has a book''\n''9.Find a reader''\n''10.Show the tables')
    choice=int(input('enter choice'))
    if choice==1:
        #library to be browsed manually
        print('Welcome Explorer!')
    elif choice==2:
        #book status is to be asked
        print('1.Browse by Name''\n''2. Browse by author''\n''3.Browse by Publisher')
        ch=int(input('make your choice'))
        if ch==1:
            nm=input('enter name of the book')
            st="select * from availability where Name='%s'"%(nm,)
            cursor.execute(st)
            data=cursor.fetchall()
            for row in data:
                print(row)
            if data==[]:
                print('no record')
        if ch==2:
            nm=input('enter author')
            st="select * from availability where Author='%s'"%(nm,)
            cursor.execute(st)
            data=cursor.fetchall()
            for row in data:
                print(row)
            if data==[]:
                print('no record')
        if ch==3:
            nm=input('enter name of the Publisher')
            st="select * from availability where Publisher='%s'"%(nm,)
            cursor.execute(st)
            data=cursor.fetchall()
            for row in data:
                print(row)
            if data==[]:
                print('no record')

```

```

    elif choice==3:
        #new entry
        n=int(input('enter number of new entries to be made in members list'))
        for i in range (n):
            entry()
            Readers()
    elif choice==4:
        #Book to be taken
        ask=int(input('mention BookNo'))
        if ask not in bnumint:
            print('book number entered incorrectly')
        else:
            id=int(input('mention member id'))
            #checking if the reader already has a book
            x="select name from Readers where BookIssued={} and Id='{}'".format(0,id)
            cursor.execute(x)
            data=cursor.fetchall()
            if len(data)==0:
                print('first return the previous book')
            else:
                st="select * from Availability where BookNo='{}'".format(ask,)
                cursor.execute(st)
                data=cursor.fetchall()
                for row in data:
                    print(row)
                #checking if at least one copy of the required book is available
                m="select NoOfCopies from Availability where BookNo='{}'".format(ask,)
                cursor.execute(m)
                data=cursor.fetchall()
                for row in data:
                    j=int(row[0])
                    print('number of copies left presently',j)
                if j!=0:
                    st="update Readers set BookIssued={}, DateOfIssue=now(), DateOfReturn=date_add(now(), interval 15 day) where Id='{}'".format(ask,id)
                    cursor.execute(st)
                    mycon.commit()
                    Readers()
                    #Readers table updated
                    st="update Availability set NoOfCopies={} where BookNo='{}'".format(j-1,ask)
                    cursor.execute(st)
                    mycon.commit()
                    print('now showing the resultant stock')
                    Showbooks()
                    #Availability table updated
                elif j==0:
                    print('Sorry...no more copy of this book is present now.')
    elif choice==5:
        #Book to be returned
        id=int(input('mention reader id'))
        if id not in mnint:
            print('invalid reader id')
        else:
            x="select name from Readers where BookIssued={} and Id='{}'".format(0,id)
            cursor.execute(x)
            data=cursor.fetchall()
            if len(data)!=0:
                print('book not taken yet')
            else:
                x="select BookIssued from Readers where Id='{}'".format(id)
                cursor.execute(x)
                data=cursor.fetchall()
                y=0
                for row in data:
                    y=int(row[0])
                bookno=y
                print('book taken is',bookno)
                st="select * from Availability where BookNo='{}'".format(bookno,)
                cursor.execute(st)
                data=cursor.fetchall()
                for row in data:
                    print(row)
                st="update Readers set BookIssued={}, DateOfIssue='{}', DateOfReturn='{}' where Id='{}'".format(0,'00-00-00','00-00-00',id)
                cursor.execute(st)
                mycon.commit()
                print('now showing the Readers table')
                Readers()
                #Readers table updated
                m="select NoOfCopies from Availability where BookNo='{}'".format(bookno,)
                cursor.execute(m)
                data=cursor.fetchall()
                j=0
                print(data)
                for row in data:
                    j=int(row[0])
                st="update Availability set NoOfCopies={} where BookNo='{}'".format(j+1,bookno)
                cursor.execute(st)
                mycon.commit()
                print('showing the resultant stock')
                Showbooks()
                #Availability table updated

```

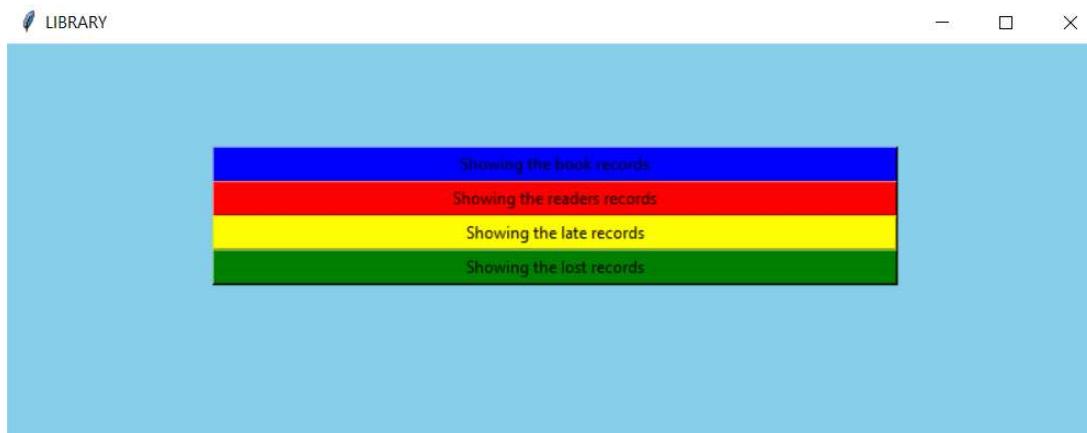
```

elif choice==6:
    choice=input('enter a new book? y or n')
    if choice=='y':
        bookentry()
    else:
        update()
    Showbooks()
elif choice==7:
    #to work out fines: to update the fines table, to delete the record when a fine is paid
    print('Please select any of the following options to proceed')
    print('1.enter record in Late''\n''2. Delete record from Late''\n''3.enter record in Lost''\n''4.Delete record from Lost''\n')
    ch=int(input('enter option'))
    if ch==1:
        lateInput()
    elif ch==2:
        lateOut()
    elif ch==3:
        lostInput()
    else:
        lostOut()
elif choice==8:
    print('showing status of the required book')
    readbook()
elif choice==9:
    findreader()
elif choice==10:
    print('1.Show all books?''\n''2.Show all readers''\n''3.show late records''\n''10.show lost records')
    ch=int(input('enter choice'))
    if ch==1:
        Showbooks()
    elif ch==2:
        Readers()
    elif ch==3:
        ShowLate()
    else:
        ShowLost()
else:
    print('invalid option chosen')

#showing all tables
Showall()
flag=1
while flag==1:
    cont()
    print('\n')
    ask=input('continue? y/n')
    print('\n')
    if ask=='y':
        flag=1
        continue
    else:
        flag=0
        break

```

# OUTPUT SCREEN (PYTHON)



```
Python 3.7.3 (v3.7.3:ef4ec6ed12, Mar 25 2019, 21:26:53) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:\Users\RIDDHI_RUCHIRA\Desktop\Computer Project\FINALESTCode.py =
successfully connected mysql and python
books:-
(1101, 'Fantastic Beasts and Where to Find Them', 'J.K. Rowling', 'Bloomsbury', 400.0, 10, 'y')
(1821, 'One Indian Girl', 'Chetan Bhagat', 'Rupa', 350.0, 15, 'y')
(1901, 'Palace Of Illusions', 'Chitra D', 'Rupa', 400.0, 10, 'y')
(1911, 'Sister Of My Heart', 'Chitra D', 'Rupa', 300.0, 15, 'y')
(2011, 'Fangirl', 'Rainbow Rowell', 'Rupa', 410.0, 15, 'y')
(2032, 'Quidditch Through The Ages', 'J.K. Rowling', 'Bloomsbury', 400.0, 10, 'y')
(2040, 'Divergent', 'Veronica Roth', 'Scholastic', 350.0, 10, 'y')
(2050, 'Hunger Games', 'Suzanne Collins', 'Scholastic', 400.0, 10, 'y')
(2100, 'Eleanor and Park', 'Rainbow Rowell', 'McMillan', 450.0, 11, 'y')
(2312, 'Insurgent', 'Veronica Roth', 'Scholastic', 400.0, 10, 'y')
(2313, 'Allegiant', 'Veronica Roth', 'Scholastic', 400.0, 10, 'y')
(2314, 'Delirium', 'Lauren Oliver', 'Scholastic', 350.0, 10, 'y')
(2315, 'Pandemonium', 'Lauren Oliver', 'Scholastic', 350.0, 10, 'y')
(2316, 'Requiem', 'Lauren Oliver', 'Scholastic', 400.0, 6, 'y')
(2317, 'Tale of Beedle the Bard and other stories', 'J.K. Rowling', 'Bloomsbury', 400.0, 15, 'y')

readers:-
('Harry', 1, 0, None, None)
('Ron', 2, 0, None, None)
('hermione', 3, 0, None, None)
('Louis', 4, 0, None, None)
('Ginny', 5, 0, None, None)
('Neville', 6, 0, None, None)
('Alex', 7, 0, None, None)
('Draco', 8, 0, None, None)
('Millicent', 9, 0, None, None)
('Astoria', 10, 0, None, None)
('Cedric', 11, 0, None, None)
('Iarina', 12, 0, None, None)
('Dharia', 13, 0, None, None)

late records:-
no record

lost records:-
no record
```

```
list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314, 2315, 2316, 2317]
list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13]
Please select any of the following options to proceed
1.Manually Browse the Library
2. Ask for the book status as per specifications
3.Become a member
4.Take Book
5.Return Book
6.Add new books
7.Accept fines
8.Check which reader has a book
9.Find a reader
10.Show the tables
enter choice1
Welcome Explorer!
```

```
continue? y/ny
```

```
list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314, 2315, 2316, 2317]
list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13]
Please select any of the following options to proceed
1.Manually Browse the Library
2. Ask for the book status as per specifications
3.Become a member
4.Take Book
5.Return Book
6.Add new books
7.Accept fines
8.Check which reader has a book
9.Find a reader
10.Show the tables
enter choice2
1.Browse by Name
2. Browse by author
3.Browse by Publisher
make your choice1
enter name of the bookFangirl
(2011, 'Fangirl', 'Rainbow Rowell', 'Rupa', 410.0, 15, 'y')
```

```
continue? y/ny
```

```
list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314, 2315, 2316, 2317]
list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13]
Please select any of the following options to proceed
1.Manually Browse the Library
2. Ask for the book status as per specifications
3.Become a member
4.Take Book
5.Return Book
6.Add new books
7.Accept fines
8.Check which reader has a book
9.Find a reader
10.Show the tables
enter choice2
1.Browse by Name
2. Browse by author
3.Browse by Publisher
make your choice2
enter authorMac
no record
```

```
continue? y/ny
```

```

list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314, 2315, 2316, 2317]
list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13]
Please select any of the following options to proceed
1.Manually Browse the Library
2. Ask for the book status as per specifications
3.Become a member
4.Take Book
5.Return Book
6.Add new books
7.Accept fines
8.Check which reader has a book
9.Find a reader
10.Show the tables
enter choice3
enter number of new entries to be made in members list2
enter member nameLiam
enter member nameRalph
readers:-
('Harry', 1, 0, None, None)
('Ron', 2, 0, None, None)
('hermione', 3, 0, None, None)
('Louis', 4, 0, None, None)
('Ginny', 5, 0, None, None)
('Neville', 6, 0, None, None)
('Alex', 7, 0, None, None)
('Draco', 8, 0, None, None)
('Millicent', 9, 0, None, None)
('Astoria', 10, 0, None, None)
('Cedric', 11, 0, None, None)
('Iarina', 12, 0, None, None)
('Dharia', 13, 0, None, None)
('Liam', 14, 0, None, None)
('Ralph', 15, 0, None, None)

continue? y/ny

list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314, 2315, 2316, 2317]
list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]
Please select any of the following options to proceed
1.Manually Browse the Library
2. Ask for the book status as per specifications
3.Become a member
4.Take Book
5.Return Book
6.Add new books
7.Accept fines
8.Check which reader has a book
9.Find a reader
10.Show the tables
enter choice4
mention BookNo1101
mention member id1
(1101, 'Fantastic Beasts and Where to Find Them', 'J.K. Rowling', 'Bloomsbury', 400.0, 10, 'y')
number of copies left presently 10
readers:-
('Harry', 1, 1101, datetime.date(2020, 12, 1), datetime.date(2020, 12, 16))
('Ron', 2, 0, None, None)
('hermione', 3, 0, None, None)
('Louis', 4, 0, None, None)
('Ginny', 5, 0, None, None)
('Neville', 6, 0, None, None)
('Alex', 7, 0, None, None)
('Draco', 8, 0, None, None)
('Millicent', 9, 0, None, None)
('Astoria', 10, 0, None, None)
('Cedric', 11, 0, None, None)
('Iarina', 12, 0, None, None)
('Dharia', 13, 0, None, None)
('Liam', 14, 0, None, None)
('Ralph', 15, 0, None, None)

now showing the resultant stock
books:-
(1101, 'Fantastic Beasts and Where to Find Them', 'J.K. Rowling', 'Bloomsbury', 400.0, 9, 'y')
(1821, 'One Indian Girl', 'Chetan Bhagat', 'Rupa', 350.0, 15, 'y')
(1901, 'Palace Of Illusions', 'Chitra D', 'Rupa', 400.0, 10, 'y')
(1911, 'Sister Of My Heart', 'Chitra D', 'Rupa', 300.0, 15, 'y')
(2011, 'Fangirl', 'Rainbow Rowell', 'Rupa', 410.0, 15, 'y')
(2032, 'Quidditch Through The Ages', 'J.K. Rowling', 'Bloomsbury', 400.0, 10, 'y')
(2040, 'Divergent', 'Veronica Roth', 'Scholastic', 350.0, 10, 'y')
(2050, 'Hunger Games', 'Suzanne Collins', 'Scholastic', 400.0, 10, 'y')
(2100, 'Eleanor and Park', 'Rainbow Rowell', 'McMillan', 450.0, 11, 'y')
(2312, 'Insurgent', 'Veronica Roth', 'Scholastic', 400.0, 10, 'y')
(2313, 'Allegiant', 'Veronica Roth', 'Scholastic', 400.0, 10, 'y')
(2314, 'Delirium', 'Lauren Oliver', 'Scholastic', 350.0, 10, 'y')
(2315, 'Pandemonium', 'Lauren Oliver', 'Scholastic', 350.0, 10, 'y')
(2316, 'Requiem', 'Lauren Oliver', 'Scholastic', 400.0, 6, 'y')
(2317, 'Tale of Beedle the Bard and other stories', 'J.K. Rowling', 'Bloomsbury', 400.0, 15, 'y')

```

```
continue? y/ny
```

```
list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314, 2315, 2316, 2317]
list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]
Please select any of the following options to proceed
1.Manually Browse the Library
2. Ask for the book status as per specifications
3.Become a member
4.Take Book
5.Return Book
6.Add new books
7.Accept fines
8.Check which reader has a book
9.Find a reader
10.Show the tables
enter choice4
mention BookNo2021
book number entered incorrectly
```

```
continue? y/ny
```

```
list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314, 2315, 2316, 2317]
list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]
Please select any of the following options to proceed
1.Manually Browse the Library
2. Ask for the book status as per specifications
3.Become a member
4.Take Book
5.Return Book
6.Add new books
7.Accept fines
8.Check which reader has a book
9.Find a reader
10.Show the tables
enter choice4
mention BookNo1101
mention member id1
first return the previous book
```

continue? y/ny

```
list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314, 2315, 2316, 2317]
list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]
Please select any of the following options to proceed
1.Manually Browse the Library
2. Ask for the book status as per specifications
3.Become a member
4.Take Book
5.Return Book
6.Add new books
7.Accept fines
8.Check which reader has a book
9.Find a reader
10.Show the tables
enter choice4
mention BookNo1821
mention member id14
(1821, 'One Indian Girl', 'Chetan Bhagat', 'Rupa', 350.0, 15, 'y')
number of copies left presently 15
readers:-
('Harry', 1, 1101, datetime.date(2020, 12, 1), datetime.date(2020, 12, 16))
('Ron', 2, 0, None, None)
('hermione', 3, 0, None, None)
('Louis', 4, 0, None, None)
('Ginny', 5, 0, None, None)
('Neville', 6, 0, None, None)
('Alex', 7, 0, None, None)
('Draco', 8, 0, None, None)
('Milicent', 9, 0, None, None)
('Astoria', 10, 0, None, None)
('Cedric', 11, 0, None, None)
('Iarina', 12, 0, None, None)
('Dharia', 13, 0, None, None)
('Liam', 14, 1821, datetime.date(2020, 12, 1), datetime.date(2020, 12, 16))
('Ralph', 15, 0, None, None)
```

now showing the resultant stock

books:-

```
(1101, 'Fantastic Beasts and Where to Find Them', 'J.K. Rowling', 'Bloomsbury', 400.0, 9, 'y')
(1821, 'One Indian Girl', 'Chetan Bhagat', 'Rupa', 350.0, 14, 'y')
(1901, 'Palace Of Illusions', 'Chitra D', 'Rupa', 400.0, 10, 'y')
(1911, 'Sister Of My Heart', 'Chitra D', 'Rupa', 300.0, 15, 'y')
(2011, 'Fangirl', 'Rainbow Rowell', 'Rupa', 410.0, 15, 'y')
(2032, 'Quidditch Through The Ages', 'J.K. Rowling', 'Bloomsbury', 400.0, 10, 'y')
(2040, 'Divergent', 'Veronica Roth', 'Scholastic', 350.0, 10, 'y')
(2050, 'Hunger Games', 'Suzanne Collins', 'Scholastic', 400.0, 10, 'y')
(2100, 'Eleanor and Park', 'Rainbow Rowell', 'McMillan', 450.0, 11, 'y')
(2312, 'Insurgent', 'Veronica Roth', 'Scholastic', 400.0, 10, 'y')
(2313, 'Allegiant', 'Veronica Roth', 'Scholastic', 400.0, 10, 'y')
(2314, 'Delirium', 'Lauren Oliver', 'Scholastic', 350.0, 10, 'y')
(2315, 'Pandemonium', 'Lauren Oliver', 'Scholastic', 350.0, 10, 'y')
(2316, 'Requiem', 'Lauren Oliver', 'Scholastic', 400.0, 6, 'y')
(2317, 'Tale of Beedle the Bard and other stories', 'J.K. Rowling', 'Bloomsbury', 400.0, 15, 'y')
```

continue? y/ny

```
list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314, 2315, 2316, 2317]
list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]
Please select any of the following options to proceed
1.Manually Browse the Library
2. Ask for the book status as per specifications
3.Become a member
4.Take Book
5.Return Book
6.Add new books
7.Accept fines
8.Check which reader has a book
9.Find a reader
10.Show the tables
enter choice5
mention reader id2
book not taken yet
```

```
continue? y/ny
```

```
list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314, 2315, 2316, 2317]
list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]
Please select any of the following options to proceed
1.Manually Browse the Library
2. Ask for the book status as per specifications
3.Become a member
4.Take Book
5.Return Book
6.Add new books
7.Accept fines
8.Check which reader has a book
9.Find a reader
10.Show the tables
enter choice5
mention reader id1
book taken is 1101
(1101, 'Fantastic Beasts and Where to Find Them', 'J.K. Rowling', 'Bloomsbury', 400.0, 9, 'y')
now showing the Readers table
readers:-
('Harry', 1, 0, None, None)
('Ron', 2, 0, None, None)
('hermione', 3, 0, None, None)
('Louis', 4, 0, None, None)
('Ginny', 5, 0, None, None)
('Neville', 6, 0, None, None)
('Alex', 7, 0, None, None)
('Draco', 8, 0, None, None)
('Milicent', 9, 0, None, None)
('Astoria', 10, 0, None, None)
('Cedric', 11, 0, None, None)
('Iarina', 12, 0, None, None)
('Dharia', 13, 0, None, None)
('Liam', 14, 1821, datetime.date(2020, 12, 1), datetime.date(2020, 12, 16))
('Ralph', 15, 0, None, None)

showing the resultant stock
books:-
(1101, 'Fantastic Beasts and Where to Find Them', 'J.K. Rowling', 'Bloomsbury', 400.0, 10, 'y')
(1821, 'One Indian Girl', 'Chetan Bhagat', 'Rupa', 350.0, 14, 'y')
(1901, 'Palace Of Illusions', 'Chitra D', 'Rupa', 400.0, 10, 'y')
(1911, 'Sister Of My Heart', 'Chitra D', 'Rupa', 300.0, 15, 'y')
(2011, 'Fangirl', 'Rainbow Rowell', 'Rupa', 410.0, 15, 'y')
(2032, 'Quidditch Through The Ages', 'J.K. Rowling', 'Bloomsbury', 400.0, 10, 'y')
(2040, 'Divergent', 'Veronica Roth', 'Scholastic', 350.0, 10, 'y')
(2050, 'Hunger Games', 'Suzanne Collins', 'Scholastic', 400.0, 10, 'y')
(2100, 'Eleanor and Park', 'Rainbow Rowell', 'McMillan', 450.0, 11, 'y')
(2312, 'Insurgent', 'Veronica Roth', 'Scholastic', 400.0, 10, 'y')
(2313, 'Allegiant', 'Veronica Roth', 'Scholastic', 400.0, 10, 'y')
(2314, 'Delirium', 'Lauren Oliver', 'Scholastic', 350.0, 10, 'y')
(2315, 'Pandemonium', 'Lauren Oliver', 'Scholastic', 350.0, 10, 'y')
(2316, 'Requiem', 'Lauren Oliver', 'Scholastic', 400.0, 6, 'y')
(2317, 'Tale of Beedle the Bard and other stories', 'J.K. Rowling', 'Bloomsbury', 400.0, 15, 'y')
```

continue? y/ny

```
list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314, 2315, 2316, 2317]
list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]
Please select any of the following options to proceed
1.Manually Browse the Library
2. Ask for the book status as per specifications
3.Become a member
4.Take Book
5.Return Book
6.Add new books
7.Accept fines
8.Check which reader has a book
9.Find a reader
10.Show the tables
enter choice6
enter a new book? y or ny
enter number of distinct books to be added1
enter book nameAllegiant
enter author nameVeronica Roth
enter name of publisherScholastic
enter cost400
enter number of copies10
enter statusy
books:-
(1101, 'Fantastic Beasts and Where to Find Them', 'J.K. Rowling', 'Bloomsbury', 400.0, 10, 'y')
(1821, 'One Indian Girl', 'Chetan Bhagat', 'Rupa', 350.0, 14, 'y')
(1901, 'Palace Of Illusions', 'Chitra D', 'Rupa', 400.0, 10, 'y')
(1911, 'Sister Of My Heart', 'Chitra D', 'Rupa', 300.0, 15, 'y')
(2011, 'Fangirl', 'Rainbow Rowell', 'Rupa', 410.0, 15, 'y')
(2032, 'Quidditch Through The Ages', 'J.K. Rowling', 'Bloomsbury', 400.0, 10, 'Y')
(2040, 'Divergent', 'Veronica Roth', 'Scholastic', 350.0, 10, 'y')
(2050, 'Hunger Games', 'Suzanne Collins', 'Scholastic', 400.0, 10, 'y')
(2100, 'Eleanor and Park', 'Rainbow Rowell', 'McMillan', 450.0, 11, 'y')
(2312, 'Insurgent', 'Veronica Roth', 'Scholastic', 400.0, 10, 'y')
(2313, 'Allegiant', 'Veronica Roth', 'Scholastic', 400.0, 10, 'y')
(2314, 'Delirium', 'Lauren Oliver', 'Scholastic', 350.0, 10, 'y')
(2315, 'Pandemonium', 'Lauren Oliver', 'Scholastic', 350.0, 10, 'y')
(2316, 'Requiem', 'Lauren Oliver', 'Scholastic', 400.0, 6, 'y')
(2317, 'Tale of Beedle the Bard and other stories', 'J.K. Rowling', 'Bloomsbury', 400.0, 15, 'y')
```

continue? y/ny

```
list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314, 2315, 2316, 2317]
list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]
Please select any of the following options to proceed
1.Manually Browse the Library
2. Ask for the book status as per specifications
3.Become a member
4.Take Book
5.Return Book
6.Add new books
7.Accept fines
8.Check which reader has a book
9.Find a reader
10.Show the tables
enter choice6
enter a new book? y or nn
enter book nameFangirl
enter number of copies of the book to be added10
books:-
(1101, 'Fantastic Beasts and Where to Find Them', 'J.K. Rowling', 'Bloomsbury', 400.0, 10, 'y')
(1821, 'One Indian Girl', 'Chetan Bhagat', 'Rupa', 350.0, 14, 'y')
(1901, 'Palace Of Illusions', 'Chitra D', 'Rupa', 400.0, 10, 'y')
(1911, 'Sister Of My Heart', 'Chitra D', 'Rupa', 300.0, 15, 'y')
(2011, 'Fangirl', 'Rainbow Rowell', 'Rupa', 410.0, 25, 'y')
(2032, 'Quidditch Through The Ages', 'J.K. Rowling', 'Bloomsbury', 400.0, 10, 'y')
(2040, 'Divergent', 'Veronica Roth', 'Scholastic', 350.0, 10, 'y')
(2050, 'Hunger Games', 'Suzanne Collins', 'Scholastic', 400.0, 10, 'y')
(2100, 'Eleanor and Park', 'Rainbow Rowell', 'McMillan', 450.0, 11, 'y')
(2312, 'Insurgent', 'Veronica Roth', 'Scholastic', 400.0, 10, 'y')
(2313, 'Allegiant', 'Veronica Roth', 'Scholastic', 400.0, 10, 'y')
(2314, 'Delirium', 'Lauren Oliver', 'Scholastic', 350.0, 10, 'y')
(2315, 'Pandemonium', 'Lauren Oliver', 'Scholastic', 350.0, 10, 'y')
(2316, 'Requiem', 'Lauren Oliver', 'Scholastic', 400.0, 6, 'y')
(2317, 'Tale of Beedle the Bard and other stories', 'J.K. Rowling', 'Bloomsbury', 400.0, 15, 'y')
```

```
continue? y/ny
```

```
list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314, 2315, 2316, 2317]
list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]
```

```
Please select any of the following options to proceed
```

- 1.Manually Browse the Library
2. Ask for the book status as per specifications
- 3.Become a member
- 4.Take Book
- 5.Return Book
- 6.Add new books
- 7.Accept fines
- 8.Check which reader has a book
- 9.Find a reader
- 10.Show the tables

```
enter choice7
```

```
Please select any of the following options to proceed
```

- 1.enter record in Late
2. Delete record from Late
- 3.enter record in Lost
- 4.Delete record from Lost

```
enter option1
```

```
enter member id1
```

```
Book not issued to this reader
```

```
continue? y/ny
```

```
list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314, 2315, 2316, 2317]
list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]
```

```
Please select any of the following options to proceed
```

- 1.Manually Browse the Library
2. Ask for the book status as per specifications
- 3.Become a member
- 4.Take Book
- 5.Return Book
- 6.Add new books
- 7.Accept fines
- 8.Check which reader has a book
- 9.Find a reader
- 10.Show the tables

```
enter choice7
```

```
Please select any of the following options to proceed
```

- 1.enter record in Late
2. Delete record from Late
- 3.enter record in Lost
- 4.Delete record from Lost

```
enter option1
```

```
enter member id14
```

```
tentative date of return was 2020-12-16
```

```
enter today's date in the format: YYYY-MM-DD2020-12-23
```

```
Today is 2020-12-23
```

```
today 2020 - 12 - 23
```

```
return date 2020 - 12 - 16
```

```
number of days done away= 7
```

```
late records:-
```

```
(1821, 14, 14)
```

```
readers:-
```

```
('Harry', 1, 0, None, None)
('Ron', 2, 0, None, None)
('hermione', 3, 0, None, None)
('Louis', 4, 0, None, None)
('Ginny', 5, 0, None, None)
('Neville', 6, 0, None, None)
('Alex', 7, 0, None, None)
('Draco', 8, 0, None, None)
('Millicent', 9, 0, None, None)
('Astoria', 10, 0, None, None)
('Cedric', 11, 0, None, None)
('Iarina', 12, 0, None, None)
('Dharia', 13, 0, None, None)
('Liam', 14, 0, None, None)
('Ralph', 15, 0, None, None)
```

```
continue? y/ny

list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314, 2315, 2316, 2317]
list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]
Please select any of the following options to proceed
1.Manually Browse the Library
2. Ask for the book status as per specifications
3.Become a member
4.Take Book
5.Return Book
6.Add new books
7.Accept fines
8.Check which reader has a book
9.Find a reader
10.Show the tables
enter choice7
Please select any of the following options to proceed
1.enter record in Late
2. Delete record from Late
3.enter record in Lost
4.Delete record from Lost

enter option2
enter member id12
no records found in late list
continue? y/ny

list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314, 2315, 2316, 2317]
list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]
Please select any of the following options to proceed
1.Manually Browse the Library
2. Ask for the book status as per specifications
3.Become a member
4.Take Book
5.Return Book
6.Add new books
7.Accept fines
8.Check which reader has a book
9.Find a reader
10.Show the tables
enter choice7
Please select any of the following options to proceed
1.enter record in Late
2. Delete record from Late
3.enter record in Lost
4.Delete record from Lost

enter option2
enter member id14
late records:-
no record

removing member from LateFine list
showing the resultant stock
books:-
(1101, 'Fantastic Beasts and Where to Find Them', 'J.K. Rowling', 'Bloomsbury', 400.0, 10, 'y')
(1821, 'One Indian Girl', 'Chetan Bhagat', 'Rupa', 350.0, 15, 'y')
(1901, 'Palace Of Illusions', 'Chitra D', 'Rupa', 400.0, 10, 'y')
(1911, 'Sister Of My Heart', 'Chitra D', 'Rupa', 300.0, 15, 'y')
(2011, 'Fangirl', 'Rainbow Rowell', 'Rupa', 410.0, 25, 'y')
(2032, 'Quidditch Through The Ages', 'J.K. Rowling', 'Bloomsbury', 400.0, 10, 'y')
(2040, 'Divergent', 'Veronica Roth', 'Scholastic', 350.0, 10, 'y')
(2050, 'Hunger Games', 'Suzanne Collins', 'Scholastic', 400.0, 10, 'y')
(2100, 'Eleanor and Park', 'Rainbow Rowell', 'McMillan', 450.0, 11, 'y')
(2312, 'Insurgent', 'Veronica Roth', 'Scholastic', 400.0, 10, 'y')
(2313, 'Allegiant', 'Veronica Roth', 'Scholastic', 400.0, 10, 'y')
(2314, 'Delirium', 'Lauren Oliver', 'Scholastic', 350.0, 10, 'y')
(2315, 'Pandemonium', 'Lauren Oliver', 'Scholastic', 350.0, 10, 'y')
(2316, 'Requiem', 'Lauren Oliver', 'Scholastic', 400.0, 6, 'y')
(2317, 'Tale of Beedle the Bard and other stories', 'J.K. Rowling', 'Bloomsbury', 400.0, 15, 'y')
```

```
continue? y/ny
```

```
list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314, 2315, 2316, 2317]  
list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]
```

```
Please select any of the following options to proceed
```

- 1.Manually Browse the Library
2. Ask for the book status as per specifications

```
3.Become a member
```

```
4.Take Book
```

```
5.Return Book
```

```
6.Add new books
```

```
7.Accept fines
```

```
8.Check which reader has a book
```

```
9.Find a reader
```

```
10.Show the tables
```

```
enter choice4
```

```
mention BookNo2100
```

```
mention member id1
```

```
(2100, 'Eleanor and Park', 'Rainbow Rowell', 'McMillan', 450.0, 11, 'y')
```

```
number of copies left presently 11
```

```
readers:-
```

```
('Harry', 1, 2100, datetime.date(2020, 12, 1), datetime.date(2020, 12, 16))  
('Ron', 2, 0, None, None)  
('hermione', 3, 0, None, None)  
('Louis', 4, 0, None, None)  
('Ginny', 5, 0, None, None)  
('Neville', 6, 0, None, None)  
('Alex', 7, 0, None, None)  
('Draco', 8, 0, None, None)  
('Millicent', 9, 0, None, None)  
('Astoria', 10, 0, None, None)  
('Cedric', 11, 0, None, None)  
('Iarina', 12, 0, None, None)  
('Dharia', 13, 0, None, None)  
('Liam', 14, 0, None, None)  
('Ralph', 15, 0, None, None)
```

```
now showing the resultant stock
```

```
books:-
```

```
(1101, 'Fantastic Beasts and Where to Find Them', 'J.K. Rowling', 'Bloomsbury', 400.0, 10, 'y')  
(1821, 'One Indian Girl', 'Chetan Bhagat', 'Rupa', 350.0, 15, 'y')  
(1901, 'Palace Of Illusions', 'Chitra D', 'Rupa', 400.0, 10, 'y')  
(1911, 'Sister Of My Heart', 'Chitra D', 'Rupa', 300.0, 15, 'y')  
(2011, 'Fangirl', 'Rainbow Rowell', 'Rupa', 410.0, 25, 'y')  
(2032, 'Quidditch Through The Ages', 'J.K. Rowling', 'Bloomsbury', 400.0, 10, 'y')  
(2040, 'Divergent', 'Veronica Roth', 'Scholastic', 350.0, 10, 'y')  
(2050, 'Hunger Games', 'Suzanne Collins', 'Scholastic', 400.0, 10, 'y')  
(2100, 'Eleanor and Park', 'Rainbow Rowell', 'McMillan', 450.0, 10, 'y')  
(2312, 'Insurgent', 'Veronica Roth', 'Scholastic', 400.0, 10, 'y')  
(2313, 'Allegiant', 'Veronica Roth', 'Scholastic', 400.0, 10, 'y')  
(2314, 'Delirium', 'Lauren Oliver', 'Scholastic', 350.0, 10, 'y')  
(2315, 'Pandemonium', 'Lauren Oliver', 'Scholastic', 350.0, 10, 'y')  
(2316, 'Requiem', 'Lauren Oliver', 'Scholastic', 400.0, 6, 'y')  
(2317, 'Tale of Beedle the Bard and other stories', 'J.K. Rowling', 'Bloomsbury', 400.0, 15, 'y')
```

```
continue? y/ny
```

```
list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314, 2315, 2316, 2317]
```

```
list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]
```

```
Please select any of the following options to proceed
```

- 1.Manually Browse the Library
2. Ask for the book status as per specifications

```
3.Become a member
```

```
4.Take Book
```

```
5.Return Book
```

```
6.Add new books
```

```
7.Accept fines
```

```
8.Check which reader has a book
```

```
9.Find a reader
```

```
10.Show the tables
```

```
enter choice7
```

```
Please select any of the following options to proceed
```

- 1.enter record in Late
2. Delete record from Late

```
3.enter record in Lost
```

```
4.Delete record from Lost
```

```
enter option3
```

```
enter member id2
```

```
no records found in lost
```

CONTINUE? Y/N

list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314, 2315, 2316, 2317]

list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]

Please select any of the following options to proceed

- 1.Manually Browse the Library
2. Ask for the book status as per specifications

3.Become a member

4.Take Book

5.Return Book

6.Add new books

7.Accept fines

8.Check which reader has a book

9.Find a reader

10.Show the tables

enter choice4

mention BookNo1101

mention member id1

(1101, 'Fantastic Beasts and Where to Find Them', 'J.K. Rowling', 'Bloomsbury', 400.0, 10, 'y')

number of copies left presently 10

readers:-

('Harry', 1, 1101, datetime.date(2020, 12, 1), datetime.date(2020, 12, 16))

('Ron', 2, 0, None, None)

('hermione', 3, 0, None, None)

('Louis', 4, 0, None, None)

('Ginny', 5, 0, None, None)

('Neville', 6, 0, None, None)

('Alex', 7, 0, None, None)

('Draco', 8, 0, None, None)

('Milicent', 9, 0, None, None)

('Astoria', 10, 0, None, None)

('Cedric', 11, 0, None, None)

('Iarina', 12, 0, None, None)

('Dharia', 13, 0, None, None)

('Liam', 14, 0, None, None)

('Ralph', 15, 0, None, None)

now showing the resultant stock

books:-

(1101, 'Fantastic Beasts and Where to Find Them', 'J.K. Rowling', 'Bloomsbury', 400.0, 9, 'Y')

(1821, 'One Indian Girl', 'Chetan Bhagat', 'Rupa', 350.0, 15, 'y')

(1901, 'Palace Of Illusions', 'Chitra D', 'Rupa', 400.0, 10, 'y')

(1911, 'Sister Of My Heart', 'Chitra D', 'Rupa', 300.0, 15, 'y')

(2011, 'Fangirl', 'Rainbow Rowell', 'Rupa', 410.0, 25, 'y')

(2032, 'Quidditch Through The Ages', 'J.K. Rowling', 'Bloomsbury', 400.0, 10, 'y')

(2040, 'Divergent', 'Veronica Roth', 'Scholastic', 350.0, 10, 'y')

(2050, 'Hunger Games', 'Suzanne Collins', 'Scholastic', 400.0, 10, 'y')

(2100, 'Eleanor and Park', 'Rainbow Rowell', 'McMillan', 450.0, 11, 'y')

(2312, 'Insurgent', 'Veronica Roth', 'Scholastic', 400.0, 10, 'y')

(2313, 'Allegiant', 'Veronica Roth', 'Scholastic', 400.0, 10, 'y')

(2314, 'Delirium', 'Lauren Oliver', 'Scholastic', 350.0, 10, 'y')

(2315, 'Pandemonium', 'Lauren Oliver', 'Scholastic', 350.0, 10, 'y')

(2316, 'Requiem', 'Lauren Oliver', 'Scholastic', 400.0, 6, 'y')

(2317, 'Tale of Beedle the Bard and other stories', 'J.K. Rowling', 'Bloomsbury', 400.0, 15, 'y')

continue? y/n/y

list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314, 2315, 2316, 2317]

list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]

Please select any of the following options to proceed

- 1.Manually Browse the Library
2. Ask for the book status as per specifications

3.Become a member

4.Take Book

5.Return Book

6.Add new books

7.Accept fines

8.Check which reader has a book

9.Find a reader

10.Show the tables

enter choice4

mention BookNo1821

mention member id2

(1821, 'One Indian Girl', 'Chetan Bhagat', 'Rupa', 350.0, 15, 'y')

number of copies left presently 15

readers:-

('Harry', 1, 1101, datetime.date(2020, 12, 1), datetime.date(2020, 12, 16))

('Ron', 2, 1821, datetime.date(2020, 12, 1), datetime.date(2020, 12, 16))

('hermione', 3, 0, None, None)

('Louis', 4, 0, None, None)

('Ginny', 5, 0, None, None)

('Neville', 6, 0, None, None)

('Alex', 7, 0, None, None)

('Draco', 8, 0, None, None)

('Milicent', 9, 0, None, None)

('Astoria', 10, 0, None, None)

('Cedric', 11, 0, None, None)

('Iarina', 12, 0, None, None)

('Dharia', 13, 0, None, None)

('Liam', 14, 0, None, None)

('Ralph', 15, 0, None, None)

now showing the resultant stock books:-

(1101, 'Fantastic Beasts and Where to Find Them', 'J.K. Rowling', 'Bloomsbury', 400.0, 9, 'y')  
(1821, 'One Indian Girl', 'Chetan Bhagat', 'Rupa', 350.0, 14, 'y')  
(1901, 'Palace Of Illusions', 'Chitra D', 'Rupa', 400.0, 10, 'y')  
(1911, 'Sister Of My Heart', 'Chitra D', 'Rupa', 300.0, 15, 'y')  
(2011, 'Fangirl', 'Rainbow Rowell', 'Rupa', 410.0, 25, 'y')  
(2032, 'Quidditch Through The Ages', 'J.K. Rowling', 'Bloomsbury', 400.0, 10, 'y')  
(2040, 'Divergent', 'Veronica Roth', 'Scholastic', 350.0, 10, 'y')  
(2050, 'Hunger Games', 'Suzanne Collins', 'Scholastic', 400.0, 10, 'y')  
(2100, 'Eleanor and Park', 'Rainbow Rowell', 'McMillan', 450.0, 11, 'y')  
(2312, 'Insurgent', 'Veronica Roth', 'Scholastic', 400.0, 10, 'y')  
(2313, 'Allegiant', 'Veronica Roth', 'Scholastic', 400.0, 10, 'y')  
(2314, 'Delirium', 'Lauren Oliver', 'Scholastic', 350.0, 10, 'y')  
(2315, 'Pandemonium', 'Lauren Oliver', 'Scholastic', 350.0, 10, 'y')  
(2316, 'Requiem', 'Lauren Oliver', 'Scholastic', 400.0, 6, 'y')  
(2317, 'Tale of Beedle the Bard and other stories', 'J.K. Rowling', 'Bloomsbury', 400.0, 15, 'y')

continue? y/ny

list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314, 2315, 2316, 2317]

list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]

Please select any of the following options to proceed

1.Manually Browse the Library

2. Asf for the book status as per specifications

3.Become a member

4.Take Book

5.Return Book

6.Add new books

7.Accept fines

8.Check which reader has a book

9.Find a reader

10.Show the tables

enter choice7

Please select any of the following options to proceed

1.enter record in Late

2. Delete record from Late

3.enter record in Lost

4.Delete record from Lost

enter option3

enter member id1

tentative date of return was 2020-12-16

enter today's date in the format: YYYY-MM-DD2020-12-23

Today is 2020-12-23

today 2020 - 12 - 23

return date 2020 - 12 - 16

number of days done away= 7

lost records:-

(1101, 1, 14)

please abide by the above mentioned fine and the replace the book

books:-

(1101, 'Fantastic Beasts and Where to Find Them', 'J.K. Rowling', 'Bloomsbury', 400.0, 9, 'L')  
(1821, 'One Indian Girl', 'Chetan Bhagat', 'Rupa', 350.0, 14, 'y')  
(1901, 'Palace of Illusions', 'Chitra D', 'Rupa', 400.0, 10, 'y')  
(1911, 'Sister Of My Heart', 'Chitra D', 'Rupa', 300.0, 15, 'y')  
(2011, 'Fangirl', 'Rainbow Rowell', 'Rupa', 410.0, 25, 'y')  
(2032, 'Quidditch Through The Ages', 'J.K. Rowling', 'Bloomsbury', 400.0, 10, 'y')  
(2040, 'Divergent', 'Veronica Roth', 'Scholastic', 350.0, 10, 'y')  
(2050, 'Hunger Games', 'Suzanne Collins', 'Scholastic', 400.0, 10, 'y')  
(2100, 'Eleanor and Park', 'Rainbow Rowell', 'McMillan', 450.0, 11, 'y')  
(2312, 'Insurgent', 'Veronica Roth', 'Scholastic', 400.0, 10, 'y')  
(2313, 'Allegiant', 'Veronica Roth', 'Scholastic', 400.0, 10, 'y')  
(2314, 'Delirium', 'Lauren Oliver', 'Scholastic', 350.0, 10, 'y')  
(2315, 'Pandemonium', 'Lauren Oliver', 'Scholastic', 350.0, 10, 'y')  
(2316, 'Requiem', 'Lauren Oliver', 'Scholastic', 400.0, 6, 'y')  
(2317, 'Tale of Beedle the Bard and other stories', 'J.K. Rowling', 'Bloomsbury', 400.0, 15, 'y')

readers:-

('Harry', 1, 0, None, None)  
('Ron', 2, 1821, datetime.date(2020, 12, 1), datetime.date(2020, 12, 16))  
('hermione', 3, 0, None, None)  
('Louis', 4, 0, None, None)  
('Ginny', 5, 0, None, None)  
('Neville', 6, 0, None, None)  
('Alex', 7, 0, None, None)  
('Draco', 8, 0, None, None)  
('Millicent', 9, 0, None, None)  
('Astoria', 10, 0, None, None)  
('Cedric', 11, 0, None, None)  
('Iarina', 12, 0, None, None)  
('Dharia', 13, 0, None, None)  
('Liam', 14, 0, None, None)  
('Ralph', 15, 0, None, None)

```
list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314
list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]
Please select any of the following options to proceed
1.Manually Browse the Library
2. Ask for the book status as per specifications
3.Become a member
4.Take Book
5.Return Book
6.Add new books
7.Accept fines
8.Check which reader has a book
9.Find a reader
10.Show the tables
enter choice7
Please select any of the following options to proceed
1.enter record in Late
2. Delete record from Late
3.enter record in Lost
4.Delete record from Lost

enter option4
enter member id1
removing member from Lost list
1101
lost records:-
no record
| 

showing the resultant stock
books:-
(1101, 'Fantastic Beasts and Where to Find Them', 'J.K. Rowling', 'Bloomsbury', 400.0, 1
(1821, 'One Indian Girl', 'Chetan Bhagat', 'Rupa', 350.0, 14, 'y')
(1901, 'Palace Of Illusions', 'Chitra D', 'Rupa', 400.0, 10, 'y')
(1911, 'Sister Of My Heart', 'Chitra D', 'Rupa', 300.0, 15, 'y')
(2011, 'Fangirl', 'Rainbow Rowell', 'Rupa', 410.0, 25, 'y')
(2022, 'Quidditch Through The Ages', 'J.K. Rowling', 'Bloomsbury', 400.0, 10, 'y')
continue? y/ny
```

```
list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314
list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]
Please select any of the following options to proceed
1.Manually Browse the Library
2. Ask for the book status as per specifications
3.Become a member
4.Take Book
5.Return Book
6.Add new books
7.Accept fines
8.Check which reader has a book
9.Find a reader
10.Show the tables
enter choice7
Please select any of the following options to proceed
1.enter record in Late
2. Delete record from Late
3.enter record in Lost
4.Delete record from Lost

continue? y/ny
```

```
list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314
list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]
Please select any of the following options to proceed
1.Manually Browse the Library
2. Ask for the book status as per specifications
3.Become a member
4.Take Book
5.Return Book
6.Add new books
7.Accept fines
8.Check which reader has a book
9.Find a reader
10.Show the tables
```

```
continue? y/ny
```

```
list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314, 2315, 2316, 2317]
list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]
Please select any of the following options to proceed
1.Manually Browse the Library
2. Ask for the book status as per specifications
3.Become a member
4.Take Book
5.Return Book
6.Add new books
7.Accept fines
8.Check which reader has a book
9.Find a reader
10.Show the tables
enter choice8
showing status of the required book
enter book nameOne Indian Girl
('Ron', 2, 1821, datetime.date(2020, 12, 4), datetime.date(2020, 12, 19), 1821, 'One Indian Girl', 'Chetan Bhagat', 'Rupa', 350.0, 14, 'y')
continue? y/ny
```

```
list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314, 2315, 2316, 2317]
list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]
Please select any of the following options to proceed
1.Manually Browse the Library
2. Ask for the book status as per specifications
3.Become a member
4.Take Book
5.Return Book
6.Add new books
7.Accept fines
8.Check which reader has a book
9.Find a reader
10.Show the tables
enter choice9
enter reader nameHarry
book not taken
('Harry', 1, 0, None, None)
```

```
continue? y/ny
```

```
list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314, 2315, 2316, 2317]
list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]
Please select any of the following options to proceed
1.Manually Browse the Library
2. Ask for the book status as per specifications
3.Become a member
4.Take Book
5.Return Book
6.Add new books
7.Accept fines
8.Check which reader has a book
9.Find a reader
10.Show the tables
enter choice9
enter reader nameRon
('Ron', 2, 1821, datetime.date(2020, 12, 1), datetime.date(2020, 12, 16), 1821, 'One Indian Girl', 'Chetan Bhagat', 'Rupa', 350.0, 14, 'y')
```

```
list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314, 2315, 2316, 2317]
list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]
Please select any of the following options to proceed
```

```
1.Manually Browse the Library
2. Ask for the book status as per specifications
3.Become a member
```

```
4.Take Book
5.Return Book
6.Add new books
7.Accept fines
8.Check which reader has a book
9.Find a reader
10.Show the tables
enter choice10
```

```
1.Show all books?
2.Show all readers
3.show late records
10.show lost records
enter choice11
```

```
books:-
```

```
(1101, 'Fantastic Beasts and Where to Find Them', 'J.K. Rowling', 'Bloomsbury', 400.0, 10, 'y')
(1821, 'One Indian Girl', 'Chetan Bhagat', 'Rupa', 350.0, 14, 'y')
(1901, 'Palace of Illusions', 'Chitra D', 'Rupa', 400.0, 10, 'y')
(1911, 'Sister Of My Heart', 'Chitra D', 'Rupa', 300.0, 15, 'y')
(2011, 'Fangirl', 'Rainbow Rowell', 'Rupa', 410.0, 25, 'y')
(2032, 'Quidditch Through The Ages', 'J.K. Rowling', 'Bloomsbury', 400.0, 10, 'y')
(2040, 'Divergent', 'Veronica Roth', 'Scholastic', 350.0, 10, 'y')
(2050, 'Hunger Games', 'Suzanne Collins', 'Scholastic', 400.0, 10, 'y')
(2100, 'Eleanor and Park', 'Rainbow Rowell', 'McMillan', 450.0, 11, 'y')
(2312, 'Insurgent', 'Veronica Roth', 'Scholastic', 400.0, 10, 'y')
(2313, 'Allegiant', 'Veronica Roth', 'Scholastic', 400.0, 10, 'y')
(2314, 'Delirium', 'Lauren Oliver', 'Scholastic', 350.0, 10, 'y')
(2315, 'Pandemonium', 'Lauren Oliver', 'Scholastic', 350.0, 10, 'y')
(2316, 'Requiem', 'Lauren Oliver', 'Scholastic', 400.0, 6, 'y')
(2317, 'Tale of Beedle the Bard and other stories', 'J.K. Rowling', 'Bloomsbury', 400.0, 15, 'y')
```

```
list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314, 2315, 2316, 2317]
list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]
Please select any of the following options to proceed
1.Manually Browse the Library
2. Ask for the book status as per specifications
3.Become a member
4.Take Book
5.Return Book
6.Add new books
7.Accept fines
8.Check which reader has a book
9.Find a reader
10.Show the tables
enter choice10
1.Show all books?
2.Show all readers
3.show late records
10.show lost records
enter choice2
readers:-  
('Harry', 1, 0, None, None)
('Ron', 2, 1821, datetime.date(2020, 12, 1), datetime.date(2020, 12, 16))
('Hermione', 3, 0, None, None)
('Louis', 4, 0, None, None)
('Ginny', 5, 0, None, None)
('Neville', 6, 0, None, None)
('Alex', 7, 0, None, None)
('Draco', 8, 0, None, None)
('Millicent', 9, 0, None, None)
('Astoria', 10, 0, None, None)
('Cedric', 11, 0, None, None)
('Tina', 12, 0, None, None)
('Dharia', 13, 0, None, None)
('Liam', 14, 0, None, None)
('Ralph', 15, 0, None, None)
```

continue? y/ny

```
list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314, 2315, 2316, 2317]
list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]
Please select any of the following options to proceed
1.Manually Browse the Library
2. Ask for the book status as per specifications
3.Become a member
4.Take Book
5.Return Book
6.Add new books
7.Accept fines
8.Check which reader has a book
9.Find a reader
10.Show the tables
enter choice10
1.Show all books?
2.Show all readers
3.show late records
10.show lost records
enter choice3
late records:-  
no record
```

continue? y/ny

```
list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314, 2315, 2316, 2317]
list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]
Please select any of the following options to proceed
1.Manually Browse the Library
2. Ask for the book status as per specifications
3.Become a member
4.Take Book
5.Return Book
6.Add new books
7.Accept fines
8.Check which reader has a book
9.Find a reader
10.Show the tables
enter choice10
1.Show all books?
2.Show all readers
3.show late records
10.show lost records
enter choice4
lost records:-  
no record
```

```

continue? y/ny

list of book ids [1101, 1821, 1901, 1911, 2011, 2032, 2040, 2050, 2100, 2312, 2313, 2314, 2315, 2316, 2317]
list of member ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]
Please select any of the following options to proceed
1.Manually Browse the Library
2. Ask for the book status as per specifications
3.Become a member
4.Take Book
5.Return Book
6.Add new books
7.Accept fines
8.Check which reader has a book
9.Find a reader
10.Show the tables
enter choice2
1.Browse by Name
2. Browse by author
3.Browse by Publisher
make your choice3
enter name of the PublisherScholastic
(2040, 'Divergent', 'Veronica Roth', 'Scholastic', 350.0, 10, 'y')
(2050, 'Hunger Games', 'Suzanne Collins', 'Scholastic', 400.0, 10, 'y')
(2312, 'Insurgent', 'Veronica Roth', 'Scholastic', 400.0, 10, 'y')
(2313, 'Allegiant', 'Veronica Roth', 'Scholastic', 400.0, 10, 'y')
(2314, 'Delirium', 'Lauren Oliver', 'Scholastic', 350.0, 10, 'y')
(2315, 'Pandemonium', 'Lauren Oliver', 'Scholastic', 350.0, 10, 'y')
(2316, 'Requiem', 'Lauren Oliver', 'Scholastic', 400.0, 6, 'y')

continue? y/nn

```

>>> |

## OUTPUT SCREEN (MYSQL)

```

MySQL5.5 Command Line Client
Enter password: **

Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 68
Server version: 5.5.62 MySQL Community Server (GPL)

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> use library1;
Database changed
mysql> show tables;
+-----+
| Tables_in_library1 |
+-----+
| availability      |
| late              |
| lost              |
| readers           |
+-----+
4 rows in set (0.06 sec)

mysql> select * from availability;
+-----+
| BookNo | Name          | Author       | Publisher    | Cost | NoOfCopies | Status |
+-----+
| 1101  | Fantastic Beasts and Where to Find Them | J.K. Rowling | Bloomsbury   | 400  | 10         | y      |
| 1821  | One Indian Girl | Chetan Bhagat | Rupa        | 350  | 15         | y      |
| 1901  | Palace Of Illusions | Chitra D     | Rupa        | 400  | 10         | y      |
| 1911  | Sister Of My Heart | Chitra D     | Rupa        | 300  | 15         | y      |
| 2011  | Fangirl         | Rainbow Rowell | Rupa        | 410  | 15         | y      |
| 2032  | Quidditch Through The Ages | J.K. Rowling | Bloomsbury   | 400  | 10         | y      |
| 2040  | Divergent        | Veronica Roth | Scholastic   | 350  | 10         | y      |
| 2050  | Hunger Games    | Suzanne Collins | Scholastic   | 400  | 10         | y      |
| 2100  | Eleanor and Park | Rainbow Rowell | McMillan    | 450  | 11         | y      |
| 2200  | I Am Malala     | Malala Yousafzai | Penguin Random House | 100  | 10         | y      |
| 2312  | Insurgent        | Veronica Roth | Scholastic   | 400  | 10         | y      |
| 2313  | Allegiant        | Veronica Roth | Scholastic   | 400  | 10         | y      |
| 2314  | Delirium         | Lauren Oliver | Scholastic   | 350  | 10         | y      |
| 2315  | Pandemonium     | Lauren Oliver | Scholastic   | 350  | 10         | y      |
| 2316  | Requiem          | Lauren Oliver | Scholastic   | 400  | 6          | y      |
| 2317  | Tale of Beedle the Bard and other stories | J.K. Rowling | Bloomsbury   | 400  | 14         | y      |
+-----+
15 rows in set (0.00 sec)

mysql> select * from readers;
+-----+
|          |
+-----+

```

```

| 2312 | Insurgent | Veronica Roth | Scholastic | 400 | 16 | y |
| 2313 | Allegiant | Veronica Roth | Scholastic | 400 | 16 | y |
| 2314 | Delirium | Lauren Oliver | Scholastic | 350 | 10 | y |
| 2315 | Pandemonium | Lauren Oliver | Scholastic | 350 | 10 | y |
| 2316 | Requiem | Lauren Oliver | Scholastic | 400 | 6 | y |
| 2317 | Tale of Beedle the Bard and other stories | J.K. Rowling | Bloomsbury | 400 | 14 | y |
+-----+-----+-----+-----+-----+-----+-----+
15 rows in set (0.00 sec)

mysql> select * from readers;
+-----+-----+-----+-----+
| Name | Id | BookIssued | DateofIssue | DateofReturn |
+-----+-----+-----+-----+
| Harry | 1 | 2317 | 2020-11-25 | 2020-12-10 |
| Ron | 2 | 0 | 0000-00-00 | 0000-00-00 |
| Hermione | 3 | 0 | 0000-00-00 | 0000-00-00 |
| Louis | 4 | 0 | 0000-00-00 | 0000-00-00 |
| Gerv | 5 | 0 | 0000-00-00 | 0000-00-00 |
| Neville | 6 | 0 | 0000-00-00 | 0000-00-00 |
| Alex | 7 | 0 | 0000-00-00 | 0000-00-00 |
| Draco | 8 | 0 | 0000-00-00 | 0000-00-00 |
| Millicent | 9 | 0 | 0000-00-00 | 0000-00-00 |
| Astoria | 10 | 0 | 0000-00-00 | 0000-00-00 |
| Cedric | 11 | 0 | 0000-00-00 | 0000-00-00 |
+-----+-----+-----+-----+
11 rows in set (0.00 sec)

mysql> select * from late;
Empty set (0.00 sec)

mysql> select * from lost;
Empty set (0.00 sec)

mysql> desc availability;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| BookNo | int(11) | NO | PRI | 0 |
| Name | char(60) | YES | NULL |
| Author | char(60) | YES | NULL |
| Publisher | char(50) | YES | NULL |
| Cost | double | YES | NULL |
| NoOfCopies | int(11) | YES | NULL |
| Status | char(10) | YES | NULL |
+-----+-----+-----+-----+-----+
7 rows in set (0.18 sec)

mysql> describe readers;
+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+

```

```

MySQL 5.5 Command Line Client
mysql> select * from lost;
Empty set (0.00 sec)

mysql> desc availability;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| BookNo | int(11) | NO | PRI | 0 |
| Name | char(60) | YES | NULL |
| Author | char(60) | YES | NULL |
| Publisher | char(50) | YES | NULL |
| Cost | double | YES | NULL |
| NoOfCopies | int(11) | YES | NULL |
| Status | char(10) | YES | NULL |
+-----+-----+-----+-----+
7 rows in set (0.18 sec)

mysql> describe readers;
+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+
| Name | char(30) | YES | NULL | |
| Id | int(11) | NO | PRI | NULL |
| BookIssued | int(11) | YES | NULL |
| DateofIssue | date | YES | NULL |
| DateofReturn | date | YES | NULL |
+-----+-----+-----+-----+
5 rows in set (0.01 sec)

mysql> describe late;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| BookNo | int(11) | YES | NULL |
| Id | int(11) | YES | NULL |
| Finereqd | int(11) | YES | NULL |
+-----+-----+-----+-----+
3 rows in set (0.02 sec)

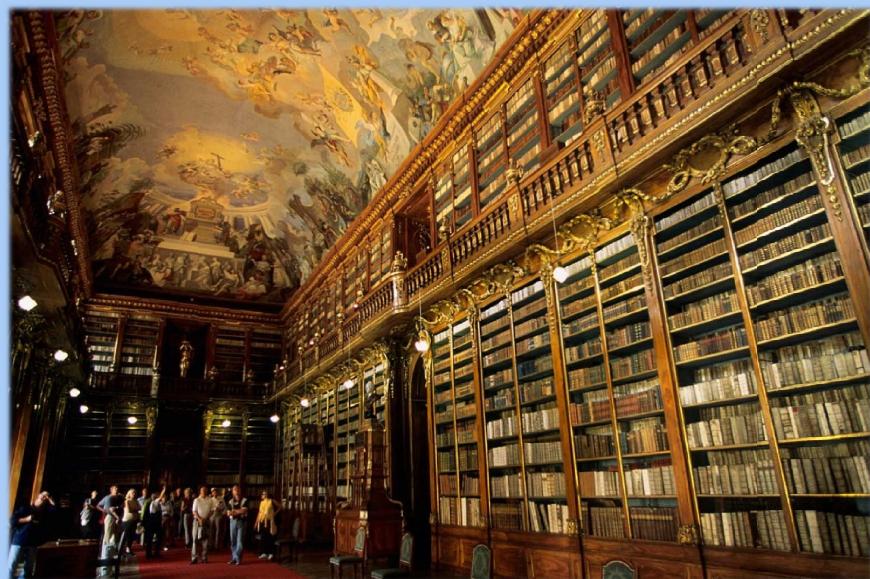
mysql> describe lost;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| BookNo | int(11) | YES | NULL |
| Id | int(11) | YES | NULL |
| Finereqd | int(11) | YES | NULL |
+-----+-----+-----+-----+
3 rows in set (0.01 sec)

mysql>

```

## **LIMITATIONS**

1. A prototype model for real life system
2. Limited to less number of records



## **BIBLIOGRAPHY & REFERENCES**

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