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Batch:B2

Q1

Class Library{

Data Members of class:

a) accession number,

b) the title of the book,

c) author name,

d) price of the book

Add the following constructors:

Parameterized constructor

Default constructor

Methods of Class

1. Overload the function sum to do the following tasks

1-sum(String author) ---calculating the total count of all books of the given author

2- sum(int acc. no.) --calculating total no of books of the given accession no.

Code:

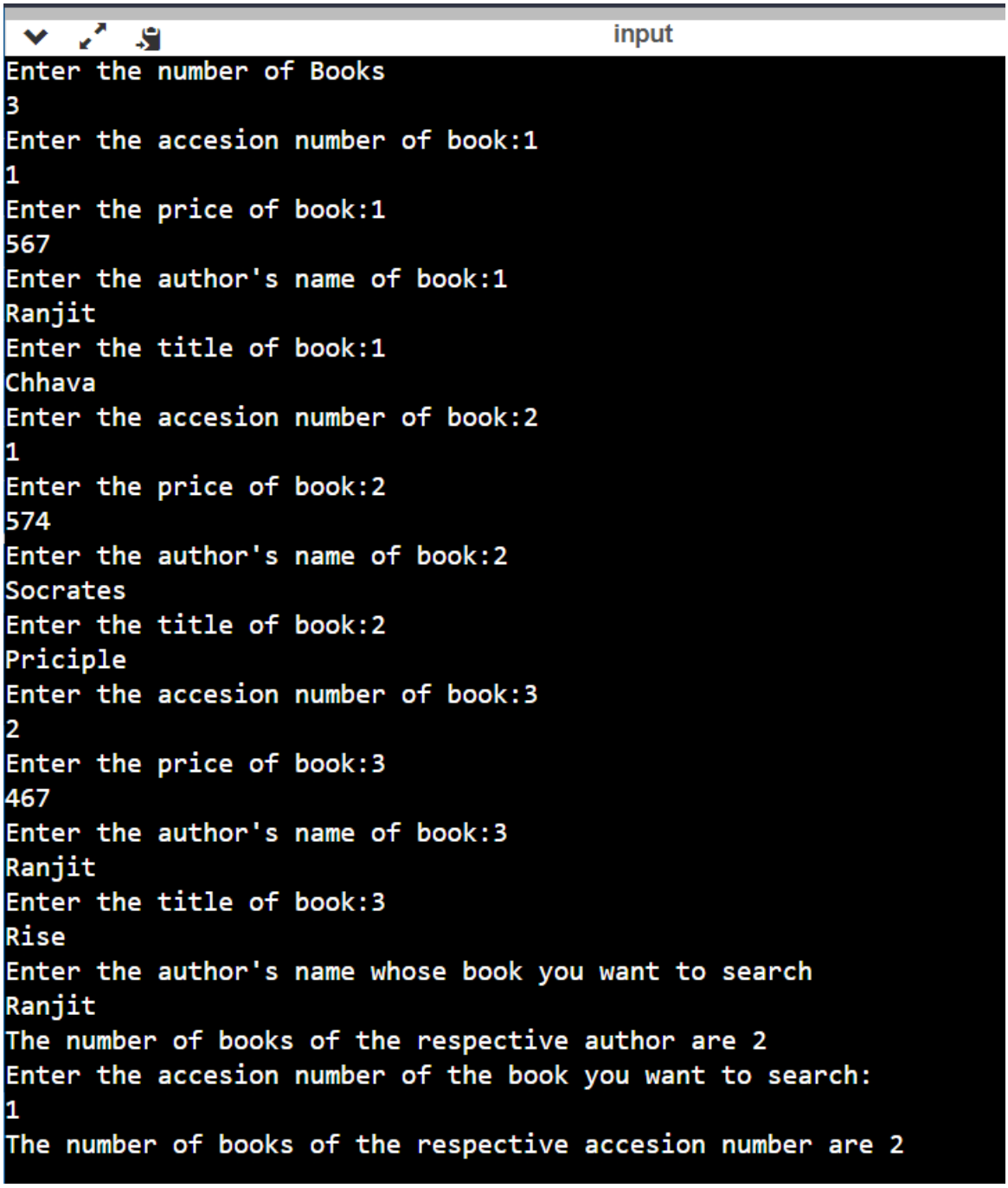
```
import java.lang.*;

import java.util.*;

class library1{

    int a_no;

    String title;

    String auth;

    int price;



  public library1(int a,String t,String au,int p){

      this.a_no=a;
```

```
        this.title=t;
        this.auth=au;
        this.price=p;
    }
    int sum(String au){

            if(this.auth.equalsIgnoreCase(au)){
                return 1;
            }

        return 0;
    }
    int sum(int ano){
         if(this.a_no== ano)
         {
        return 1;
        }
        return 0;
         }
}
public class Main{
    public static void main(String[] args) {
        Scanner sc= new Scanner(System.in);
        int a_no,price;
        System.out.println("Enter the number of Books");
        int n=sc.nextInt();
        int c=0;
```

```
int w=0;
library1 obj[] = new library1[n];
for(int k=0;k<n;k++){
        System.out.println("Enter the accesion number of book:"+(k+1));
        a_no =sc.nextInt();
        System.out.println("Enter the price of book:"+(k+1));
        price =sc.nextInt();
        sc.skip("\\R?");
        System.out.println("Enter the author's name of book:"+(k+1));
        String auth= sc.nextLine();
        System.out.println("Enter the title of book:"+(k+1));
        String title=sc.nextLine();
         obj[k] = new library1(a_no,title,auth,price);
    }



System.out.println("Enter the author's name whose book you want to search");
sc.skip("\\R?");
String aut= sc.nextLine();
    for(int j=0;j<n;j++){
        if(obj[j].sum(aut)==1){
            c++;
        }
        else{
            continue;
        }
```

```
        }
      System.out.println("The number of books of the respective author are "+ c);
      System.out.println("Enter the accesion number of the book you want to search:");
      int anno=sc.nextInt();
      for(int h=0;h<n;h++){
        if(obj[h].sum(anno)==1){
            w++;
        }
        else{
            continue;
        }
      }
      System.out.println("The number of books of the respective accesion number are "+ w);

    }

}
```

Output:



Q2: **Create a Date class with data int year, int month, int date, int hrs, int min, int sec. Create a default, no-argument constructor which sets the default date to January 1, 2000, 00:00:00 Create 3 overloaded setter methods**

void setDate(int year, int month, int date)

void setDate(int year, int month, int date, int hrs, int min)

void setDate(int year, int month, int date, int hrs, int min, int sec)

Also write a displayDate() method which will display the date depending on the type of date object created.

add a function calculating the date of retirement at age of 60 for the given input date.

Code:

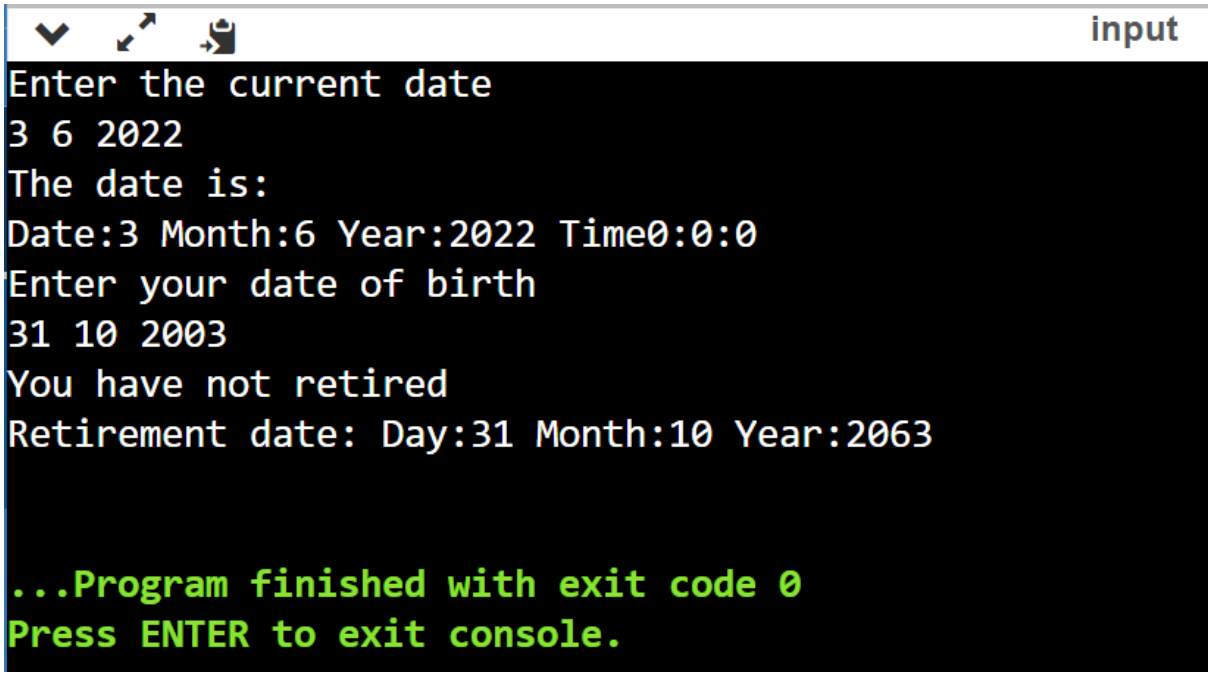
```
import java.util.*;
class date1{
   int year;
   int month;
   int hours;
   int min;
   int sec;
   int date;
   public date1(){
      this.year=2000;
      this.month=1;
      this.date=1;
      this.min=0;
      this.sec=0;
      this.hours=0;
   }
   void setDate(int d,int m,int y){
      this.year=y;
      this.month=m;
      this.date=d;
   }
   void setDate(int d,int m,int y,int h,int mi){
      this.year=y;
      this.month=m;
      this.date=d;
      this.hours=h;
      this.min=mi;
```

```
    }
    void setDate(int d,int m,int y,int h,int mi,int s){
        this.year=y;
        this.month=m;
        this.date=d;
        this.hours=h;
        this.min=mi;
        this.sec=s;
    }
    void displaydate(){
        System.out.println("The date is:");
        System.out.println("Date:"+(date) +" Month:"+(month) +" Year:"+(year) + " Time"+(hours) +":" +
min+":" +sec);
    }
    void retirement(int da,int mo,int ye){
        if(ye>=this.year+60){
            System.out.println("You have retired");
        }
        else if(ye == this.year+60){
            if(mo< this.month){
                System.out.println("You have not retired yet");
            }
            else if(mo == this.month){
                {
                    if(da< this.date){
                        System.out.println("You have not retired yet");
                    }
                    else{
```

```
                System.out.println("You have retired");
            }


        }
      }
      else{
         System.out.println("You have retired");
      }
    }
    else if(ye<this.year){
      System.out.println("You have not retired");
    }
    System.out.println("Retirement date:"+ " Day:"+ da + " Month:"+ mo + " Year:" +(ye+60));
  }


}
public class Main {
  public static void main(String[] args) {
    Scanner sc= new Scanner(System.in);
    date1 d= new date1();
    System.out.println("Enter the current date");
    d.setDate(sc.nextInt(),sc.nextInt(),sc.nextInt());
    d.displaydate();
    System.out.println("Enter your date of birth");
    d.retirement(sc.nextInt(),sc.nextInt(),sc.nextInt());
```

```
    }


}
```

Output:


input
Enter the current date
3 6 2022
The date is:
Date:3 Month:6 Year:2022 Time0:0:0
Enter your date of birth
31 10 2003
You have not retired
Retirement date: Day:31 Month:10 Year:2063
...Program finished with exit code 0
Press ENTER to exit console.