# PROJECT-

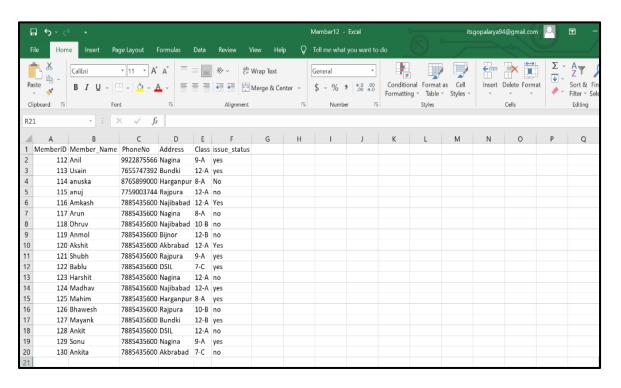
# Library Management

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### **CSV FILES:**

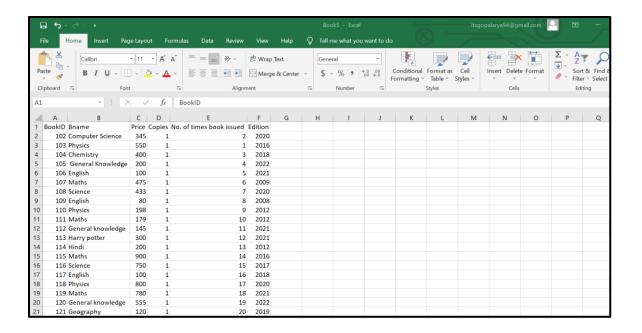
### ➤ <u>Details of Members:</u>

This table contains data related to the members that are registered in a library. There are six columns in this table named **Member12** i.e., MemberID, Member name, Phone number, Address, Class and issue status (it will describe that book are issued to the member or not).



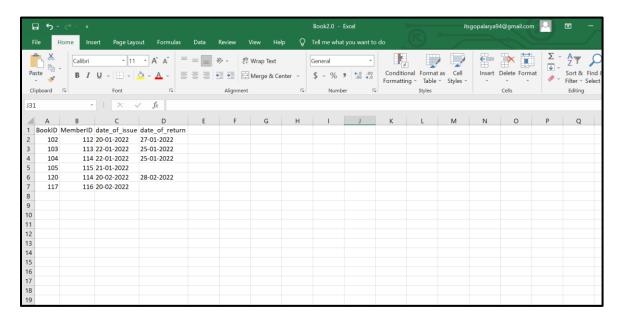
### > Records of books:

This table contain details about all the book that are in the library. There are six columns in the table named **Book5** i.e., BookID, Bname (Book name), their Price, Copies (it contains 1 because every book has a unique id), No. of times that book has been issued, and their edition.



### ➤ Book issued:

This table contains details about the books that are being issued by the member. There are four columns in this table named **Book2.0** i.e., BookID, MemberID, Date of issue and Date of return.



### **SOURCE CODE AND OUTPUT:**

### For Displaying menu:

#### Source Code:

```
import pandas as pd
import matplotlib.pyplot as plt
def menu ():
  print ()
              Library Management System")
  print ("
  print ()
  print ("Member1 CSV File")
  print ("
            1. Read csv file-member")
            2. Add new member in member file")
  print ("
            3. Search Member")
  print ("
            4. Delete a member")
  print ("
  print ("
            5. Display member name in Ascending order")
  print ("Book1 CSV File")
            6. Read 2 records from top and 2 from bottom-member")
  print ("
  print ("
            7. Modify data")
            8. Add new book record in Book1 file")
  print ("
            9. Show Books file")
  print ("
            10. Book name in Descending order")
  print ("
            11. Read CSV file - book1")
  print ("
  print ("
            12. Find total books in Library")
  print ("
            13. Save changes in Book1 file")
  print ("
            14. Save changes in Member file")
            15. Search book")
  print ("
            16. Delete a book")
  print ("
  print ("
            17. Issue Books")
  print ("
            18. Return book")
  print ("
            19. show issued books")
  print ("Data Visualization")
  print ("
            20. Line Plot")
  print ("
            21. Bar Plot")
  print ("
            22. Hist chart")
menu ()
```

```
Console Z/A X

Member1 CSV File

1.Read csv file-member
2.Add new member in member file
3.Search Member
4.Delete a member
5.Display member name in Ascending order
Book1 CSV File

6.Read 2 records from top and 2 from bottom-member
7.Modify data
8.Add new book record in Book1 file
9.Show Books file
10.Publisher in Descending order
11.Read CSV file - book1
12.Find total books in Library
13.Save changes in Book1 file
14.Save changes in Member file
15.searchbook
16.Delete a book
17.Issue Books
18.Return book
19.show issued books
Dat Visualisation
20.Line Plot
21.Bar Plot
21.Bar Plot
22.Hist chart

Enter the Choice:
```

### ➤ Read CSV file-Member:

### Source Code:

```
def member ():
    print ("Reading File Book1")
    df=pd. read_csv ("C:\\Users\\itsgo\\Downloads\\Member12.csv")
    print(df)
```

```
Console 2/A X
Enter the Choice:1
Reading File Book1
MemberID Member_Name
Anil
                                           PhoneNo
9922875566
                                                                   Address Class issue_status
Nagina 9-A yes
                                                                                                      yes
no
no
                                           7655747392
8765899000
                                                                    Bundki 12-A
                                                              Harganpur
Rajpura
                114
                                                                                  8-A
                              anuska
                                           7759003744
7885435600
                              Amkash
                                                                                 12-A
                                                               Najibabad
                                           7885435600
7885435600
                                                              Nagina
Najibabad
                                                                                8-A
10-B
                118
                                                                                                        no
no
                              Anmol
Akshit
                                                                    Bijnor
8
9
10
11
12
13
14
15
16
17
                                           7885435600
7885435600
                                                                Akbrabad
                                                                                                        yes
yes
yes
no
                120
                                                                                 12-A
                                                                                  9-A
7-C
                                                                  Rajpura
DSIL
                                           7885435600
7885435600
                               Bablu
                                                                    Nagina
                124
125
                              Madhav
Mahim
                                          7885435600
7885435600
                                                                                12-A
8-A
                                                              Najibabad
                                                                                                       yes
yes
no
yes
no
yes
no
                                                              Harganpur
                126
127
                            Bhawesh
Mayank
                                          7885435600
7885435600
                                                                  Rajpura 10-B
Bundki 12-B
                               Ankit 7885435600
Sonu 7885435600
                                                                   DSIL 12-A
Nagina 9-A
                130 Ankita 7885435600
*****Thank You*********
                                                                Akbrabad
```

## To add new member in member file:

### Source Code:

```
def new_member ():
  print ("Adding new member in File member")
  df=pd. read_csv("C:\\Users\\itsgo\\Downloads\\Member12.csv")
  print(df)
  ans='yes'
  while ans=='yes' or ans=='Yes':
    MemberID=int (input ("Enter the member id: "))
    Name=input ("Enter the name: ")
    PhoneNo=int (input ("Enter the phone number: "))
    Address=input ("Enter the address: ")
    Class=input ("Enter the class of student: ")
    issue_status="No"
    n=df["MemberID"]. count()
    df.at[n]= [MemberID, Name, PhoneNo, Address, Class, issue_status]
    df.to_csv(path_or_buf="C:\\Users\\itsgo\\Downloads\\Member12.csv", index=False)
    print ("Member added successfully")
    ans=input ("Do you want to add more books?")
  print(df)
```

```
Console 2/A X
Enter the Choice:2
Adding new member in File member
    MemberID Member_Name
                                PhoneNo
                                             Address Class issue_status
          112
113
                                              Nagina
Bundki
0
                      Anil
                             9922875566
                                                        9-A
                     Usain
                                                       12-A
                             7655747392
                                                                       yes
          114
                             8765899000
                                                        8-A
                    anuska
                                           Harganpur
                                                                        no
          115
                      anuj
                             7759003744
                                             Rajpura
                                                        12-A
                                                                        no
          116
117
                    Amkash
                              7885435600
                                           Najibabad
                                                        12-A
4
5
6
7
8
                             7885435600
                      Arun
                                              Nagina
                                                        8-A
                                                                        no
                     Dhruv
                             7885435600
                                           Najibabad
                                                       10-B
          118
                                                                        no
          119
                             7885435600
                                              Bijnor
                                                        12-B
                     Anmol
                                                                        no
          120
                    Akshit
                              7885435600
                                            Akbrabad
                                                        12-A
                                                                       yes
9
10
11
12
13
14
15
16
17
          121
                     Shubh
                              7885435600
                                             Rajpura
                                                         9-A
7-C
                                                                       yes
          122
                             7885435600
                                                DSTI
                     Bablu
                                                                       yes
          123
                             7885435600
                                              Nagina
                   Harshit
                                                       12-A
                                                                        no
          124
                    Madhav
                             7885435600
                                           Najibabad
                                                        12-A
                                                                       ves
                                                         8-A
          125
                     Mahim
                              7885435600
                                           Harganpur
                                                                       yes
          126
                   Bhawesh
                              7885435600
                                             Rajpura
                                                        10-B
                                                                        no
          127
                    Mayank
                             7885435600
                                              Bundki
                                                        12-B
                                                                       yes
                     Ankit
                             7885435600
                                                DSIL
                                                        12-A
          128
                                                                        no
                             7885435600
          129
                      Sonu
                                              Nagina
                                                                       ves
          130
                             7885435600
                                            Akbrabad
                    Ankita
                                                                        no
```

Enter the member id: 131

Enter the name: Virat

Enter the phone number: 7823098111

Enter the address: Nagina

Enter the class of student: 10-A

Member added successfully

```
Console 2/A X
Do you want to add more books?no
    MemberID Member_Name
                               PhoneNo
                                           Address Class issue_status
0
       112.0
                    Anil
                          9.922876e+09
                                            Nagina
                                                    9-A
                                                                  ves
                          7.655747e+09
                                            Bundki
1
       113.0
                   Usain
                                                    12-A
                                                                  yes
2
       114.0
                  anuska
                          8.765899e+09
                                         Harganpur
                                                    8-A
                                                                   no
       115.0
3
                          7.759004e+09
                                           Rajpura
                    anuj
                                                    12-A
                                                                   no
       116.0
                  Amkash
                           7.885436e+09
                                         Najibabad
                                                    12-A
                                                                  yes
5
       117.0
                          7.885436e+09
                                                    8-A
                    Arun
                                            Nagina
                                                                   no
                                         Najibabad
6
       118.0
                   Dhruv
                          7.885436e+09
                                                   10-B
                                                                    no
       119.0
                   Anmol
                          7.885436e+09
                                            Bijnor
                                                    12-B
                                                                   no
8
                  Akshit
                          7.885436e+09
                                                    12-A
       120.0
                                          Akbrabad
                                                                  yes
9
       121.0
                   Shubh
                           7.885436e+09
                                           Rajpura
                                                     9-A
                                                                  yes
10
       122.0
                   Bablu 
                          7.885436e+09
                                              DSIL
                                                     7-C
                                                                  yes
11
       123.0
                 Harshit
                          7.885436e+09
                                            Nagina
                                                    12-A
                                                                   no
12
       124.0
                  Madhav
                          7.885436e+09
                                         Najibabad
                                                    12-A
                                                                  ves
13
       125.0
                   Mahim
                          7.885436e+09
                                         Harganpur
                                                    8-A
                                                                  yes
14
       126.0
                 Bhawesh
                          7.885436e+09
                                           Rajpura
                                                    10-B
                                                                   no
                          7.885436e+09
                                                    12-B
15
                                            Bundki
       127.0
                  Mayank
                                                                  yes
16
       128.0
                   Ankit
                          7.885436e+09
                                              DSIL
                                                    12-A
                                                                   no
17
       129.0
                          7.885436e+09
                                                     9-A
                                                                  yes
                    Sonu
                                            Nagina
18
       130.0
                  Ankita
                          7.885436e+09
                                          Akbrabad
                                                     7-C
                                                                    no
19
                   Virat 7.823098e+09
                                            Nagina
                                                    10-A
       131.0
                                                                    No
    ********Thank You*********
```

### ➤ To search member:

#### Source Code:

```
def search_member ():
    MemberID=int (input ("Enter the member id: "))
    df=pd.read_csv("C:\\Users\\itsgo\\Downloads\\Member12.csv")
    df1=df.loc[df["MemberID"] ==MemberID]
    if df1.empty:
        print ("No member found with given id")
    else:
        print ("Member details are: ")
        print(df1)
```

```
Console 2/A X
Book1 CSV File
    7.Read 2 records from top and 2 from bottom-member
    8.Modify fine to null
    9.Add new book record in Book1 file
    10.Show Books file
    11. Publisher in Descending order
    12.Read CSV file - book1
    13. Find total books in Library
    14. Save changes in Book1 file
    15.Save changes in Member file
    16.Searchbook
    17.Delete a book
    18.Issue Books
    19.Return book
    20.show issued books
Data Visualisation
    21.Line Plot
    22.Bar Plot
    23.Hist chart
Enter the Choice:3
Enter the member id: 121
Member details are:
  MemberID Member_Name
                         PhoneNo Address Class issue_status
     *************Thank You**********
```

### ➤ To delete a member:

#### Source Code:

```
def delete_member ():
    MemberID=int (input ("Enter the member id: "))
    df=pd.read_csv("C:\\Users\\itsgo\\Downloads\\Member12.csv")
    bdf=df.drop (df[df["MemberID"] ==MemberID].index)
    df=df.to_csv ("C:\\Users\\itsgo\\Downloads\\Member12.csv", index=False)
    print ("Member deleted successfully")
    print(bdf)
```

```
Enter the Choice:4
Enter the member id: 120
Member deleted successfully
   MemberID Member Name
                            PhoneNo
                                       Address Class issue_status
        112
                   Anil 9922875566
                                        Nagina
                                                9-A
                  Usain 7655747392
                                        Bundki
                                                12-A
                                                               yes
         114
                  anuska 8765899000
                                     Harganpur
                                                 8-A
                                                               no
                   anuj 7759003744
                                       Rajpura
                                                12-A
                                                                no
        116
                 Amkash 7885435600
                                     Najibabad
                                                12-A
                                                               yes
        117
                   Arun 788543<u>5600</u>
                                        Nagina
                                                 8-A
                                                               no
                  Dhruv 7885435600
        118
                                     Najibabad
                                                10-B
                                                               no
        119
                  Anmol
                         7885435600
                                        Bijnor
                                                12-B
                                                               no
                  Shubh
                         7885435600
                                       Rajpura
                                                 9-A
                                                               yes
10
                  Bablu
                         7885435600
                                          DSIL
                                                 7-C
                                                               yes
11
         123
                Harshit
                         7885435600
                                        Nagina
                                                12-A
        124
                 Madhav
                         7885435600
                                     Najibabad
                                                12-A
                                                               yes
13
        125
                  Mahim 7885435600
                                     Harganpur
                                                 8-A
                                                               yes
                Bhawesh 7885435600
14
        126
                                       Rajpura
                                                10-B
                                                               no
15
        127
                 Mayank 7885435600
                                        Bundki
                                                12-B
                                                               yes
16
        128
                  Ankit 7885435600
                                          DSIL
                                                12-A
                                                               no
        129
                   Sonu 7885435600
                                        Nagina
                                                 9-A
                                                               yes
                 Ankita 7885435600
18
        130
                                      Akbrabad
*************Thank You***************
```

# To Display member name in Ascending order: Source Code:

```
def sort_member ():
    print ("Sorting members name in Ascending order")
    df=pd.read_csv ("C:\\Users\\itsgo\\Downloads\\Member12.csv", index_col=0)
    df=df.sort_values ('Member_Name', ascending=True)
    print(df)
```

```
Console 2/A X
Sorting members name in Ascending order
                                 Address Class issue status
        Member Name
                       PhoneNo
MemberID
120
            Akshit 7885435600
                                Akbrabad 12-A
                                                      yes
            Amkash 7885435600 Najibabad 12-A
116
                                                      yes
112
              Anil 9922875566
                                  Nagina
                                         9-A
                                                      yes
128
             Ankit 7885435600
                                   DSIL 12-A
                                                       no
130
            Ankita 7885435600
                               Akbrabad
                                        7-C
                                                       no
119
             Anmol 7885435600
                                 Bijnor 12-B
                                                       no
117
              Arun 7885435600
                                 Nagina
                                        8-A
                                                       no
122
             Bablu 7885435600
                                   DSIL
                                         7-C
                                                      yes
                                 Rajpura 10-B
126
            Bhawesh 7885435600
                                                       no
118
             Dhruv 7885435600 Najibabad 10-B
                                                       no
                                  Nagina 12-A
123
           Harshit 7885435600
                                                       no
124
            Madhav 7885435600 Najibabad 12-A
                                                      yes
125
             Mahim 7885435600 Harganpur
                                          8-A
                                                      yes
127
            Mayank 7885435600
                                  Bundki 12-B
                                                      yes
121
             Shubh 7885435600
                                 Rajpura
                                         9-A
                                                      yes
129
              Sonu 7885435600
                                 Nagina
                                        9-A
                                                      yes
113
             Usain 7655747392
                                  Bundki 12-A
                                                      ves
115
              anuj 7759003744
                                 Rajpura 12-A
                                                       no
114
            anuska 8765899000
                              Harganpur
                                                       no
```

### To Read 2 records from top and 2 from bottommember:

### Source Code:

```
def top_bottom ():
    print ("Top 2 records and Last 2 records")
    df=pd.read_csv("C:\\Users\\itsgo\\Downloads\\Member12.csv")
    print ('Top 2 rows')
    print (df.head (2))
    print ()
    print ('Last 2 rows')
    print (df.tail(2))
```

```
Console 2/A X
Enter the Choice:7
Top 2 records and Last 2 records
Top 2 rows
  MemberID Member_Name
                         PhoneNo Address Class issue_status
                 Anil 9922875566 Nagina 9-A
       112
                                                      yes
                Usain 7655747392 Bundki 12-A
       113
                                                      yes
Last 2 rows
                          PhoneNo Address Class issue status
   MemberID Member Name
17
        129
                  Sonu 7885435600
                                  Nagina 9-A
                                                         yes
        130
                Ankita 7885435600 Akbrabad 7-C
                                                          no
***********Thank You*********
```

### ➤ Modify:

# Modify Book file: Source Code:

```
def modify():
  print ("Enter-1: To modify book file ")
  print ("Enter-2: To modify member file")
  opt=int (input ("Enter the choice: "))
  if opt==1:
    df=pd.read_csv("C:\\Users\\itsgo\\Downloads\\Book5.csv")
    ans='yes'
    BookID=0
    while ans=='yes' or ans=='Yes':
       BookID=int (input ("Enter Book id :"))
       if BookID in df['BookID'].values:
         a=input ("Enter the column name to change: ")
         b=input ("Enter it's value: if string in quotes("): ")
         df.loc[(df['BookID'] == BookID),a]=b
         print ("Book id -",BookID,"has been updated successfully...")
         print(df.loc[df['BookID']==BookID])
       else:
         print ("Book is not found...")
       df.to_csv("C:\\Users\\itsgo\\Downloads\\Book5.csv",index=False)
       ans=input ("Do you want to edit more books?")
    print(df)
```

```
Enter the Choice:7
Enter-1: To modify book file
Enter-2: To modify member file

Enter the choice: 1

BookID Bname Price Copies No. of times book issued
0 102 Computer Science 345 1 2
1 103 Physics 550 1 3
2 104 Chemistry 400 1 4
3 105 General Knowledge 200 1 5
4 106 English 100 1 6
5 107 Maths 475 1 7
6 108 Science 433 1 88
7 109 English 80 1 9
8 110 Physics 198 1 10
9 111 Maths 179 1 11
10 112 General knowledge 145 1 12
11 113 Harry potter 300 1 13
12 114 Hindi 200 1 14
13 115 Maths 900 1 15
14 116 Science 750 1 16
15 117 English 100 0 17
16 118 Physics 800 1 18
17 119 Maths 780 1 18
17 119 Maths 780 1 19
18 120 General knowledge 555 1 20
19 121 Geography 120 1 2
```

```
Enter the column name to change: Price

Enter it's value: if string in quotes(''): 500
Book id - 103 has been updated successfully...

BookID Bname Price Copies No. of times book issued

1 103 Physics 500 1 3

Do you want to edit more books?no
BookID Bname Price Copies No. of times book issued

0 102 Computer Science 345 1 2
1 103 Physics 500 1 3
2 104 Chemistry 400 1 4
3 105 General Knowledge 200 1 5
4 106 English 100 1 6
5 107 Maths 475 1 7
6 108 Science 433 1 8
7 109 English 80 1 9
8 110 Physics 198 1 10
9 111 Maths 179 1 11
10 112 General knowledge 145 1 12
11 113 Harry potter 300 1 13
12 114 Hindi 200 1 14
13 115 Science 750 1 16
15 117 English 100 0 1 15
16 118 Physics 800 1 13
17 119 Maths 780 1 19
18 120 General knowledge 555 1 20

Database Console History
```

### Modify Member file: Source Code:

```
if opt==2:
    df=pd.read_csv("C:\\Users\\itsgo\\Downloads\\Member12.csv")
    print(df)
    ans='yes'
    MemberID=0
    while ans=='yes' or ans=='Yes':
       MemberID=int (input ("Enter Member id :"))
       if MemberID in df['MemberID'].values:
         a=input ("Enter the column name to change: ")
         b=input ("Enter it's value: if string in quotes("): "))
         df.loc[(df['MemberID'] == MemberID),a]=b
         print ("Member id -", MemberID," has been updated successfully...")
         print(df.loc[df['MemberID']==MemberID])
       else:
         print ("Member is not found...")
       df.to_csv("C:\\Users\\itsgo\\Downloads\\Member12.csv",index=False)
       ans=input ("Do you want to edit more member details?")
    print(df)
```

```
Console 2/A X
Enter the Choice:7
Enter-1: To modify book file
Enter-2: To modify member file
Enter the choice: 2
    MemberID Member_Name
                               PhoneNo
                                          Address Class issue_status
       112.0
                    Anil 9.922876e+09
                                           Nagina
                                                   9-A
                                                                 ves
                  Usain 7.655747e+09
                                           Bundki
                                                   12-A
       113.0
                                                                  yes
2
       114.0
                          8.765899e+09
                                                    8-A
                  anuska
                                        Harganpur
                                                                  no
3
                          7.759004e+09
                                         Rajpura
       115.0
                   anuj
                                                   12-A
                                                                  no
       116.0
                  Amkash
                          7.885436e+09
                                        Najibabad
                                                   12-A
                                                                 yes
5
       117.0
                   Arun
                          7.885436e+09
                                           Nagina
                                                    8-A
                                                                  no
                   Dhruv
                                                   10-B
       118.0
                          7.885436e+09
                                        Najibabad
                                                                  no
       119.0
                   Anmol
                          7.885436e+09
                                           Bijnor
                                                   12-B
                                                                  no
       120.0
                          7.885436e+09
8
                  Akshit
                                         Akbrabad 12-A
                                                                  yes
9
       121.0
                   Shubh
                          7.885436e+09
                                          Rajpura
                                                    9-A
                                                                  yes
10
       122.0
                   Bablu
                          7.885436e+09
                                            DSTI
                                                    7-C
                                                                  yes
11
       123.0
                 Harshit
                          7.885436e+09
                                           Nagina 12-A
                                                                  no
12
       124.0
                          7.885436e+09
                                        Najibabad
                                                   12-A
                 Madhav
                                                                  yes
13
       125.0
                  Mahim
                          7.885436e+09
                                        Harganpur
                                                    8-A
                                                                  yes
14
       126.0
                 Bhawesh
                          7.885436e+09
                                          Rajpura
                                                   10-B
                                                                  no
15
                          7.885436e+09
                                           Bundki
                                                   12-B
       127.0
                  Mayank
                                                                  yes
16
       128.0
                   Ankit
                          7.885436e+09
                                             DSIL
                                                   12-A
                                                                  no
17
                                           Nagina
       129.0
                    Sonu
                          7.885436e+09
                                                    9-A
                                                                  yes
18
       130.0
                  Ankita 7.885436e+09
                                         Akbrabad
                                                   7-C
                                                                  no
19
       131.0
                  Virat 7.823098e+09
                                           Nagina 10-A
                                                                  No
                                                     IPython Console History
```

```
Console 2/A X
Enter Member id :112
Enter the column name to change: Class
Enter it's value: if string in quotes(''): 10-A
Member id - 112 has been updated successfully...
   MemberID Member_Name
                              PhoneNo Address Class issue_status
а
                   Anil 9.922876e+09 Nagina 10-A
      112.0
Do you want to edit more member details?No
    MemberID Member_Name
                              PhoneNo
                                           Address Class issue_status
                    Anil 9.922876e+09
       112.0
                                           Nagina 10-A
       113.0
                   Usain 7.655747e+09
                                            Bundki 12-A
                                                                  yes
2
       114.0
                  anuska 8.765899e+09
                                                    8-A
                                        Harganpur
                                                                  no
       115.0
3
                    anuj 7.759004e+09
                                          Rajpura 12-A
                                                                   no
                  Amkash 7.885436e+09
4
       116.0
                                        Najibabad 12-A
                                                                  yes
5
       117.0
                   Arun 7.885436e+09
                                            Nagina
                                                    8-A
                                                                   no
6
       118.0
                   Dhruv
                          7.885436e+09
                                        Najibabad
                                                   10-B
                                                                   no
                   Anmol
7
       119.0
                          7.885436e+09
                                            Bijnor
                                                    12-B
                                                                   no
8
       120.0
                  Akshit 7.885436e+09
                                          Akbrabad 12-A
                                                                  yes
                                                    9-A
9
       121.0
                   Shubh 7.885436e+09
                                           Rajpura
                                                                  yes
10
       122.0
                   Bablu 7.885436e+09
                                              DSIL
                                                    7-C
                                                                  yes
       123.0
11
                 Harshit 7.885436e+09
                                            Nagina 12-A
                                                                   no
                  Madhav 7.885436e+09
Mahim 7.885436e+09
12
       124.0
                                        Najibabad
                                                    12-A
                                                                  yes
13
       125.0
                                         Harganpur
                                                    8-A
                                                                  yes
                 Bhawesh 7.885436e+09
                                           Rajpura
14
       126.0
                                                    10-B
                                                                   no
                                                      IPython Console History
```

# To Add new book record in Book1 file: Source Code:

```
def add_book ():
  print ("Adding new book record in book1 file")
  df=pd.read_csv("C:\\Users\\itsgo\\Downloads\\Book5.csv")
  print(df)
  ans='yes'
  while ans=='yes' or ans=='Yes':
    BookID=int (input ("Enter the book id: "))
    Bname=input ("Enter the book name: ")
    Price=int (input ("Enter the Price: "))
    Copies=1
    No_of_times_book_issued=input ("Enter the No_of_times_book_issued: ")
    Edition=int (input ("Enter the edition of the book: "))
    n=df["BookID"].count()
    df.at[n]= [BookID, Bname, Price, Copies, No_of_times_book_issued, Edition]
    df=df.to_csv("C:\\Users\\itsgo\\Downloads\\Book5.csv",index=False)
    print ("Book added successfully")
    ans=input ("Do you want to add more books?")
  print(df)
```

```
Console 2/A X
Enter the Choice:8
Adding new book record in book1 file
                            Bname ... No. of times book issued Edition
     BookID
               Computer Science
        102
                                                                          2020
        103
                         Physics
                                                                          2016
        104
                        Chemistry
                                                                          2018
        105
              General Knowledge
                                                                          2022
4
5
6
7
8
9
10
11
12
13
14
15
        106
        107
        108
                          Science
                                                                          2020
        109
                                                                         2008
                          English
        110
                                                                         2012
                          Physics
        111
                            Maths
                                                                         2012
              General knowledge
        112
113
                                                                         2021
                    Harry potter
                                                                          2021
        114
                            Hindi
                                                                          2012
        115
                            Maths
        116
        117
                          English
16
        118
                          Physics
                                                                         2020
17
18
        119
                                                                          2021
                            Maths
        120
              General knowledge
                                                                          2022
                        Geography
```

### To show Book file:

### Source Code:

```
def book_name ():
    print ("Show Books list")
    df=pd.read_csv("C:\\Users\\itsgo\\Downloads\\Book5.csv",usecols=['Bname'])
    print(df)
```

```
Console 2/A X
Enter the Choice:10
Show Books list
      Computer Science
              Physics
             Chemistry
     General Knowledge
               English
                 Maths
               Science
               English
               Physics
                 Maths
10
11
12
     General knowledge
          Harry potter
                 Hindi
13
                 Maths
14
15
               Science
               English
16
               Physics
                 Maths
18
     General knowledge
19
             Geography
                Civics
************Thank You**********
```

### ➤ To Print Bname in Descending order:

### Source Code:

```
def sort_book ():
    print ("Show Book name in descending order")
    df=pd.read_csv("C:\\Users\\itsgo\\Downloads\\Book5.csv")
    df=df. sort_values ('Bname', ascending=False)
    print(df)
```

```
Console 2/A X
Enter the Choice:11
Show Book name in descending order
                                        No. of times book issued
                                                                     Edition
    BookID
                           Bname ...
                         Science ...
     108.0
                                                                      2020.0
     116.0
                                                               15.0
                                                                      2017.0
                         Science
     103.0
                        Physics
                                                                      2016.0
     110.0
                         Physics
                                                                      2012.0
     118.0
                                                               17.0
                         Physics
     107.0
                           Maths
     119.0
     111.0
                           Maths
13
12
11
19
18
10
4
7
     115.0
                           Maths
                                                               14.0
     114.0
                           Hindi
                                                               13.0
     113.0
                   Harry potter
                                                               12.0
                                                                      2021.0
     121.0
                       Geography
                                                               20.0
                                                                      2019.0
     120.0
112.0
              General knowledge
                                                               19.0
                                                                      2022.0
              General knowledge
                                                               11.0
                                                                      2021.0
     106.0
109.0
                         English
                                                                      2021.0
                         English
                                                                      2008.0
15
0
     117.0
                         English
                                                               16.0
                                                                      2018.0
     102.0
               Computer Science
                                                               2.0
                                                                      2020.0
20
     122.0
                          Civics
                                                                      2021.0
                       Chemistry
     104.0
                                                                      2018.0
              General Knowledge
                                                                        IPvthon Console History
```

# ➤ To Read CSV file – book (Records of books): Source Code:

```
def book1():
    print ("Reading File Book")
    df=pd.read_csv("C:\\Users\\itsgo\\Downloads\\Book5.csv")
    print(df)
```

```
Console 2/A X
Enter the Choice:12
Reading File Book
                         Bname ... No. of times book issued
    BookID
                                                               Edition
    102.0
             Computer Science ...
                                                                2020.0
     103.0
                      Physics ...
                                                                2016.0
                     Chemistry ...
     104.0
                                                                2018.0
                                                                2022.0
     105.0
            General Knowledge
                                                          4.0
     106.0
                       English
                                                          5.0
                                                                2021.0
     107.0
                         Maths
                                                                2009.0
     108.0
                       Science
                                                                2020.0
     109.0
                       English ...
                                                          8.0
                                                                2008.0
                                                                2012.0
     110.0
                                                          9.0
                       Physics
     111.0
                         Maths
                                                         10.0
                                                                2012.0
     112.0
            General knowledge
                                                         11.0
                                                                2021.0
11
     113.0
                                                         12.0
                                                                2021.0
                  Harry potter
12
13
     114.0
                         Hindi
                                                                2012.0
                                                         13.0
     115.0
                         Maths
                                                         14.0
                                                                2016.0
     116.0
                       Science
                                                         15.0
                                                                2017.0
15
     117.0
                                                                2018.0
                       English
                                                         16.0
16
                                                         17.0
     118.0
                                                                2020.0
                       Physics
     119.0
                         Maths ...
                                                                2021.0
     120.0
            General knowledge ...
                                                                2022.0
                                                         19.0
19
    121.0
                                                                2019.0
                     Geography
                        Civics ...
    122.0
                                                                2021.0
                                                             IPython Console History
```

# ➤ To Find total books in Library: Source Code:

```
def Totalbooks():
    print ("Find Total Books in Library")
    df=pd.read_csv("C:\\Users\\itsgo\\Downloads\\Book5.csv")
    Totalbooks=df['Copies'].sum()
    Print (Totalbooks)
```

```
Book1 CSV File
    7.Read 2 records from top and 2 from bottom-member
    8.Modify fine to null
    9.Add new book record in Book1 file
    10.Show Books file
    11. Publisher in Descending order
    12.Read CSV file - book1
    13. Find total books in Library
    14. Save changes in Book1 file
    15. Save changes in Member file
    16.Searchbook
    17.Delete a book
    18.Issue Books
    19.Return book
    20.show issued books
Data Visualisation
    21.Line Plot
    22.Bar Plot
    23.Hist chart
Enter the Choice:13
Find Total Books in Library
20.0
***********Thank You**********
                                                                 IPython Console History
```

# To save changes in Book1 file: Source Code:

```
def changes_book1():
    m=input ("Enter the column name you want to add: ")
    n=int (input ("Enter the data: "))
    print ("Save changes in Book1 file")
    df=pd.read_csv("C:\\Users\\itsgo\\Downloads\\Book5.csv")
    df[m]=n
    print(df)
    df=df.to_csv("C:\\Users\\itsgo\\Downloads\\Book5.csv")
```

```
Console 2/A X
Enter the Choice:14
Enter the column name you want to add: Item
Enter the data: 2
Save changes in Book1 file
                        Bname Price ... No. of times book issued Edition Item
   BookID
    102.0
             Computer Science 345.0 ...
                                                                    2020.0
    103.0
                    Physics
                              550.0 ...
                                                               1.0
                                                                    2016.0
    104.0
                    Chemistry
                              400.0
                                                               3.0
                                                                    2018.0
    105.0
            General Knowledge
                               200.0
                                                                    2022.0
                      English
    106.0
                                                                    2021.0
                               100.0
                                                               5.0
    107.0
                        Maths
                              475.0
                                                                    2009.0
    108.0
                      Science 433.0
                                                               7.0
                      English
    109.0
                               80.0
                                                              8.0
                                                                    2008.0
    110.0
                      Physics 198.0
                                                              9.0
                                                                    2012.0
    111.0
                        Maths 179.0
                                                              10.0
                                                                    2012.0
            General knowledge 145.0
10
    112.0
                                                              11.0
                                                                    2021.0
    113.0
                 Harry potter
                               300.0
                                                              12.0
                                                                    2021.0
12
    114.0
                        Hindi 200.0
                                                                    2012.0
                                                              13.0
13
    115.0
                        Maths 900.0
                                                              14.0
                                                                    2016.0
     116.0
                      Science
                               750.0
                                                              15.0
                                                                    2017.0
15
                      English
    117.0
                              100.0
                                                              16.0
                                                                    2018.0
16
    118.0
                      Physics 800.0
                                                              17.0
                                                                    2020.0
    119.0
                        Maths
```

# To save changes in Member file: Source Code:

```
def changes_member1():
    m=input ("Enter the column name you want to add: ")
    n=int (input ("Enter the data: "))
    print ("Save changes in Member1 file")
    df=pd.read_csv("C:\\Users\\itsgo\\Downloads\\Member12.csv")
    df[m]=n
    print(df)
    df=df.to_csv("C:\\Users\\itsgo\\Downloads\\Member12.csv")
```

```
Console 2/A X
Enter the column name you want to add: Fine
Enter the data: 10
Save changes in Member1 file
                                         Address Class issue_status
    MemberID Member_Name
                              PhoneNo
                                                                   Fine
                   Anil 9.922876e+09
                                          Nagina 10-A
                                                               yes
                                                                      10
       113.0
                                          Bundki 12-A
                  Usain 7.655747e+09
                                                               yes
       114.0
                 anuska 8.765899e+09 Harganpur
                                                  8-A
                                                                      10
                                                                no
       115.0
                         7.759004e+09
                                         Rajpura
                                                  12-A
                                                                      10
                   anuj
                                                                no
       116.0
                         7.885436e+09
                 Amkash
                                       Najibabad
                                                  12-A
                                                               yes
                                                                      10
       117.0
                   Arun 7.885436e+09
                                          Nagina
                                                  8-A
                                                                      10
                                                                no
       118.0
                  Dhruv 7.885436e+09
                                       Najibabad
                                                 10-B
                                                                no
7
8
       119.0
                                          Bijnor 12-B
                                                                      10
                  Anmol 7.885436e+09
                                                                no
       120.0
                                                                      10
                 Akshit 7.885436e+09
                                        Akbrabad 12-A
                                                               yes
       121.0
                  Shubh
                         7.885436e+09
                                                                      10
                                         Rajpura
                                                  9-A
                                                               yes
10
       122.0
                  Bablu 7.885436e+09
                                            DSIL
                                                   7-C
                                                               yes
                                                                      10
       123.0
                Harshit 7.885436e+09
                                          Nagina 12-A
                                                                      10
12
13
14
15
       124.0
                 Madhav 7.885436e+09 Najibabad
                                                  12-A
                                                                      10
                                                               yes
                                                                      10
       125.0
                  Mahim 7.885436e+09 Harganpur
                                                  8-A
                                                               yes
                Bhawesh 7.885436e+09
                                                                      10
       126.0
                                         Rajpura 10-B
       127.0
                                                                      10
                 Mayank 7.885436e+09
                                          Bundki
                                                  12-B
                                                               yes
16
       128.0
                  Ankit 7.885436e+09
                                            DSIL
                                                  12-A
                                                                no
                                                                      10
       129.0
                                                  9-A
                                                                      10
                   Sonu 7.885436e+09
                                          Nagina
                                                               yes
18
                                                  7-C
                                                                      10
       130.0
                 Ankita 7.885436e+09
                                        Akbrabad
                                                                no
       131.0
                  Virat 7.823098e+09
                                          Nagina 10-A
                                                               IPython Console History
```

### To search a book:

### Source Code:

```
def searchbook ():
    Bname=input ("Enter the book name: ")
    df=pd.read_csv("C:\\Users\\itsgo\\Downloads\\Book5.csv")
    df1=df.loc[df["Bname"] ==Bname]
    if df1.empty:
        print ("No book found with given name")
    else:
        print ("Book details are: ")
        print(df1)
```

```
13.Find total books in Library
     14.Save changes in Book1 file
     15. Save changes in Member file
    16.Searchbook
     17.Delete a book
     18.Issue Books
     19.Return book
     20.show issued books
Data Visualisation
     21.Line Plot
     22.Bar Plot
     23.Hist chart
Enter the Choice:16
Enter the book name: Maths
Book details are:
   BookID Bname Price Copies No. of times book issued Edition
      107 Maths
                  475
                                                            2009
      111 Maths
                   179
                                                     10
                                                            2012
     115 Maths
                                                            2016
                   900
                                                     14
      119 Maths
                  780
                                                            2021
**********Thank You**********
```

### ➤ To delete a book:

#### Source Code:

```
def delete_book ():
    df=pd.read_csv("C:\\Users\\itsgo\\Downloads\\Book5.csv")
    print(df)
    BookID=int (input ("Enter the book id: "))
    mdf=df.drop(df[df["BookID"] ==BookID].index())
    df=df.to_csv ("C:\\Users\\itsgo\\Downloads\\Book5.csv", index=False)
    print ("Book deleted successfully")
    print(mdf)
```

```
Console 1/A X
Enter the Choice:17
Enter the book id: 121
Book deleted successfully
                                                    Price
    Unnamed:
               0
                  BookID
                                           Bname
                              Computer Science
                                                    345.0
0
               0
                    102.0
1234567
                                        Physics
               1
                    103.0
                                                    550.0
               2
                    104.0
                                                    400.0
                                       Chemistry
               3
                    105.0
                             General
                                      Knowledge
                                                    200.0
               4
                    106.0
                                         English
                                                    100.0
               5
                    107.0
                                           Maths
                                                    475.0
               6
                    108.0
                                         Science
                                                    433.0
               7
                                         English
                    109.0
                                                     80.0
8
               8
                                          hysics
                    110.0
                                                    198.0
               9
                    111.0
                                           Maths
                                                    179.0
10
              10
                             General knowledge
                                                    145.0
                    112.0
11
              11
                    113.0
                                                    300.0
                                   Harry
                                          potter
                    114.0
12
              12
                                           Hindi
                                                    200.0
13
              13
                    115.0
                                           Maths
                                                    900.0
14
              14
                                                    750.0
                    116.0
                                         Science
15
              15
                    117.0
                                         English
                                                    100.0
                    118.0
                                                    800.0
16
              16
                                         Physics
17
                    119.0
                                           Maths
                                                    780.0
18
              18
                    120.0
                                                    555.0
                             General knowledge
```

### To issue a book:

#### Source Code:

```
def issue_book ():
  dfbooks=pd.read_csv("C:\\Users\\itsgo\\Downloads\\Book5.csv")
  dfmembers=pd.read_csv("C:\\Users\\itsgo\\Downloads\\Member12.csv")
  dfbook=pd.read_csv("C:\\Users\\itsgo\\Downloads\\Book2.0.csv")
  ans='yes'
  while ans=='yes' or ans=='Yes':
    Mid=int (input ("Enter Member id: "))
    Bid=int (input ("Enter Book id to be issued: "))
    if Mid in dfmembers['MemberID'].values:
       print (dfmembers.loc [dfmembers. MemberID==Mid, ['Member_Name']])
       istatus=dfmembers.loc[dfmembers['MemberID'] == Mid, 'issue_status'].values[0]
       if (istatus=='no' or istatus=='No'):
         if Bid in dfbooks['BookID'].values:
            print (dfbooks.loc [dfbooks.BookID==Bid, ['Bname','Copies']])
            cpy=dfbooks.loc[dfbooks['BookID'] == Bid, 'Copies'].values[0]
            if cpy>0:
              dt_iss=input ("Please Enter date of Issue(dd/mm/yyyy): ")
              data=[Bid, Mid,dt_iss,np.NaN]
              dfbook.loc[len(dfbook)] =data
              dfmembers.loc [dfmembers.MemberID == Mid, 'issue_status'] ='Yes'
              dfbooks.loc[dfbooks.BookID == Bid, 'Copies']-=1
              print ("Book Issued Successfully...")
              print ("Sorry! No. of copy is insufficient in the Library..")
         else:
            print ("Book is not found...")
       else:
         print ("Sorry!...1-Book Already issued. First return it")
    else:
       print ("Member is not found...")
    dfbook.to_csv("C:\\Users\\itsgo\\Downloads\\Book2.0.csv",index=False)
    dfbooks.to_csv("C:\\Users\\itsgo\\Downloads\\Book5.csv",index=False)
    dfmembers.to_csv("C:\\Users\\itsgo\\Downloads\\Member12.csv",index=False)
    ans=input ("Do you want to issue more books?")
  print(dfbook)
```

```
Console 2/A X
Enter Member id: 131
Enter Book id to be issued: 122
   Member_Name
Virat
     Bname Copies
    Civics
Please Enter date of Issue(dd/mm/yyyy): 20-02-2022
Book Issued Successfully...
   you want to issue more books?no
BookID MemberID date_of_issue date_of_return
102 112 20-01-2022 27-01-2022
                            22-01-2022
                                              25-01-2022
       103
       104
                   114
                            22-01-2022
                                               25-01-2022
       105
                   115
                            21-01-2022
                                                       NaN
                            20-02-2022
                   116
                            20-02-2022
```

### ➤ To return a book:

#### Source Code:

```
def return_book ():
  dfbooks=pd.read_csv("C:\\Users\\itsgo\\Downloads\\Book5.csv")
  dfmembers=pd.read_csv("C:\\Users\\itsgo\\Downloads\\Member12.csv")
  dfbook=pd.read csv("C:\\Users\\itsgo\\Downloads\\Book2.0.csv")
  print(dfbook)
  ans='yes'
  while ans=='yes' or ans=='Yes':
    Mid=int (input ("Enter Member id: "))
    if Mid in dfbook['MemberID'].values:
       dt_is=input ("Date of Issue: ")
       dt rtn=input ("Enter Date of Return: ")
       Bid=dfbook.loc[(dfbook['MemberID'] == Mid) & (dfbook['date_of_issue'] ==
dt_is), 'BookID'].values[0]
       cond=(dfmembers.MemberID==Mid) & (dfmembers.issue status=='Yes')
       if cond.any():
        dfbook.loc[(dfbook['MemberID'] == Mid) & (dfbook['date_of_issue'] == dt_is),
'date_of_return'] =dt_rtn
        dfmembers.loc[dfmembers.MemberID == Mid, 'issue status'] ='No'
         dfbooks.loc[dfbooks.BookID == Bid, 'Copies']+=1
        n=int (input ("No. of days book has been issued: "))
```

```
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...")
dfbook.to_csv ("C:\\Users\\itsgo\\Downloads\\Book2.0.csv", index=False)
dfbooks.to_csv ("C:\\Users\\itsgo\\Downloads\\Book5.csv", index=False)
dfmembers.to_csv ("C:\\Users\\itsgo\\Downloads\\Member12.csv", index=False)
ans=input ("Do you want to Return more books?")
print(dfbook)
```

```
120
               114
                      20-02-2022
                                      28-02-2022
     117
               116
                       20-02-2022
                                             NaN
                       20-02-2022
                                             NaN
                      20-02-2022
Enter Member id: 131
Date of Issue: 20-02-2022
Enter Date of Return: 24-02-2022
No. of days book has been issued: 4
Please Pay Fine Rs. 0.0
Book Returned Successfully...
Do you want to Return more books?no
   BookID MemberID date_of_issue date_of_return
                      20-01-2022
               112
                                      27-01-2022
     102
                      22-01-2022
     103
               113
                                      25-01-2022
      104
               114
                      22-01-2022
                                      25-01-2022
      105
               115
                       21-01-2022
     120
               114
                      20-02-2022
                                      28-02-2022
     117
               116
                      20-02-2022
                                             NaN
                      20-02-2022
     120
               114
                                             NaN
                      20-02-2022
                                      24-02-2022
***********Thank You**********
                                                                 IPython Console History
```

### ➤ To show issued books:

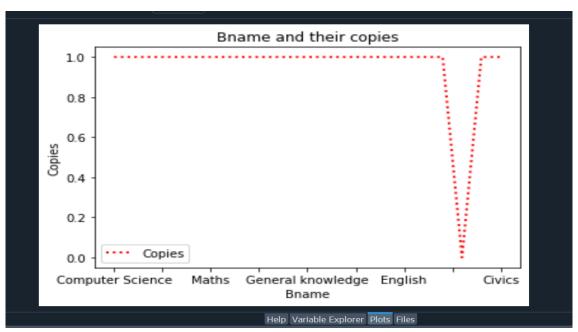
### Source Code:

```
Console 2/A X
    11.Publisher in Descending order
    12.Read CSV file - book1
    13.Find total books in Library
    14. Save changes in Book1 file
    15. Save changes in Member file
    16.Searchbook
    17.Delete a book
    18.Issue Books
    19.Return book
    20.show issued books
Data Visualisation
    21.Line Plot
    22.Bar Plot
    23.Hist chart
Enter the Choice:20
  BookID MemberID date_of_issue date_of_return
                                 27-01-2022
     102
              112 20-01-2022
     103
              113 22-01-2022
                               25-01-2022
2
3
4
     104
              114 22-01-2022 25-01-2022
                   21-01-2022
     105
              115
                                      NaN
                               28-02-2022
     120
              114
                    20-02-2022
              116
                    20-02-2022
                                       NaN
     120
              114
                   20-02-2022
                                       NaN
```

### ➤ To show line plot:

### Source Code:

```
def line_chart ():
    print ('Line Plot (Book name and their copies)')
    df=pd.read_csv("C:\\Users\\itsgo\\Downloads\\Book5.csv")
    df=df[["Bname","Copies"]]
    df.plot ("Bname","Copies", kind='line', color='red', linewidth='2', linestyle='dotted')
    plt.xlabel ('Bname')
    plt.ylabel('Copies')
    plt.title('Bname and their copies')
    plt.show()
```



### ➤ To show bar chart:

#### Source Code:

```
def bar_chart ():
  print ("Press 1-Books and their price")
  print ("Press 2-Bname and their copies")
  print ("Press 3-Bname and numbers of times it is issued")
  opt=int (input ("Enter the choice: "))
  if opt==1:
     print ('Bar Plot (Book vs Price)')
     df=pd.read_csv("C:\\Users\\itsgo\\Downloads\\Book5.csv")
     df=df[["Bname","Price"]]
     df.plot("Bname", "Price", kind='bar', color='green', linewidth='5', linestyle='dashdot')
     plt.xlabel('Books')
     plt.ylabel('Price')
     plt.title('Books vs Price')
    plt.show()
  if opt==2:
     print ('Bar Plot (Bname vs Copies)')
     df=pd.read_csv("C:\\Users\\itsgo\\Downloads\\Book5.csv")
    df=df[["Bname","Copies"]]
     df.plot("Bname", "Copies", kind='bar', color='red', linewidth='5', linestyle='dotted')
     plt.xlabel('Bname')
     plt.ylabel('Copies')
     plt.title('Bname and their copies')
     plt.show()
  if opt==3:
     print ('Bar Plot (No. of times books issued vs Bname)')
```

```
df=pd.read_csv("C:\\Users\\itsgo\\Downloads\\Book5.csv")

df=df[["Bname","No. of times book issued"]]

df.plot("Bname","No. of times book
issued",kind='bar',color='Magenta',linewidth='4',linestyle='dashed')

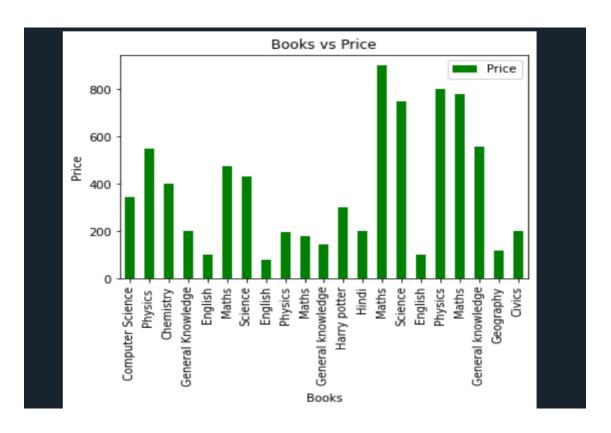
plt.xlabel('Book_Name')

plt.ylabel('No. of times books issued')

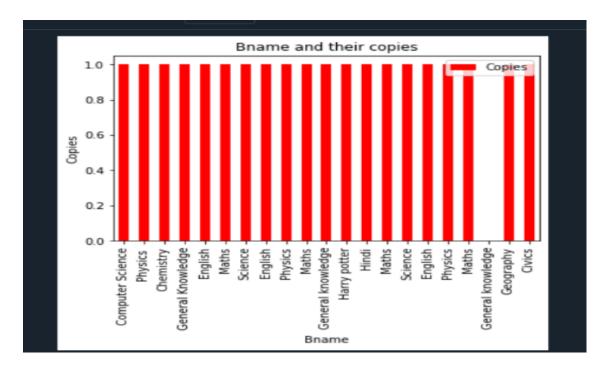
plt.title('No. of times books issued vs Book_Name')

plt.show()
```

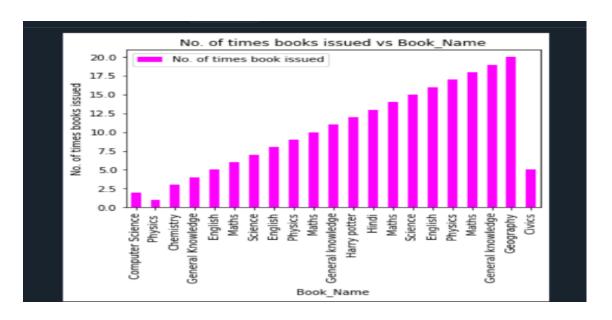
• For opt=1(Books and their price):



• For opt=2(Bname vs Copies):



• For opt=3(Bname and numbers of times it is issued):

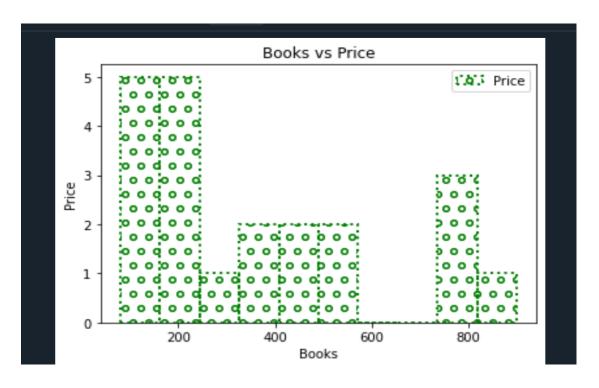


### ➤ To show Histogram chart:

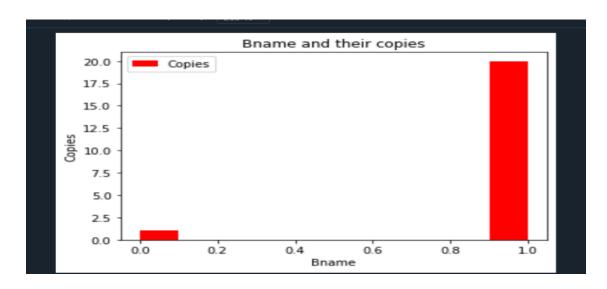
### Source Code:

```
def hist_chart ():
  print ("Press 1-Books and their price")
  print ("Press 2-Bname and their copies")
  print ("Press 3-Bname and numbers of times it is issued")
  opt=int (input ("Enter the choice: "))
  if opt==1:
     print ('Hist Plot (Book vs Price)')
    df=pd.read_csv("C:\\Users\\itsgo\\Downloads\\Book5.csv")
     df=df[["Bname","Price"]]
df.plot("Bname", "Price", kind='hist', edgecolor='green', linewidth='2', linestyle=':', fill=False
, hatch="o")
    plt.xlabel('Books')
     plt.ylabel('Price')
     plt.title('Books vs Price')
     plt.show()
  if opt==2:
     print ('Hist Plot (Bname vs Copies)')
     df=pd.read_csv("C:\\Users\\itsgo\\Downloads\\Book5.csv")
     df=df[["Bname","Copies"]]
     df.plot("Bname", "Copies", kind='hist', color='red', linewidth='5', linestyle='dotted')
     plt.xlabel('Bname')
     plt.ylabel('Copies')
     plt.title('Bname and their copies')
     plt.show()
  if opt==3:
     print ('Hist Plot (No. of times books issued vs Book_Name)')
     df=pd.read_csv("C:\\Users\\itsgo\\Downloads\\Book5.csv")
     df=df[["Bname","No. of times book issued"]]
     df.plot("Bname", "No. of times book
issued",kind='hist',edgecolor='Magenta',linewidth='2',linestyle='--',fill=False,hatch="o")
     plt.xlabel('Book name')
     plt.ylabel('No. of times books issued')
     plt.title('No. of times books issued vs Book_Name')
     plt.show()
```

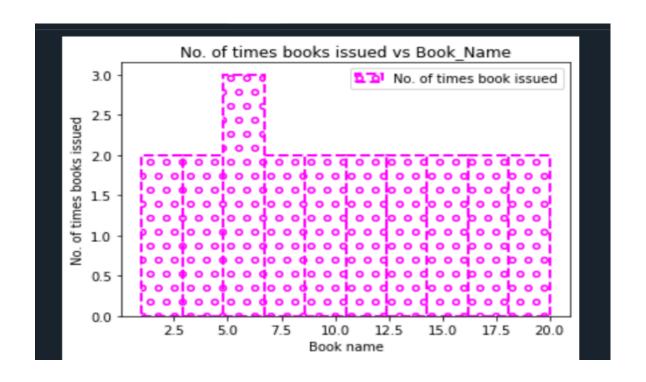
• For opt=1(Books and their price):



• For opt=2(Bname vs Copies):



• For opt=3(Bname and numbers of times it is issued):



# Code for running all the above programs: Source Code:

```
opt=""
opt=int (input ("Enter the Choice:"))
if opt==1:
  member ()
elif opt==2:
  new_member ()
elif opt==3:
  search_member ()
elif opt==4:
  delete_member ()
elif opt==5:
  sort_member ()
elif opt==6:
  top_bottom()
elif opt==7:
  modify ()
```

```
elif opt==8:
  add_book()
elif opt==9:
  book_name()
elif opt==10:
  sort_book ()
elif opt==11:
  book1()
elif opt==12:
  Totalbooks ()
elif opt==13:
  changes_book1()
elif opt==14:
  changes_member1()
elif opt==15:
  searchbook ()
elif opt==16:
  delete_book()
elif opt==17:
  issue_book()
elif opt==18:
  return_book ()
elif opt==19:
  show_issuedbooks ()
elif opt==20:
  line_chart ()
elif opt==21:
  bar_chart ()
elif opt==22:
  hist_chart ()
else:
  print ('Invalid Option')
print ("**********Thank You**********")
```