COMPUTER SCIENCE

PROJECT

ON

LIBRARY MANAGEMENT

NAME:

CLASS:

ROLL NO. :

Vineeta Garg

CERTIFICATE

This is to certify that _____ of class _____, _____ School, has successfully completed her Investigatory Project as prescribed by CBSE in the year _____.

Date :

Roll No. :

Signature of Subject Teacher

Signature of External Examiner

_____ _____

Vineeta Garg

ACKNOWLEDGEMENT

It would be my utmost pleasure to thank my Computer Science teacher _____ for giving me this knowledgeable topic "LIBRARY MANAGEMENT" and supporting me during the course of this project. I would also like to thank my parents and God for encouraging me and giving me strength to complete this project on time.

Secondly, I also like to thank my partner for being co-operative and pally with me throughout the process and for helping me to make this a full proof success.

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PROGRAM CODE

BOOK.py

```
import csv
book=[
        ["1001","Twilight","Meyer, Stephenie","550","N"],
        ["1002","Lost Symbol,The","Brown, Dan","450","N"],
        ["1003","One Day","Nicholls, David","345","N"],
        ["2001","Life of Pi","Martel, Yann","420","N"],
        ["2002","Small Island","Levy, Andrea","370","N"],
        ["2003","Brick Lane","Ali, Monica","280","N"]]

with open('book.csv','w',newline='') as afile:
        filewriter = csv.writer(afile,delimiter=',',lineterminator='\n')
        filewriter.writerows(book)

with open('book.csv', 'r') as file:
   reader = csv.reader(file)
   for row in reader:
      print(row)
```

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MEMBER.py

```
import csv

member=[

        ["A001","AMIT","","Y"],

        ["B002","MEENA","","N"],

        ["C003","KANIKA","","N"],

        ["D001","CHARU","","N"],

        ["E002","MAHESH","","N"],

        ["F003","DIMPLE","","N"]]


with open('member.csv','w',newline='') as mfile:

        filewriter = csv.writer(mfile,delimiter=',',lineterminator='\n')

        filewriter.writerows(member)


with open('member.csv', 'r') as file:

   reader = csv.reader(file)

   for row in reader:

      print(row)
```

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LIBRARY.py

```
import csv



def DispMenu():
    print("\n\n\n\t\t############# LIBRARY MANAGEMENT ################")
    print("\n\t\t\t 1. BOOK MANAGEMENT ")
    print("\n\t\t\t 2. MEMBER MANAGEMENT ")
    print("\n\t\t\t 3. ISSUE BOOK")
    print("\n\t\t\t 4. RETURN BOOK")
    print("\n\t\t\t 5. EXIT ")
    print("\t\t#########################################################")



def BookMenu():
    print("\n\n\n\t\t############# BOOK MANAGEMENT ################")
    print("\n\t\t\t 1. ADD BOOK  ")
    print("\n\t\t\t 2. DELETE BOOK ")
    print("\n\t\t\t 3. MODIFY BOOK")
    print("\n\t\t\t 4. DISPLAY BOOKS")
    print("\n\t\t\t 5. EXIT ")
```

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```
    print("\t\t#######################################################")



def MemberMenu():
    print("\n\n\n\t\t############# MEMBER MANAGEMENT ################")
    print("\n\t\t\t 1. ADD MEMBER  ")
    print("\n\t\t\t 2. DELETE MEMBER ")
    print("\n\t\t\t 3. MODIFY MEMBER")
    print("\n\t\t\t 4. DISPLAY MEMBERS")
    print("\n\t\t\t 5. EXIT ")
    print("\t\t#######################################################")



def bookadd():
    bookrec=[]
    file=open('book.csv', 'r')
    book1 = csv.reader(file)
    for brec in book1:
        bookrec.append(brec)
    file.close()
```

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```
print("Enter the following information")
bno=input("Enter the book number:")
bname=input("Enter book name:")
bauthor=input("Enter author name:")
bprice=input("Enter book price:")
brec1=[bno,bname,bauthor,bprice]
bookrec.append(brec1)
print("book added")


with open('book.csv', 'w',newline='') as file:
    writer = csv.writer(file)
    writer.writerows(bookrec)


bookrec=[]
file=open('book.csv', 'r')
book1 = csv.reader(file)
for brec in book1:
    bookrec.append(brec)
file.close()
print(bookrec)
```

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```
def bookdelete():
    bookrec=[]
    file=open('book.csv', 'r')
    book1 = csv.reader(file)
    for brec in book1:
        bookrec.append(brec)
    file.close()

    bno=input("Enter book Number to be deleted")
    flag=0

    for brec in bookrec:
        if brec[0]==bno:
            print("Book Details:")
            print(brec)
            bookrec.remove(brec)
            flag=1
            break
    if flag==1:
        print("Book has been deleted")
        with open('book.csv','w',newline='') as bcsv:
```

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```
            bwriter = csv.writer(bcsv,delimiter=',',lineterminator='\n')
            bwriter.writerows(bookrec)
    else:
        print("Book not found")

    bookrec=[]
    file=open('book.csv', 'r')
    book1 = csv.reader(file)
    for brec in book1:
        bookrec.append(brec)
    file.close()
    print(bookrec)

def bookmodify():
    bookrec=[]
    file=open('book.csv', 'r')
    book1 = csv.reader(file)
    for brec in book1:
        bookrec.append(brec)
    file.close()
```

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```
bno=input("Enter book Number to be modified")
flag=0
b1=0
for brec in bookrec:
    if brec[0]==bno:
        print("Book Details:")
        print(brec)
        print("Enter the following information")

        bname=input("Enter book name:")
        bauthor=input("Enter author name:")
        bprice=input("Enter book price:")
        br=[bno,bname,bauthor,bprice]
        bookrec[b1]=br
        flag=1
        break
    b1=b1+1
if flag==1:
    print("Book has been modified")
    with open('book.csv','w',newline='') as bcsv:
        bwriter = csv.writer(bcsv,delimiter=',',lineterminator='\n')
```

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```
            bwriter.writerows(bookrec)
        else:
            print("Book not found")



        bookrec=[]
        file=open('book.csv', 'r')
        book1 = csv.reader(file)
        for brec in book1:
            bookrec.append(brec)
        file.close()
        print(bookrec)


    def bookdisp():
        bookrec=[]
        file=open('book.csv', 'r')
        book1 = csv.reader(file)


        print("\n\n\n############################ BOOK DETAILS ##############################")
        print("%10s"%"BOOK NO.","%20s"%"TITLE","%20s"%"AUTHOR","%15s"%"PRICE")
        for row in book1:
```

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```
        print("%10s"%row[0],"%20s"%row[1],"%20s"%row[2],"%15s"%row[3])
    print("\n############################ BOOK DETAILS ##############################")
    K=input("\n\nPress any key to continue")
    file.close()



def memberadd():
    memberrec=[]
    file=open('member.csv', 'r')
    member1 = csv.reader(file)
    for mrec in member1:
        memberrec.append(mrec)
    file.close()


    print("Enter the following information")
    mno=input("Enter the member number:")
    mname=input("Enter member name:")
    bno=" "
    status="N"
    mrec1=[mno,mname,bno,status]
```

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```
    memberrec.append(mrec1)
    print("book added")

    with open('member.csv', 'w',newline='') as file:
        writer = csv.writer(file)
        writer.writerows(memberrec)

    memberrec=[]
    file=open('member.csv', 'r')
    member1 = csv.reader(file)
    for mrec in book1:
        memberrec.append(mrec)
    file.close()
    print(memberrec)

def memberdelete():
    memberrec=[]
    file=open('member.csv', 'r')
    member1 = csv.reader(file)
    for mrec in member1:
        memberrec.append(mrec)
```

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```
file.close()


mno=input("Enter member Number to be deleted")
flag=0


for mrec in memberrec:
    if mrec[0]==mno:
        print("Member Details:")
        print(mrec)
        memberrec.remove(mrec)
        flag=1
        break
if flag==1:
    print("Member has been deleted")
    with open('member.csv','w',newline='') as mcsv:
        bwriter = csv.writer(mcsv,delimiter=',',lineterminator='\n')
        bwriter.writerows(memberrec)
else:
    print("Book not found")


memberrec=[]
```

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```
    file=open('member.csv', 'r')
    member1 = csv.reader(file)
    for mrec in member1:
        bookrec.append(mrec)
    file.close()
    print(memberrec)


def membermodify():
    memberrec=[]
    file=open('member.csv', 'r')
    member1 = csv.reader(file)
    for mrec in member1:
        memberrec.append(mrec)
    file.close()


    mno=input("Enter member number to be modified")
    flag=0
    m1=0
    for mrec in memberrec:
        if mrec[0]==mno:
            print("Member Details:")
```

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```
        print(mrec)
        print("Enter the following information")
        mname=input("Enter member name:")
        bno=mrec[2]
        status=mrec[3]
        mr=[mno,mname,bno,status]
        memberrec[b1]=mr
        flag=1
        break
    m1=m1+1
if flag==1:
    print("Meember has been modified")
    with open('member.csv','w',newline='') as mcsv:
        bwriter = csv.writer(mcsv,delimiter=',',lineterminator='\n')
        bwriter.writerows(memberrec)
else:
    print("Member not found")


memberrec=[]
file=open('member.csv', 'r')
```

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```
    member1 = csv.reader(file)
    for mrec in member1:
        memberrec.append(mrec)
    file.close()
    print(memberrec)



def memberdisp():
    bookrec=[]
    file=open('member.csv', 'r')
    member1 = csv.reader(file)


    print("\n\n\n########################## MEMBER DETAILS
##############################")
    print("%10s"%"MEMBER NO.","%15s"%"NAME","%20s"%"BOOK TITLE","%15s"%"STATUS")
    for row in member1:


        print("%10s"%row[0],"%15s"%row[1],"%20s"%row[2],"%15s"%row[3])
    print("\n########################## MEMBER DETAILS ##############################")
    K=input("\n\nPress any key to continue")
    file.close()
```

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```
def IssueBook():
    bookrec=[]
    memberrec=[]
    file=open('member.csv', 'r')
    member1 = csv.reader(file)
    for mrec in member1:
        memberrec.append(mrec)
    file.close()



    file=open('book.csv', 'r')
    book1 = csv.reader(file)
    for brec in book1:
        bookrec.append(brec)
    file.close()



    mno=input("Enter Member Number")
    flag=0
```

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```
mr=0
for mrec in memberrec:
    if mrec[0]==mno:
        print("Member Details:")
        print(memberrec[mr])
        if mrec[3]== "N":
            bno=input("Enter Book Number")
            b1=0
            for brec in bookrec:
                if brec[0]== bno:
                    flag=1
                    if brec[4]=="N":
                        print("Book Details:")
                        print(bookrec[b1])
                        bookrec[b1][4]="Y"
                        memberrec[mr][2]=bno
                        memberrec[mr][3]="Y"
                        print("Book Successfully Issued")
                        print("Return the book within 10 days of issue date")
                        print(brec)
                        print(mrec)
```

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```
                    break
                else:
                    print("Book already issued")
            b1=b1+1
        if (flag==0):
            print("Book already issued")
    else:
        print("Return the previous book")
    mr=mr+1

with open('book.csv', 'w',newline='') as file:
    writer = csv.writer(file)
    writer.writerows(bookrec)
with open('member.csv', 'w',newline='') as file:
    writer = csv.writer(file)
    writer.writerows(memberrec)

def ReturnBook():
    bookrec=[]
    memberrec=[]
```

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```
file=open('member.csv', 'r')
member1 = csv.reader(file)
for mrec in member1:
    memberrec.append(mrec)
file.close()
print(memberrec)


file=open('book.csv', 'r')
book1 = csv.reader(file)
for brec in book1:
    bookrec.append(brec)
file.close()
print(bookrec)


mno=input("Enter Member Number")
flag=0
m1=0
for mrec in memberrec:
    if mrec[0]==mno:
        print("Member Details:")
        print(mrec)
```

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```
        b1=0
        for brec in bookrec:
            if mrec[2]== brec[0]:
                print("Book details:")
                print(brec)
                flag=1
                bookrec[b1][4]="N"
                memberrec[m1][2]=" "
                memberrec[m1][3]="N"
                days=int(input("Book returned in no. of days: "))
                fine=0
                if (days>10):
                    fine=(days-10)*2
                print("Deposit the fine amount:",fine)
                print("Book Successfully Returned")
                break
            b1=b1+1
        if (flag==0):
            print("Book not found")
    m1=m1+1
print(bookrec)
```

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```
    print(memberrec)
    with open('book.csv', 'w',newline='') as file:
        writer = csv.writer(file)
        writer.writerows(bookrec)
    with open('member.csv', 'w',newline='') as file:
        writer = csv.writer(file)
        writer.writerows(memberrec)




choice=0
while choice!=5:
    DispMenu()
    choice = int(input('\t\t\t ENTER YOUR CHOICE :'))
    if choice==1:
        ch=0
        while ch!=5:
            BookMenu()
            ch = int(input('\t\t\t ENTER YOUR CHOICE :'))
            if ch==1:
```

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```
            bookadd()
        elif ch==2:
            bookdelete()

        elif ch==3:
            bookmodify()

        elif ch==4:
            bookdisp()

        elif ch==5:
            break

        else:
            print('\n\t\t\t == INVALID CHOICE == ')

elif choice==2:
    ch=0
    while ch!=5:
        MemberMenu()
        ch = int(input('\t\t\t ENTER YOUR CHOICE :'))
```

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```
        if ch==1:
            memberadd()
        elif ch==2:
            memberdelete()

        elif ch==3:
            membermodify()

        elif ch==4:
            memberdisp()

        elif ch==5:
            break

        else:
            print('\n\t\t\t == INVALID CHOICE == ')

elif choice==3:
    IssueBook()
elif choice==4:
```

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```
    ReturnBook()
elif choice==5:
    break
else:
    print('\n\t\t\t == INVALID CHOICE == ')
```

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OUTPUT SCREENSHOTS

```
########### LIBRARY MANAGEMENT ###############

          1. BOOK MANAGEMENT

          2. MEMBER MANAGEMENT

          3. ISSUE BOOK

          4. RETURN BOOK

          5. EXIT
#################################################
          ENTER YOUR CHOICE :1
```

```
             ########### BOOK MANAGEMENT ##############

                      1. ADD BOOK

                      2. DELETE BOOK

                      3. MODIFY BOOK

                      4. DISPLAY BOOKS

                      5. EXIT
            ################################################
                      ENTER YOUR CHOICE :1
Enter the following information
Enter the book number:2004
Enter book name:Computer Science
Enter author name:XYZ
Enter book price:350
book added
```

```
############ BOOK MANAGEMENT ################

          1. ADD BOOK

          2. DELETE BOOK

          3. MODIFY BOOK

          4. DISPLAY BOOKS

          5. EXIT
##############################################
          ENTER YOUR CHOICE :4
```

```
########################## BOOK DETAILS ##############################
  BOOK NO.                TITLE                AUTHOR           PRICE
      1001              Twilight     Meyer, Stephenie             550
      1002      Lost Symbol,The           Brown, Dan             450
      1003              One Day      Nicholls, David             345
      2001          Life of Pi         Martel, Yann             420
      2002        Small Island         Levy, Andrea             370
      2003          Brick Lane          Ali, Monica             280
      2004     Computer Science                  XYZ             350

########################## BOOK DETAILS ##############################


Press any key to continue
```

```
############ MEMBER MANAGEMENT ###############

          1. ADD MEMBER

          2. DELETE MEMBER

          3. MODIFY MEMBER

          4. DISPLAY MEMBERS

          5. EXIT
##############################################
          ENTER YOUR CHOICE :4
```

```
########################## MEMBER DETAILS ##############################
MEMBER NO.            NAME           BOOK TITLE          STATUS
      A001             AMIT                                 Y
      B002            MEENA                                 N
      C003           KANIKA                                 N
      D001            CHARU                                 N
      E002           MAHESH                                 N
      F003           DIMPLE                                 N

########################## MEMBER DETAILS ##############################


Press any key to continue
```

```
############ LIBRARY MANAGEMENT ###############

          1. BOOK MANAGEMENT

          2. MEMBER MANAGEMENT

          3. ISSUE BOOK

          4. RETURN BOOK

          5. EXIT
#################################################
          ENTER YOUR CHOICE :3
```

```
Enter Member NumberA001
Member Details:
['A001', 'AMIT', ' ', 'N']
Enter Book Number2002
Book Details:
['2002', 'Small Island', 'Levy, Andrea', '370', 'N']
Book Successfully Issued
Return the book within 10 days of issue date
['2002', 'Small Island', 'Levy, Andrea', '370', 'Y']
['A001', 'AMIT', '2002', 'Y']
```

```
############ LIBRARY MANAGEMENT ###############

          1. BOOK MANAGEMENT

          2. MEMBER MANAGEMENT

          3. ISSUE BOOK

          4. RETURN BOOK

          5. EXIT
################################################
          ENTER YOUR CHOICE :4
```

```
Enter Member NumberA001
Member Details:
['A001', 'AMIT', '2002', 'Y']
Book details:
['2002', 'Small Island', 'Levy, Andrea', '370', 'Y']
Book returned in no. of days: 5
Deposit the fine amount: 0
Book Successfully Returned
```