

```

1 import java.io.*;
2
3 public class question71
4 {
5     String books[]={"Taiko", "Rich Dad Poor Dad", "Kafka on the Shore", "",
6     ""}; //creating a library of 3 books and a capacity of maximum 5 books
7     String authors[]={"Eiji Yoshikawa", "Robert Kiyosaki", "Haruki Murakami", "",
8     ""}; //corresponding author list
9
10    //here we are creating an array where the array index corresponds to the array index
11    of the books array. So if here, the value on index 0 is 1, then that would mean the
12    book at the 0 index in the books array has been issued
13    int issuedbooks[]={0,0,0,0,0}; //0 means not issued, 1 means issued
14
15    int noofbooksissued=0;
16
17    String password="needsoup2020";
18
19    void display()
20    {
21        System.out.println("BOOK NAME\t\tAUTHOR NAME\t\tISSUING STATUS");
22        for(int i=0;i<5;i++)
23        {
24            if(!books[i].equals(""))//! signifies a negative condition..so this means
25            that if books[i] is not equal to ""
26                System.out.println(books[i]+"~"+authors[i]+"~ "+issuedbooks[i]);
27        }
28    }
29
30    void issuebook()throws IOException
31    {
32        InputStreamReader read=new InputStreamReader(System.in);
33        BufferedReader in=new BufferedReader(read);
34
35        if(noofbooksissued>3)
36            System.out.println("Maximum number of books issued");
37        else
38        {
39            System.out.println("Enter the name of the book to issue:");
40            String book=in.readLine();
41
42            for(int i=0;i<5;i++)
43            {
44                if(book.equalsIgnoreCase(books[i]) && issuedbooks[i]==0)//if the book is
45                found and isnt already issued
46                {
47                    issuedbooks[i]=1;
48                    noofbooksissued++;
49                    System.out.println("Book issued");
50                    break;
51                }
52            }
53        }
54    }
55
56    void returnbook()throws IOException
57    {
58        InputStreamReader read=new InputStreamReader(System.in);
59        BufferedReader in=new BufferedReader(read);
60
61        if(noofbooksissued==0)
62            System.out.println("No books issued yet");
63        else
64        {
65            System.out.println("Enter the name of the book to return:");
66        }
67    }
68 }

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60     String book=in.readLine();
61
62     for(int i=0;i<5;i++)
63     {
64         if(book.equalsIgnoreCase(books[i]) && issuedbooks[i]==1)//if the book is
            found and is issued
65         {
66             issuedbooks[i]=0;
67             noofbooksissued--;
68             System.out.println("Book returned");
69             break;
70         }
71     }
72 }
73
74
75 void addbook()throws IOException
76 {
77     InputStreamReader read=new InputStreamReader(System.in);
78     BufferedReader in=new BufferedReader(read);
79
80     System.out.println("Enter the password:");
81     String pwd=in.readLine();
82     if(pwd.equals(password))
83     {
84         System.out.println("Enter the name of the book to add:");
85         String book=in.readLine();
86         System.out.println("Enter the name of the author to add:");
87         String author=in.readLine();
88         for(int i=0;i<5;i++)
89         {
90             if(books[i].equals(""))
91             {
92                 books[i]=book;
93                 authors[i]=author;
94                 System.out.println("Book added");
95                 break;
96             }
97         }
98     }
99     else
100     {
101         System.out.println("Access Denied");
102     }
103 }
104
105 void removebook()throws IOException
106 {
107     InputStreamReader read=new InputStreamReader(System.in);
108     BufferedReader in=new BufferedReader(read);
109
110     System.out.println("Enter the password:");
111     String pwd1=in.readLine();
112     if(pwd1.equals(password))
113     {
114         System.out.println("Enter the name of the book to remove:");
115         String book=in.readLine();
116         for(int i=0;i<5;i++)
117         {
118             if(book.equalsIgnoreCase(books[i]))
119             {
120                 books[i]="";
121                 authors[i]="";
122                 System.out.println("Book removed");
123                 break;

```

```

124     }
125 }
126 }
127 else
128 {
129     System.out.println("Access Denied");
130 }
131 }
132
133 public static void main(String args[])throws IOException
134 {
135     InputStreamReader read=new InputStreamReader(System.in);
136     BufferedReader in=new BufferedReader(read);
137
138     question71 ob=new question71();
139     int n;
140     do
141     {
142         System.out.print("Enter \n1. Display all books \n2. Issue a book \n3. Return
a book \n4. Add a book to the library \n5. Remove a book from the library
\n0. Exit \nEnter ->");
143         n=Integer.parseInt(in.readLine());
144         //using switch case
145         switch(n)
146         {
147             case 1:
148                 ob.display();
149                 break;
150
151             case 2:
152                 ob.issuebook();
153                 break;
154
155             case 3:
156                 ob.returnbook();
157                 break;
158
159             case 4:
160                 ob.addbook();
161                 break;
162
163             case 5:
164                 ob.removebook();
165                 break;
166         }
167
168     }while(n!=0);
169 }
170 }

```