



# LIBRARY MANAGEMENT

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# AIM:

## To Develop Library Management System

**Develop a software named Library Management System to**

**manage manual functions of a library. The software should helps to**

**manage the entire library operations from maintaining book records to**

**issue a book. In addition, it should allows streamlined management of**

**fine details of books such as author name, costing, number of copies**

**existing in the library and many other important details. Make it easier**

**to search for books and find the right materials for students and the**

**librarian instantly.**



# Why i chose this topic?

- To reduce the manual work to manage library functions.
- To Save time and reduced overheads.
- To increase Librarian's efficiencies.
- To remove manual processes in the Library.
- To perform day to day library operations electronically.



# Introduction



**LMS is also called an automated library system. It is defined as software that has been established to manage basic housekeeping function of a library. The electronic management via the software is essential to track information like issue date, due date, who has borrowed any book etc. The system is developed and designed with an aim to facilitate efficient management to the schools to manage a modern library with accurate data management. The software is intended to reduce the manual work to manage library functions which have various features.**

# FUNCTIONS

**In order to maintain library management software, LMS has the following set of components. These components are efficient to manage library operations accurately.**

LIBRARY

**Add and update books:** LMS can add new books or other materials to the system with the essential details by generating the id of the books automatically. Thus, the librarian can maintain the system effectively.

**Add and update members:** LMS can add new members or and edit the detail of existing members of the library who have the membership of the Library.

**Search option:** Librarian can search for library books/materials. He /She can search for books and members of the Library.

**Transaction :** Transaction like issue and return of books can be done any time by the existing members of the Library.

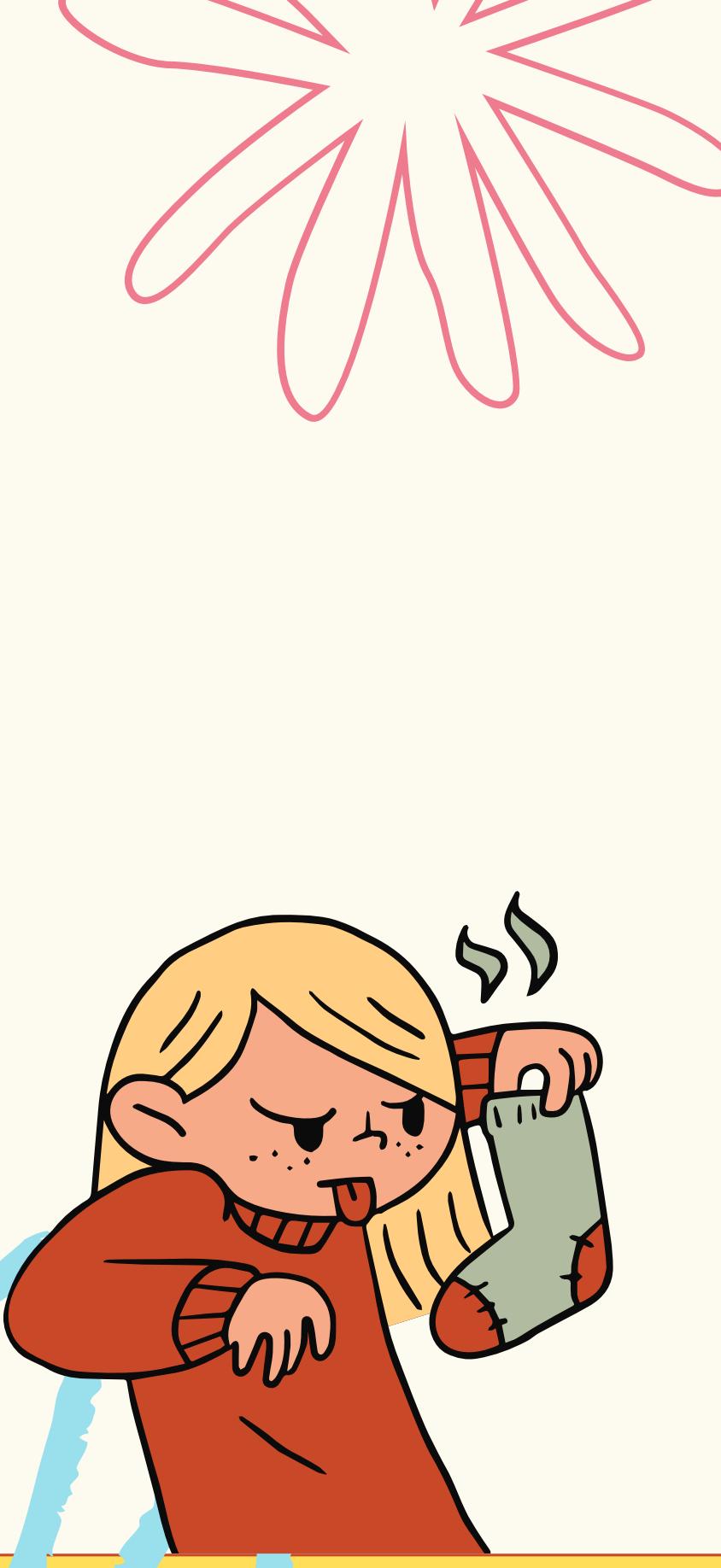
**Fine calculator :** The Librarian can view the issued materials with their due date. And, if any book is overdue, the system will allow calculating fine for the same.

**Visualization:** Various type of graphs and charts can be viewed from LMS for various data set, and understand ability can be enhanced very quickly.



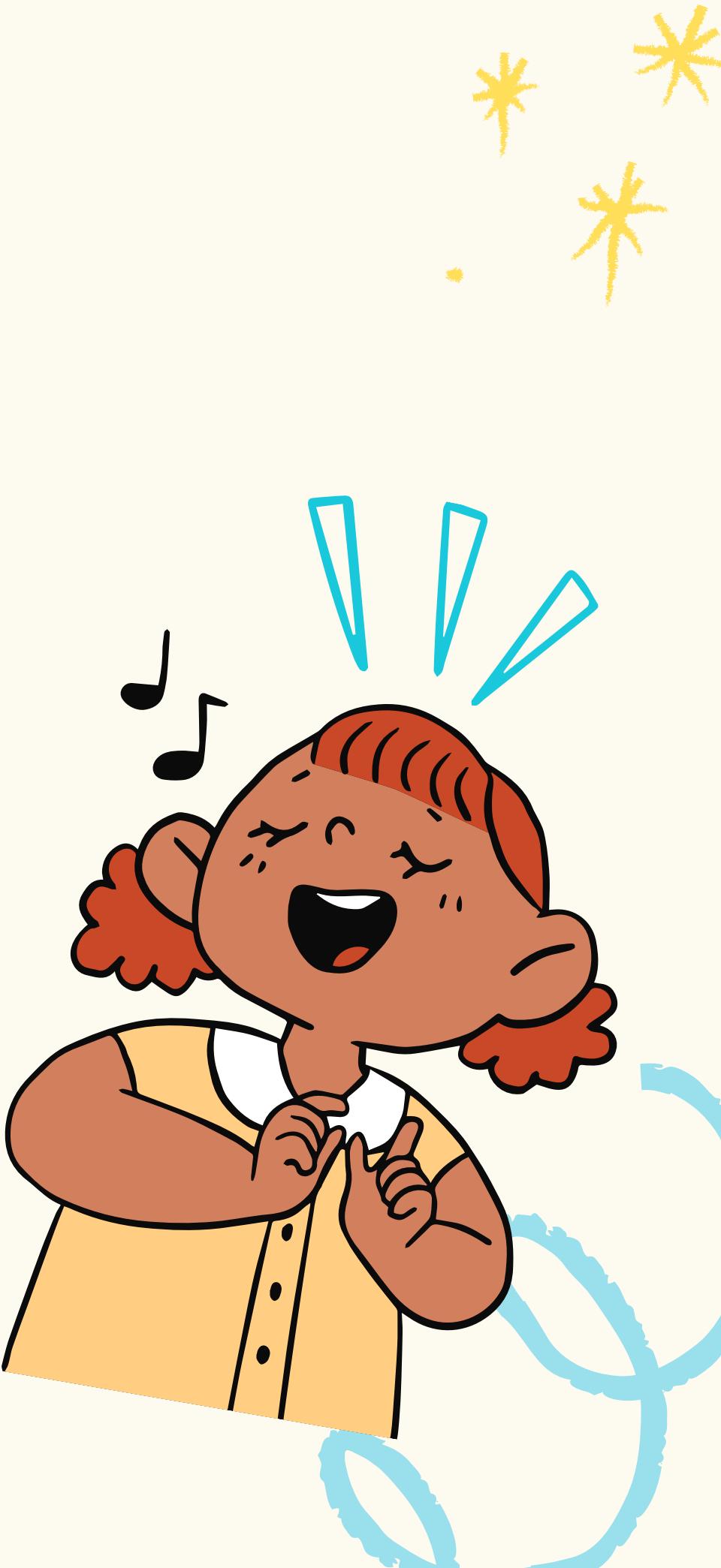
# IMPORTANCE

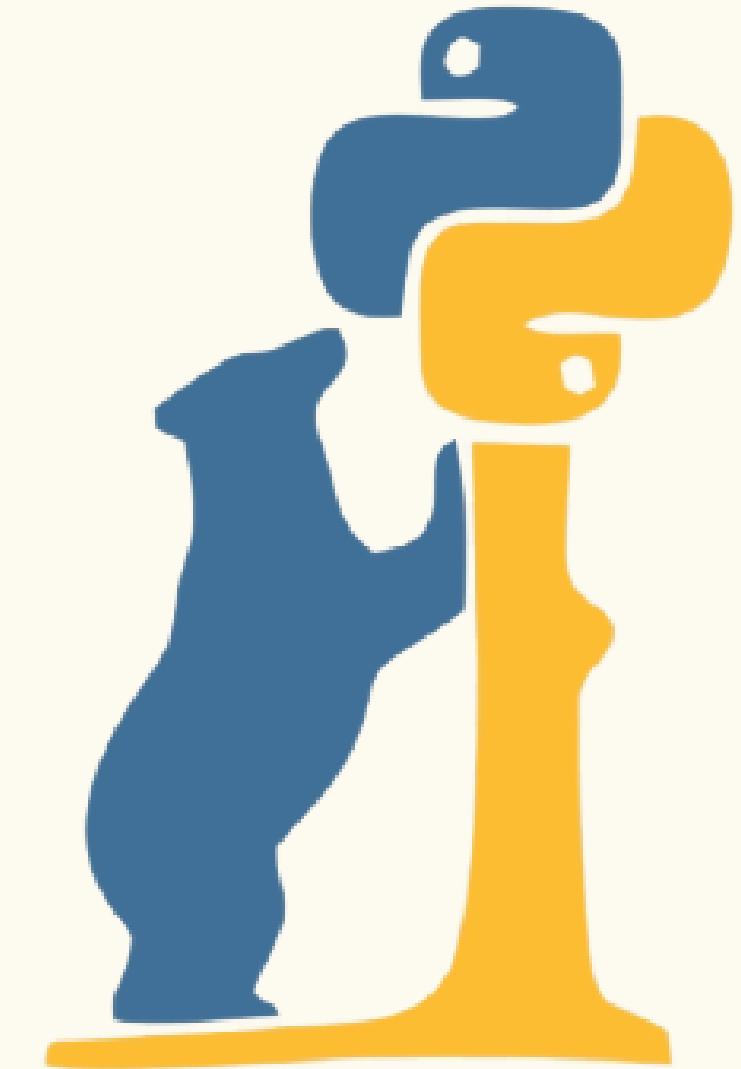
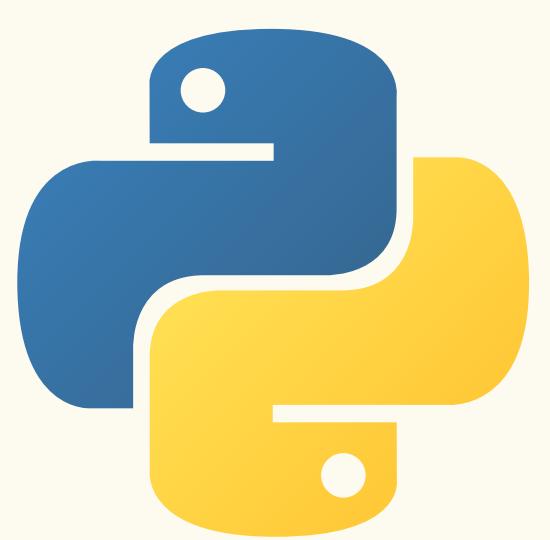
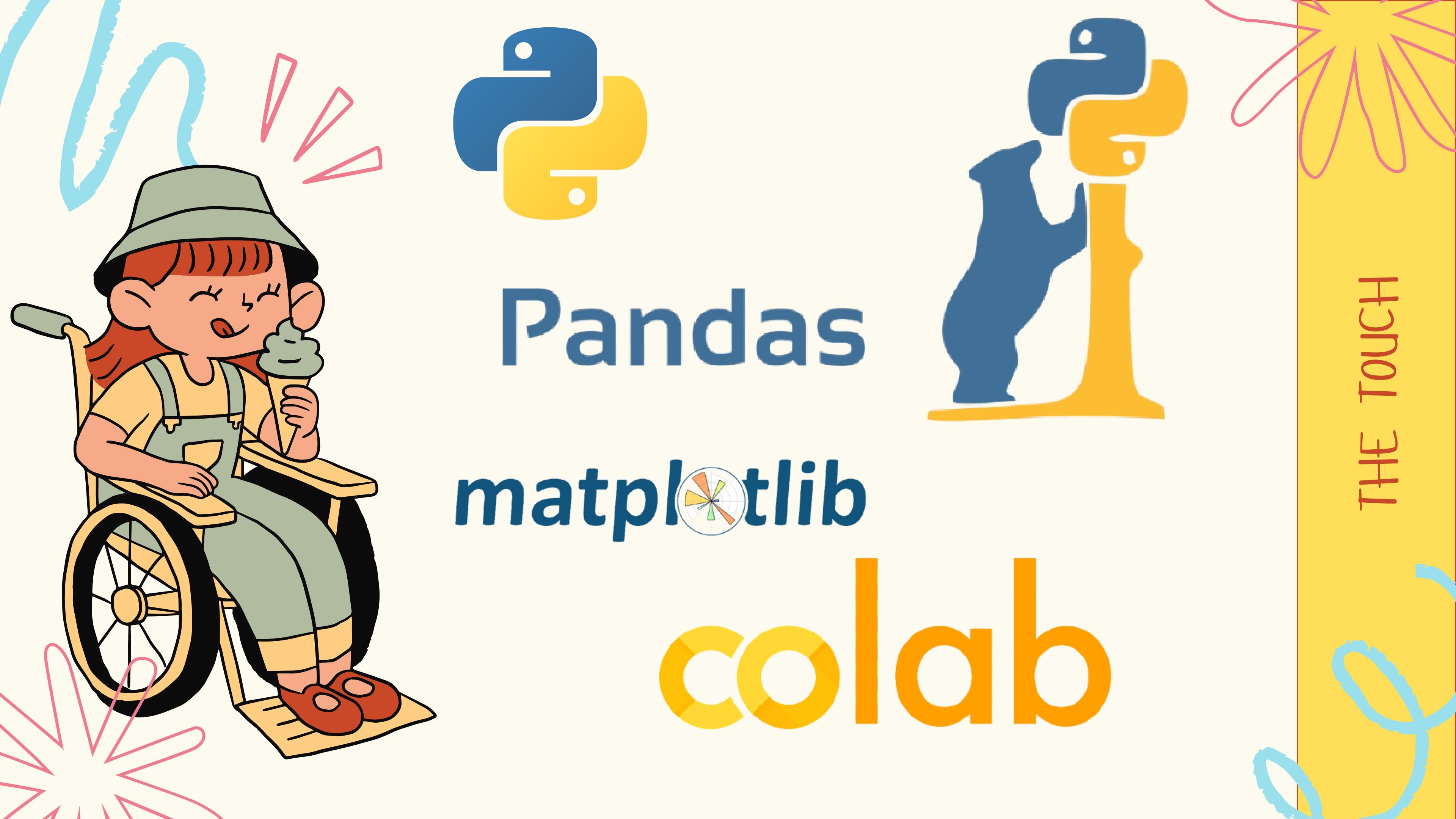




facilitate the administrators to keep an eye on the library department's all functions. Also, it enables librarians and users to save time on daunting tasks and enhances efficiency. By using this sort of library management system, the school management would be able to follow the work outline and fineness of different librarians capabilities. Additionally, they get an opportunity to know how well-maintained the record of issued books and collection is. The librarian and the administration department can access various reports to implement new improvements. Thus, the efficient library management software is essential to run smart school functions, and maintain accurate data of a library.

# TOOLS USED





# Pandas

matplotlib

colab

THE TOUCH



# DATASETS





A	B	C	D	E	F	G
Member_id	Member_r	Age	Contact	Address	Membersh	Issu_status
1	Aman	20	3.42E+08	1,"1383 M	Y	Y
2	Kanti	34	4.35E+08	2,"0210 Di	Y	N
3	Priya	25	5.28E+08	3,"16846 E	Y	N
4	Santosh	56	6.21E+08	1,"1383 M	Y	Y
5	Jack	76	7.14E+08	2,"0210 Di	Y	Y
6	Rose	23	8.06E+08	3,"16846 E	Y	N
7	Bart	11	8.99E+08	1,"1383 M	Y	N
8	Homer	23	9.92E+08	2,"0210 Di	Y	Y
9	Lisa	35	1.08E+08	3,"16846 E	Y	Y
10	Bruce	36	1.18E+08	1,"1383 M	Y	N
11	Clark	39	1.27E+08	2,"0210 Di	Y	N

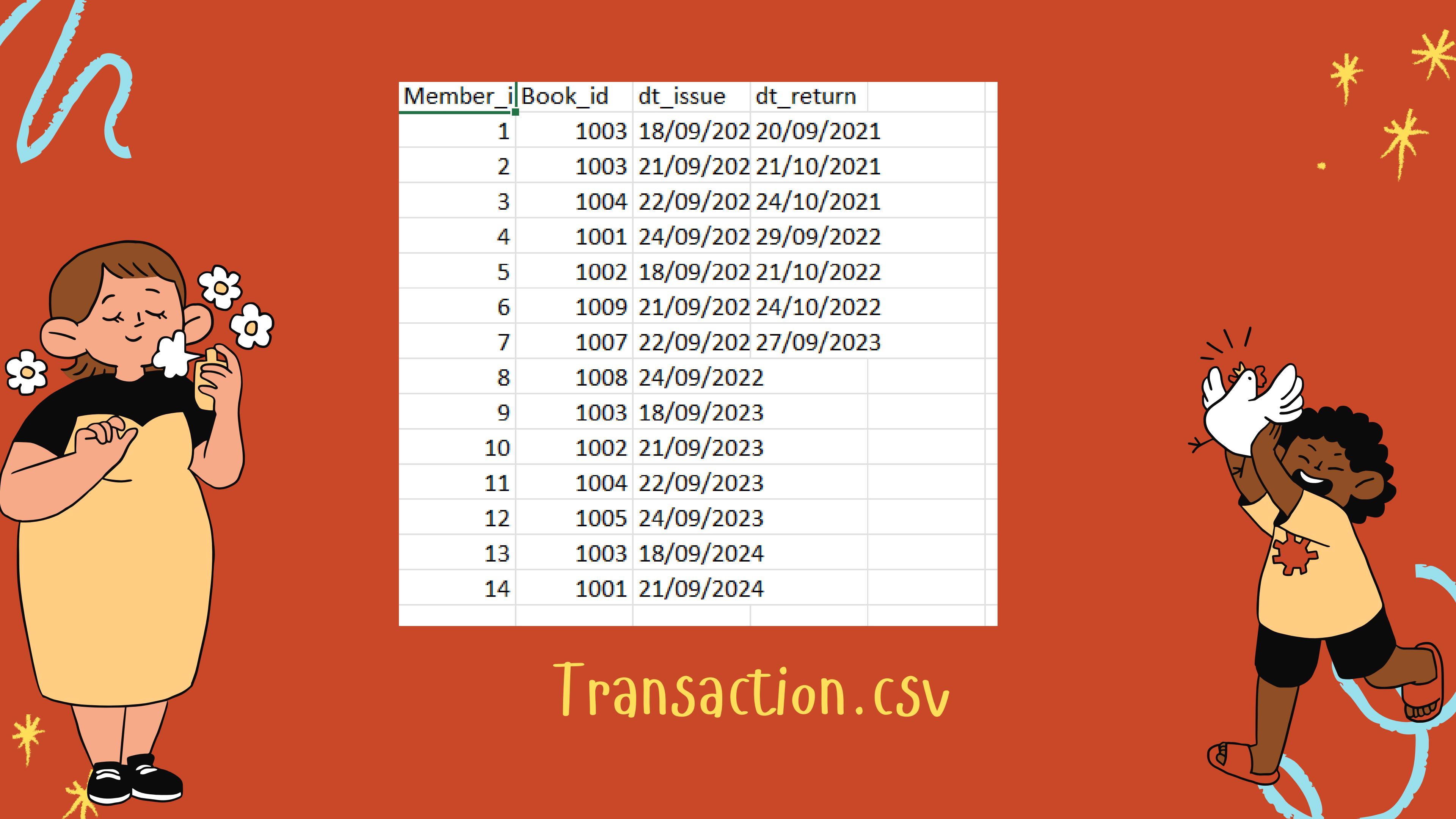
# Members.csv





A	B	C	D	E	F	G	H
Book_id	Bname	Author	Cost	dt_entry	Copies		
1001	Informatic	Sumita arc	560	17/09/202	120		
1002	Physics for	Pradeep	890	16/09/202	119		
1003	Chemistry	S L arora	750	15/09/202	96		
1004	Biology for	K N Bhatia	900	17/09/202	73		
1005	Core python	M Nagesh	650	16/09/202	120		
1006	NEET chan	MTG	400	15/09/202	50		
1007	Physics cla	Reeta Sah	465	17/09/202	10		
1008	Concepts of	HC Verma	890	16/09/202	50		
1009	Objective i	RD Sharma	1450	15/09/202	10		
1010	Electrical	I C R Dargar	325	17/09/202	40		

Books.csv



Member_id	Book_id	dt_issue	dt_return
1	1003	18/09/202	20/09/2021
2	1003	21/09/202	21/10/2021
3	1004	22/09/202	24/10/2021
4	1001	24/09/202	29/09/2022
5	1002	18/09/202	21/10/2022
6	1009	21/09/202	24/10/2022
7	1007	22/09/202	27/09/2023
8	1008	24/09/2022	
9	1003	18/09/2023	
10	1002	21/09/2023	
11	1004	22/09/2023	
12	1005	24/09/2023	
13	1003	18/09/2024	
14	1001	21/09/2024	

Transaction.csv

A cartoon illustration of a boy with blonde hair, wearing a red jacket, white shirt, and black shorts. He is holding a speech bubble that has a face with a smile and a tongue sticking out. He is also holding a blue ribbon.

CODE



# IMPORT LIBRARIES

```
import pandas as pd
import matplotlib.pyplot as plt
import numpy as np
global path
from datetime import date
import time
pd.set_option('display.max_columns',None)
```

LIBRARY

```
def menu():
    while True:
        print("LMS Version 1.00 By: Computer Concepts: A K Pandey")
        print(" LIBRARY MANAGEMENT SYSTEM")
        print(" PUBLIC LIBRARY")
        print(" ****")
        print()
        print(" 1- BOOKS")
        print(" 2- MEMBERS")
        print(" 3- TRANSACTION")
        print(" 4- VISUALIZATION")
        print(" 5- ANALYTICS/QUERY")
        print(" 6- EXIT")
        ch=int(input(" Enter your choice [1-6] :"))
        if ch==1:
            books()
        elif ch==2:
            members()
        elif ch==3:
            transaction()
        elif ch==4:
            visualization()
        elif ch==5:
            analytics()
        else:
            print("Thank You")
            break
```

```
def books():
    while True:
        print(" B O O K S M E N U")
        print(" *****")
        print()
        print(" 1- Add New Books")
        print(" 2- Delete old Books")
        print(" 3- Edit detail of the Books")
        print(" 4- B A C K")
        ch=int(input(" Enter your choice [1-4] :"))
        if ch==1:
            add_book()
        elif ch==2:
            del_book()
        elif ch==3:
            edit_book()
        else:
            print("Going back to Main Menu")
            break
```

```
def members():
    while True:
        print(" MEMBERS MENU")
        print(" ****")
        print()
        print(" 1- Add Members")
        print(" 2- Delete Members")
        print(" 3- Edit detail of the Memebers")
        print(" 4- B A C K")
        ch=int(input(" Enter your choice [1-4]:"))
        if ch==1:
            add_member()
        elif ch==2:
            del_member()
        elif ch==3:
            edit_member()
        else:
            print("Going back to Main Menu")
            break
```

```
def transaction():
    dftrans=pd.read_csv("Transaction.csv")
    print(dftrans)
    while True:
        print(" TRANSACTION MENU")
        print(" ****")
        print()
        print(" 1- Issue a Book")
        print(" 2- Return a Book")
        print(" 3- B A C K")
        ch=int(input(" Enter your choice [1-3]:"))
        if ch==1:
            issue_book()
        elif ch==2:
            return_book()
        else:
            print("Going back to Main Menu")
            break
```

```
def add_book():
    dfbooks=pd.read_csv("Books.csv")
    ans='y'
    bid=0
    while ans=='y' or ans=='Y':
        df=dfbooks.sort_values(by='Book_id')
        df=df.tail(1)
        bid=df.iloc[0,0]+1
        #bid=int(input("Enter Book id :"))
        print("New Book id : ",bid)
        bnm=input("Enter Book Name :")
        auth=input("Enter Author Name :")
        price=float(input("Enter Price :"))
        dt_enter=input("Enter Date of Entry :")
        cpy=int(input("Enter No. of copies:"))
        data=[bid, bnm, auth, price, dt_enter, cpy]
        dfbooks.loc[len(dfbooks)]=data
        dfbooks.to_csv("Books.csv",index=False)
        print("A New Books added Successfully....")
        ans=input("Do you want to add more books?")
        print(dfbooks)
```

```
def del_book():
    dfbooks=pd.read_csv("Books.csv")
    ans='y'
    bid=0
    while ans=='y' or ans=='Y':
        bid=int(input("Enter Book id :"))
        if bid in dfbooks['Book_id'].values:
            response=input("Do you really want to remove this book from Library(Y/N)?")
            if response=='y' or response=='Y':
                dfbooks.drop(dfbooks[dfbooks['Book_id']==bid].index,inplace=True)
                print("Book id - ",bid,"has been deleted successfully...")
            else:
                print("Book is not found...")
        dfbooks.to_csv("Books.csv",index=False)
        ans=input("Do you want to delete more books?")
        print(ans)
```

```
def edit_book():
    dfbooks=pd.read_csv("Books.csv")
    print(dfbooks)
    ans='y'
    bid=0
    while ans=='y' or ans=='Y':
        bid=int(input("Enter Book id :"))
        if bid in dfbooks['Book_id'].values:
            nm=input("Enter the column name to change: ")
            val1=eval(input("Enter it's value: if string in
quotes("): "))
            dfbooks.loc[(dfbooks['Book_id'] == bid),nm]=val1
            print("Book id -",bid,"has been updated
successfully...")
            print(dfbooks.loc[dfbooks['Book_id']==bid])
        else:
            print("Book is not found...")
    dfbooks.to_csv("Books.csv",index=False)
    ans=input("Do you want to edit more books?")
    print(ans)
```

```
def add_member():
    dfmembers=pd.read_csv("Members.csv")
    ans='y'
    mid=0
    while ans=='y' or ans=='Y':
        df=dfmembers.sort_values(by='Member_id')
        df=df.tail(1)
        mid=df.iloc[0,0]+1
        print("New Member id : ",mid)
        mem_nam=input("Enter Member Name:")
        age=int(input("Enter Age :"))
        phno=int(input("Enter Contact :"))
        addr=input("Enter Address :")
        mship=input("Enter Membership Status (Y/N):")
        iss_st='N'
        data=[mid,mem_nam,age,phno,addr,mship,iss_st]
        dfmembers.loc[len(dfmembers)]=data
        dfmembers.to_csv("Members.csv",index=False)
        print("A New Member added Successfully....")
        ans=input("Do you want to add more Members?")
        print(dfmembers)
```

```
def del_member():
    dfmembers=pd.read_csv("Members.csv")
    ans='y'
    mid=0
    while ans=='y' or ans=='Y':
        mid=int(input("Enter Member id :"))
        if mid in dfmembers['Member_id'].values:
            print(dfmembers.loc[dfmembers.Member_id==mid,
            ['Member_name','Age']])
            ans=input("Do you want to really delete it(Y/N)")
            if ans=='y' or ans=='Y':
                dfmembers.drop(dfmembers[dfmembers['Member_i
                d']==mid].index,inplace= True)
                print("Member id -",mid,"has been deleted
                successfully...")
            else:
                print("Member is not found...")
                dfmembers.to_csv("Members.csv",index=False)
                ans=input("Do you want to delete more
                members?")
                print(dfmembers)
```

```
def edit_member():
    dfmembers=pd.read_csv("Members.csv")
    print(dfmembers)
    ans='y'
    mid=0
    while ans=='y' or ans=='Y':
        mid=int(input("Enter Member id :"))
        if mid in dfmembers['Member_id'].values:
            nm=input("Enter the column name to change: ")
            val1=eval(input("Enter it's value: if string in
            quotes("): "))
            dfmembers.loc[(dfmembers['Member_id'] ==
            mid),nm]=val1
            print("Member id -",mid,"has been updated
            successfully...")
            print(dfmembers.loc[dfmembers['Member_id']==mi
            d])
        else:
            print("Member is not found...")
            dfmembers.to_csv("Members.csv",index=False)
            ans=input("Do you want to edit more Members?")
            print(dfmembers)
```

```

def issue_book():
    dfbooks=pd.read_csv("Books.csv")
    dfmembers=pd.read_csv("Members.csv")
    dftrans=pd.read_csv("Transaction.csv")
    ans='y'
    while ans=='y' or ans=='Y':
        mid=int(input("Enter Member id: "))
        bid=int(input("Enter Book id to be issued: "))
        if mid in dfmembers['Member_id'].values:
            print(dfmembers.loc[dfmembers.Member_id==mid,['Member_name','Age']])
            mship=dfmembers.loc[dfmembers['Member_id'] == mid,'Membership'].values[0]
            istatus=dfmembers.loc[dfmembers['Member_id'] == mid,'Issu_Status'].values[0]
            if (mship=='y' or mship=='Y') and (istatus=='n' or istatus=='N'):
                if bid in dfbooks['Book_id'].values:
                    print(dfbooks.loc[dfbooks.Book_id==bid,['Bname','Copies']])
                    cpy=dfbooks.loc[dfbooks['Book_id'] == bid, 'Copies'].values[0]
                    if cpy>0:
                        dt_iss=input("Please Enter date of Issue(dd/mm/yyyy): ")
                        data=[mid,bid,dt_iss,np.NaN]
                        dftrans.loc[len(dftrans)]=data
                        dfmembers.loc[dfmembers.Member_id == mid,'Issu_Status']='Y'
                        dfbooks.loc[dfbooks.Book_id == bid, 'Copies']=1
                        print("Book Issued Successfully...")
                    else:
                        print("Sorry ! No. of copy is insufficient in the Library..")
                    else:
                        print("Book is not found...")
                else:
                    print("Sorry! Membership Expired!! or 1-Book Already issued. First return it..")
            else:
                print("Member is not found...")
                dftrans.to_csv("Transaction.csv",index=False)
                dfbooks.to_csv("Books.csv",index=False)
                dfmembers.to_csv("Members.csv",index=False)
                ans=input("Do you want to issue more books?")
                print(dftrans)

```

```

def return_book():
    dfbooks=pd.read_csv("Books.csv")
    dfmembers=pd.read_csv("Members.csv")
    dftrans=pd.read_csv("Transaction.csv")
    ans='y'
    while ans=='y' or ans=='Y':
        mid=int(input("Enter Member id: "))
        if mid in dftrans['Member_id'].values:
            dt_is=input("Date of Issue: ")
            dt_rtn=input("Enter Date of Return: ")
            bid=dftrans.loc[(dftrans['Member_id'] == mid) & (dftrans['dt_issue'] == dt_is ), 'Book_id'].values[0]
            cond=(dfmembers.Member_id==mid) & (dfmembers.Issu_Status=='Y')
            if cond.any():
                dftrans.loc[(dftrans['Member_id'] == mid) & (dftrans['dt_issue'] == dt_is ), 'dt_return']=dt_rtn
                dfmembers.loc[dfmembers.Member_id == mid, 'Issu_Status']='N'
                dfbooks.loc[dfbooks.Book_id == bid, 'Copies']+1
                # Calculating Fine
                yyr=int(dt_rtn[6:])
                mmr=int(dt_rtn[3:5])
                ddr=int(dt_rtn[:2])
                yyi=int(dt_is[6:])
                mmi=int(dt_is[3:5])
                ddi=int(dt_is[:2])
                d0 = date(yyi, mmi, ddi)
                d1 = date(yyr, mmr, ddr)
                delta = d1 - d0
                n=delta.days
                if n>7:
                    fine=(n-7)*10.00
                else:
                    fine=0.00
                print("Please Pay Fine Rs.",fine)
                print("Book Returned Successfully...")
            else:
                print("The book is already returned.. Action denied")
        else:
            print("Member is not found...")
            dftrans.to_csv("Transaction.csv",index=False)
            dfbooks.to_csv("Books.csv",index=False)
            dfmembers.to_csv("Members.csv",index=False)
            ans=input("Do you want to Return more books?")
            print(dftrans)

```

```

def analytics():
    dfbooks=pd.read_csv("Books.csv")
    dfmembers=pd.read_csv("Members.csv")
    dftrans=pd.read_csv("Transaction.csv")
    while True:
        print(" A N A L Y S I S M E N U")
        print(" *****")
        print()
        print(" 1- All Books")
        print(" 2- All Members")
        print(" 3- Search Books (Code wise)")
        print(" 4- Search Books (Name wise)")
        print(" 5- Search Member ( Code wise)")
        print(" 6- Search Member (Name wise)")
        print(" 7- Books issued (Date wise)")
        print(" 8- Back to Main Menu")
        ch=int(input(" Enter your choice [1-8]:"))
        if ch==1:
            print(dfbooks)
        elif ch==2:
            print(dfmembers)
        elif ch==3:
            bcode=int(input("Please Enter Book ID: "))
            print(dfbooks.loc[dfbooks.Book_id==bcode])
        elif ch==4:
            bnm=input("Please Enter Book Name: ")
            length=len(dfbooks)
            for i in range(length):
                if bnm in dfbooks.Bname[i]:
                    print(dfbooks.Book_id[i],"-->",dfbooks.Bname[i])
        elif ch==5:
            mid=int(input("Please Enter Member ID: "))
            print(dfmembers.loc[dfmembers.Member_id==mid])
        elif ch==6:
            m_nm=input("Please Enter Member Namee: ")
            length=len(dfmembers)
            for i in range(length):
                if m_nm in dfmembers.Member_name[i]:
                    print(dfmembers.Member_id[i],"-->",dfmembers.Member_name[i],"-->",dfmembers.Contact[i])
        elif ch==7:
            dt_iss=input("Please Enter Date of Issue: ")
            print(dftrans.loc[dftrans.dt_issue==dt_iss])
        else:
            print("Going back to Main Menu")
            break

```

```

def visualization():
    dfbooks=pd.read_csv("Books.csv")
    dfmembers=pd.read_csv("Members.csv")
    dftrans=pd.read_csv("Transaction.csv")
    while True:
        print(" V I S U A L I Z A T I O N M E N U")
        print(" *****")
        print()
        print(" 1- No. of Copies Balanced in the Library")
        print(" 2- Members Age ( Specific Group)")
        print(" 3- The Books Popularity")
        print(" 4- Back to Main Menu")
        ch=int(input(" Enter your choice [1-4]:"))
        if ch==1:
            typ=input("Graph Type [Line-L,Bar-B]:")
            if typ=='L':
                x1=dfbooks.Bname
                y1=dfbooks.Copies
                n=np.arange(len(dfbooks))
                plt.plot(n,y1,color='m',linestyle='-.',linewidth=2,marker='o')
                plt.xticks(n,x1,rotation=25)
            elif typ=='B':
                dfbooks.plot('Bname','Copies', kind='bar', color='r',rot=20)
                plt.title("Plot: Book Name vs Copies",fontsize=16,color='r')
                plt.xlabel("Book Name-->",fontsize=12,color='m')
                plt.ylabel("No. of Copies-->",fontsize=12,color='m')
                plt.grid()
                plt.show()
        elif ch==2:
            typ=input("Graph Type [Line-L,Bar-B]:")
            if typ=='L':
                x1=dfmembers.Member_name
                y1=dfmembers.Age
                n=np.arange(len(dfmembers))
                plt.plot(n,y1,color='r',linestyle='-.',linewidth=2,marker='^')
                plt.xticks(n,x1,rotation=25)
            elif typ=='B':
                dfmembers.plot('Member_name','Age', kind='bar', color='m',rot=20)
                plt.title("Plot: Member Name vs Age",fontsize=16,color='m')
                plt.xlabel("Member Name-->",fontsize=12,color='b')
                plt.ylabel("Age-->",fontsize=12,color='b')
                plt.grid()
                plt.show()
        elif ch==3:
            bid=list(dftrans.Book_id)
            frequency = {}
            for item in bid:
                if item in frequency:
                    frequency[item] += 1
                else:
                    frequency[item] = 1
            df1=pd.DataFrame({'Book_id':list(frequency.keys()),'Rank':list(frequency.values())})
            df2=pd.merge(df1,dfbooks,on='Book_id')
            print(df2)
            x=df2.Bname
            y=df2.Rank
            plt.bar(x,y,color='g',width=0.60)
            plt.title("Plot: Book no vs Popularity",fontsize=16,color='g')
            plt.xlabel("Book ID-->",fontsize=12,color='b')
            plt.ylabel("Reading Frequency-->",fontsize=12,color='b')
            plt.grid()
            plt.show()
        elif ch==4:
            print("Going back to Main Menu.....")
            break
    #####
    # Call Main Menu
    #####

```

```
menu()
```

```
*****
```



# OUTPUT



\*\*\*\*\*

... LIBRARY MANAGEMENT SYSTEM  
P U B L I C L I B R A R Y  
\*\*\*\*\*  
1- BOOKS  
2- MEMBERS  
3- TRANSACTION  
4- VISUALIZATION  
5- ANALYTICS/QUERY  
6- E X I T  
Enter your choice [1-6] :1  
B O O K S M E N U  
\*\*\*\*\*

1- Add New Books  
2- Delete old Books  
3- Edit detail of the Books  
4- B A C K  
Enter your choice [1-4] :1  
New Book id : 1012  
Enter Book Name :Game of Thrones  
Enter Author Name :George R Martin  
Enter Price :800  
Enter Date of Entry :20/09/2021  
Enter No. of copies:900



Enter No. of copies:900  
A New Books added Successfully....  
... Do you want to add more books?

Book_id	Bname	Author	Cost	dt_entry
0	1001 Informatics Practices 12	Sumita arora	1000.0	17/09/2021
1	1002 Physics for 12	Pradeep	890.0	16/09/2021
2	1003 Chemistry for 12	S L arora	750.0	15/09/2021
3	1004 Biology for 12	K N Bhatia	900.0	17/09/2022
4	1005 Core python	M Nageshwar Rao	650.0	16/09/2022
5	1006 NEET champions	MTG	400.0	15/09/2022
6	1007 Physics class 12	Reeta Sahoo	465.0	17/09/2023
7	1008 Concepts of physics	HC Verma	890.0	16/09/2023
8	1009 Objective mathematics	RD Sharma	1450.0	15/09/2023
9	1010 Electrical Technology	C R Dargan	200.0	17/09/2024
10	1011 Game of thrones	George R Martin	800.0	29/09/2021
11	1012 Game of Thrones	George R Martin	800.0	20/09/2021

Copies  
0 120  
1 118  
2 96  
3 73  
4 120  
5 50  
6 10  
7 50  
8 10  
9 40



2- Delete old Books  
3- Edit detail of the Books  
4- B A C K  
...

Enter your choice [1-4] :2

Enter Book id :1012

Do you really want to remove this book from Library(Y/N)?y

Book id - 1012 has been deleted successfully...

Enter Book id :1001

Do you really want to remove this book from Library(Y/N)?n

Book is not found...

Do you want to delete more books?n

n

B O O K S M E N U

\*\*\*\*\*

Enter Book id :1011

Enter the column name to change: Cost

Enter it's value: if string in quotes(''): '1000'

Book id - 1011 has been updated successfully...

Book_id	Bname	Author	Cost	dt_entry	Copies
10	1011	Game of thrones	George R Martin	1000	29/09/2021

Enter Book id :123123

Book is not found...

Do you want to edit more books?n

n

- 1- BOOKS
- 2- MEMBERS
- 3- TRANSACTION
- 4- VISUALIZATION
- 5- ANALYTICS/QUERY
- 6- E X I T

Enter your choice [1-6] :2

M E M B E R S M E N U

\*\*\*\*\*

- 1- Add Members
- 2- Delete Members
- 3- Edit detail of the Memebers

- 1- Add Members
- 2- Delete Members
- 3- Edit detail of the Memebers
- 4- B A C K

Enter your choice [1-4] :1

New Member id : 15

Enter Member Name :ANirudh

Enter Age :78

Enter Contact :314344

Enter Address :dsadasdsad

Enter Membership Status (Y/N) :y

A New Member added Successfully....

Do you want to add more Members?n

Member id	Member name	Age	Contact	\
-----------	-------------	-----	---------	---

2	3	Priya	25	527990612
3	4	Santosh	56	620769701
...	4	Jack	76	713548790
5	6	Rose	23	806327879
6	7	Bart	11	899106968
7	8	Homer	23	991886057
8	9	Lisa	35	108466514
9	10	Bruce	36	117744423
10	11	Clark	39	127022332
11	12	Anusha	19	9515100251
12	14	ADadAS	19	123213123
13	15	ANirudh	78	314344

Enter Member id :15

Member\_name Age

13 ANirudh 78

Do you want to really delete it(Y/N)y

Member id - 15 has been deleted successfully...

Enter Member id :1

Member\_name Age

0 Aman 20

Do you want to really delete it(Y/N)n

Member is not found...

Member\_name Age

0 Aman 20

Do you want to really delete it(Y/N)n

Member is not found...

Do you want to delete more members?n

Member_id	Member_name	Age	Contact	\
0	1	Aman	20	342432434
1	2	Kanti	34	435211523
2	3	Priya	25	527990612
3	4	Santosh	56	620769701
4	5	Jack	76	713548790
5	6	Rose	23	806327879
6	7	Bart	11	899106968
7	8	Homer	23	991886057
8	9	Lisa	35	108466514

2	3	,"16846 Buhler Alley",64178-000,home,"Bangkok...	Y
3	1	,"1383 Merchant Street",10600,office,"Bangkok...	Y
4	2	,"0210 Division Lane",,"63032 CEDEX 9",office,...	Y
5	3	,"16846 Buhler Alley",64178-000,home,"Bangkok...	Y
6	1	,"1383 Merchant Street",10600,office,"Bangkok...	Y
7	2	,"0210 Division Lane",,"63032 CEDEX 9",office,...	Y
8	3	,"16846 Buhler Alley",64178-000,home,"Bangkok...	Y
9	1	,"1383 Merchant Street",10600,office,"Bangkok...	Y
10	2	,"0210 Division Lane",,"63032 CEDEX 9",office,...	Y
11		Pallikarnai Chennai	Y
12		1323213dfsafsa	y

M E M B E R S M E N U  
\*\*\*\*\*

## TRANSACTION MENU

\*\*\*\*\*

1- Issue a Book

2- Return a Book

3- B A C K

Enter your choice [1-3] :1

Enter Member id: 1

Enter Book id to be issued: 1002

Member\_name Age

0 Aman 20

3- B A C K

Enter your choice [1-3] :1

Enter Member id: 1

Enter Book id to be issued: 1002

Member\_name Age

0 Aman 20

Sorry! Membership Expired!! or 1-Book Already issued. First return it..

Enter Member id: 3213213

Enter Book id to be issued: 546564

Member is not found...

- 2- MEMBERS
- 3- TRANSACTION
- 4- VISUALIZATION
- 5- ANALYTICS/QUERY
- 6- E X I T

Enter your choice [1-6] :4

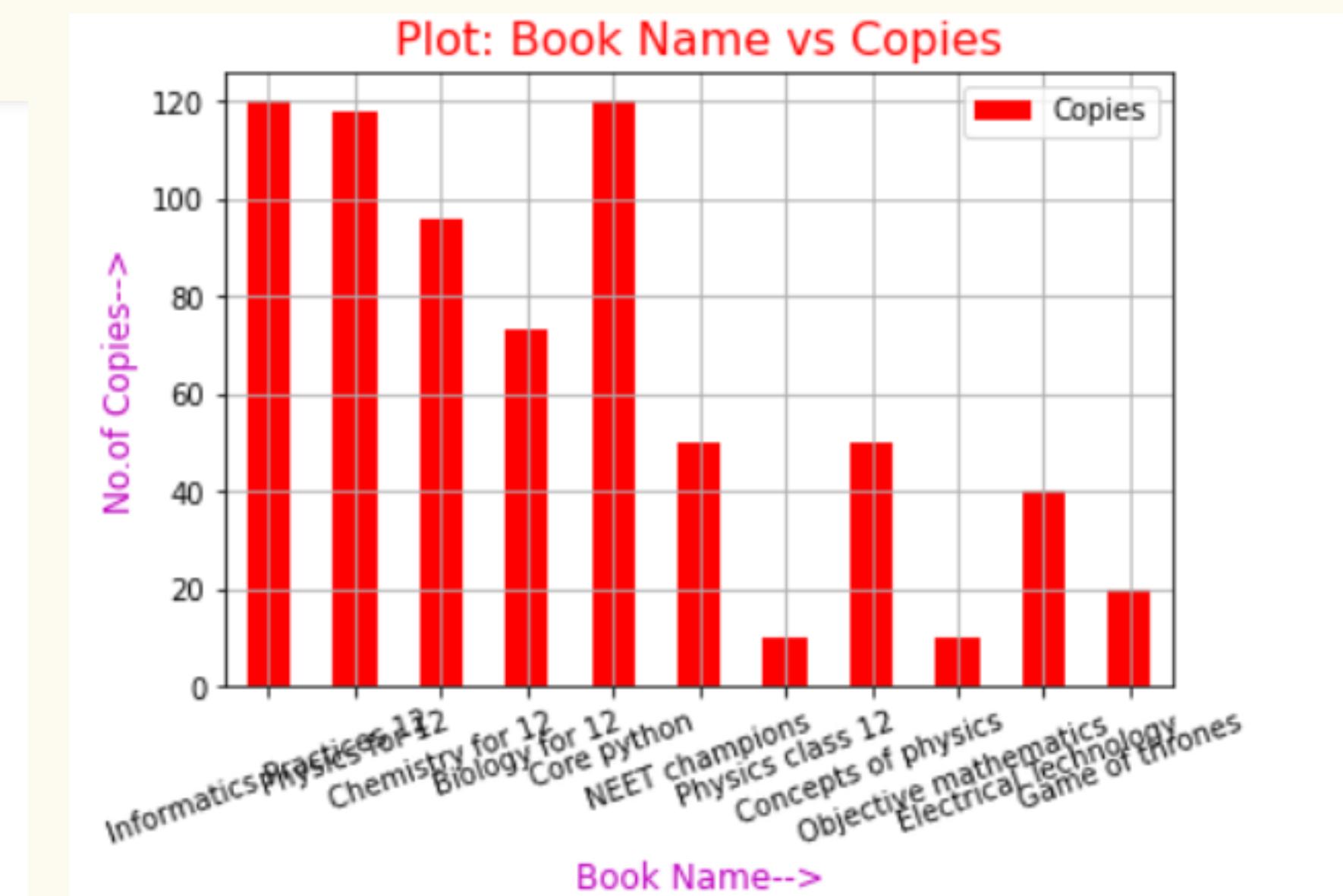
V I S U A L I Z A T I O N M E N U

\*\*\*\*\*

- 1- No. of Copies Balanced in the Library
- 2- Members Age ( Specific Group)
- 3- The Books Popularity
- 4- Back to Main Menu

Enter your choice [1-4] :1

Graph Type [Line-L,Bar-B]:B



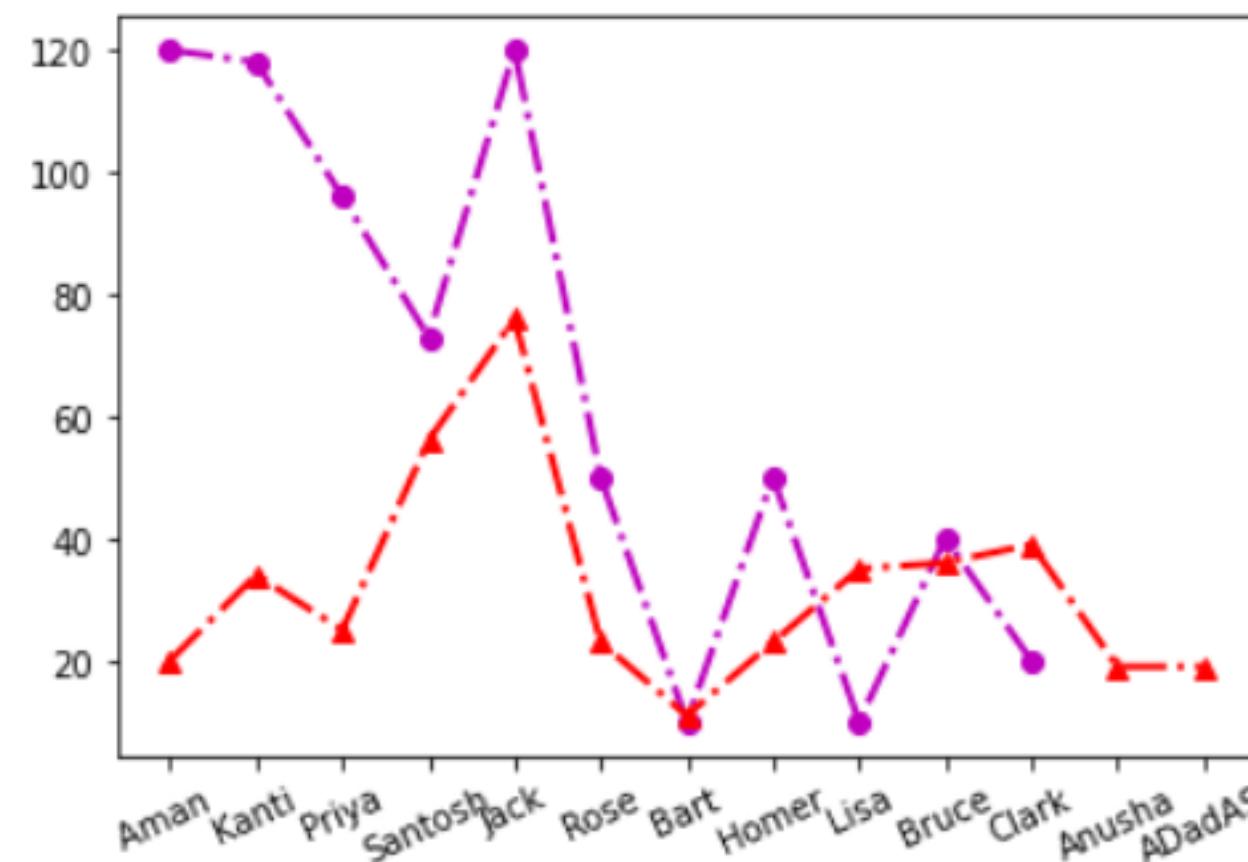
## V I S U A L I Z A T I O N M E N U

\*\*\*\*\*

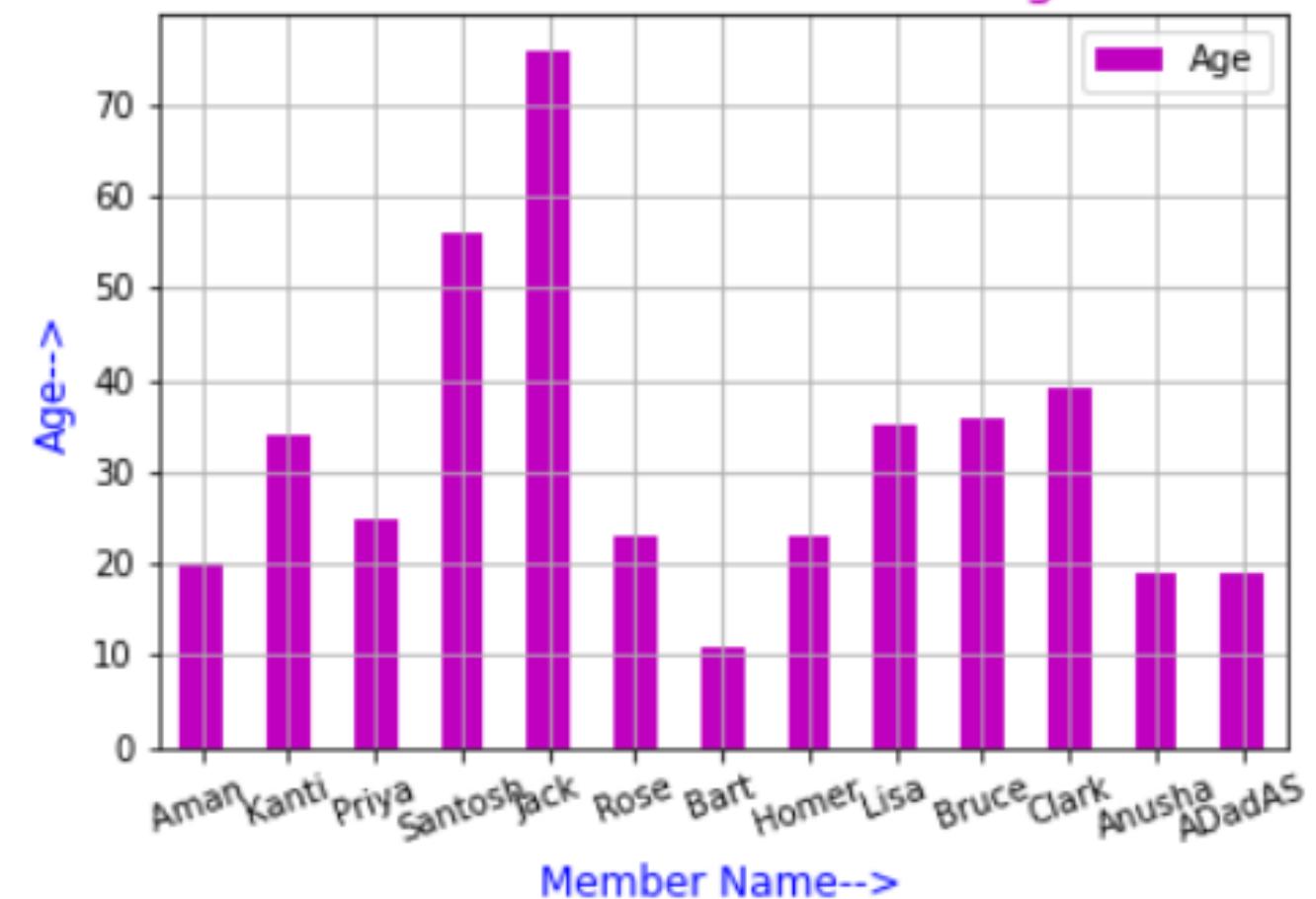
- 1- No. of Copies Balanced in the Library
- 2- Members Age ( Specific Group)
- 3- The Books Popularity
- 4- Back to Main Menu

Enter your choice [1-4] :2

Graph Type [Line-L,Bar-B]:B



## Plot: Member Name vs Age



## V I S U A L I Z A T I O N M E N U

\*\*\*\*\*

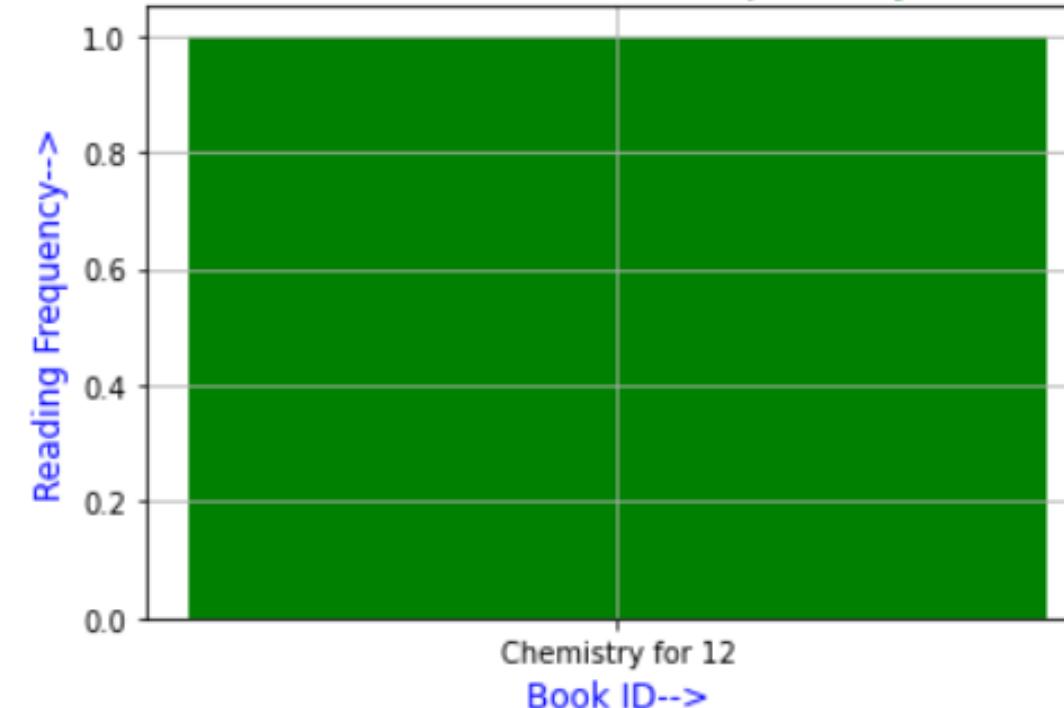
- 1- No. of Copies Balanced in the Library
- 2- Members Age ( Specific Group)
- 3- The Books Popularity
- 4- Back to Main Menu

\*\*\*\*\*

1- No. of Copies Balanced in the Library  
2- Members Age ( Specific Group)  
3- The Books Popularity  
4- Back to Main Menu  
Enter your choice [1-4] :3

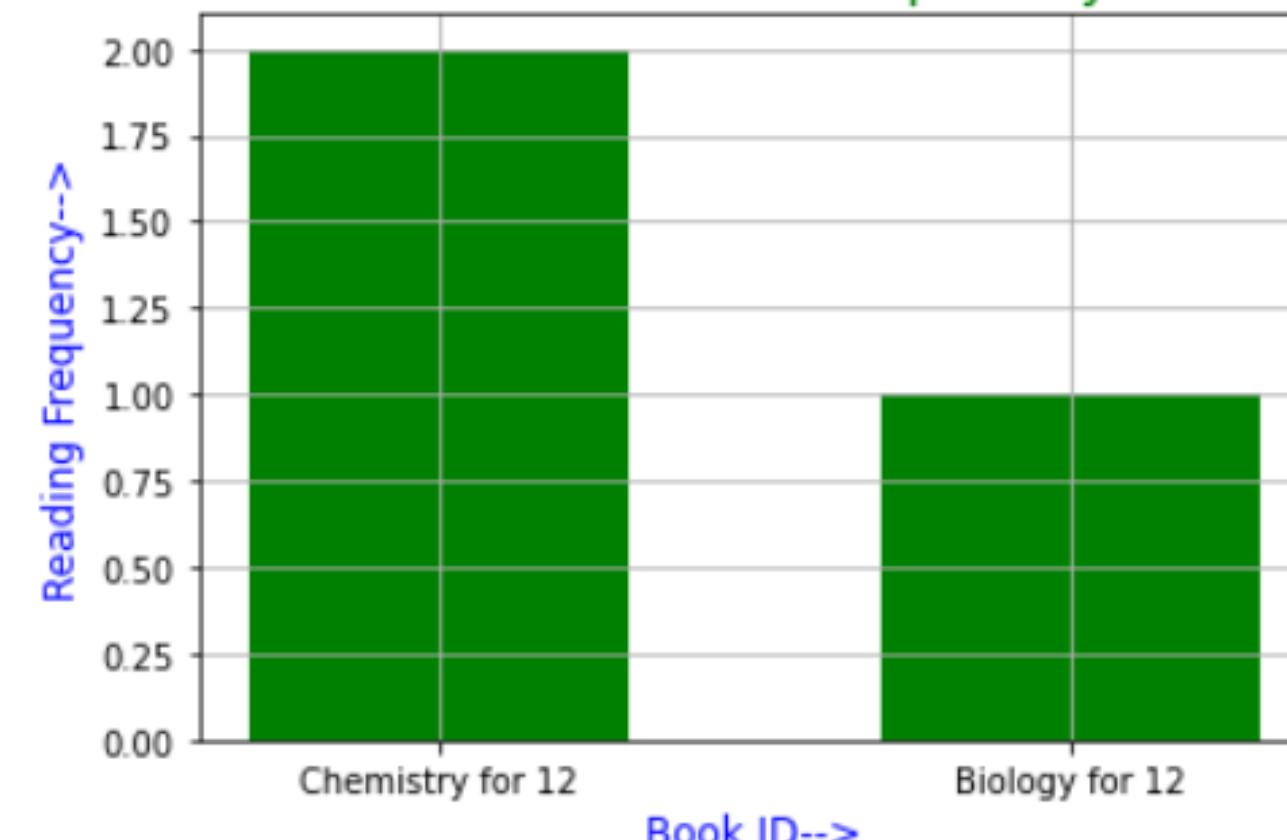
Book\_id Rank Bname Author  
0 1003 1 Chemistry for 12 S L arora

Plot: Book no vs Popularity

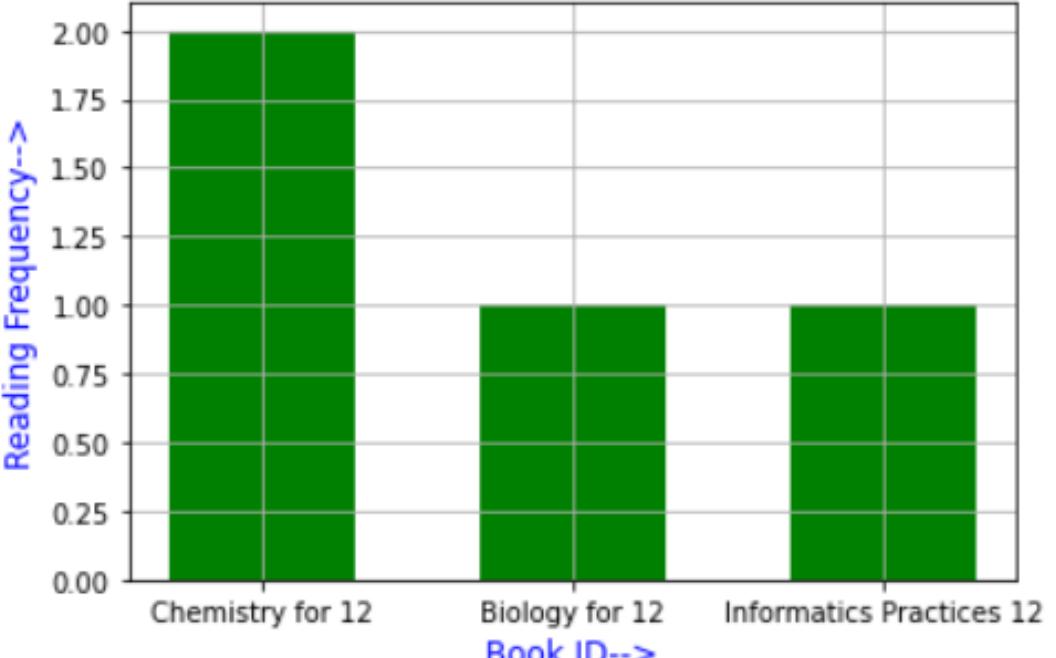


BOOK ID-->  
Book\_id Rank Bname Author  
0 1003 2 Chemistry for 12 S L arora  
1 1004 1 Biology for 12 K N Bhatia

Plot: Book no vs Popularity



Plot: Book no vs Popularity



Book\_id Rank Bname  
0 1003 2 Chemistry for 12  
1 1004 1 Biology for 12  
2 1001 1 Informatics Practices 12 Su  
3 1002 1 Physics for 12

Copies  
0 96  
1 73

**THANK  
YOU FOR  
LISTENING!**



# GIT HUB PROJECT PAGE LINK

<https://github.com/SurvivalXUdit007/Library-Management-System.git>



# LINKEDIN PROFILE LINK

You can use these  
gorgeous elements to  
customize the slides.



# UDIT KUMAR

Wanna be data

scientist

Computer science  
student

Working hard towards  
goals

Working well against  
all odds

