// Q1) Book problem:

```
import java.util.*;
class Book{
	int id=0;
	String title=null;
	int noOfPages=0;
	String year=null;
	String author=null;
	double price=0;
	public void setId(int id) {
		this.id = id;
	}
	public void setTitle(String title) {
		this.title = title;
	}
	public void setNoOfPages(int noOfPages) {
		this.noOfPages = noOfPages;
	}
	public void setYear(String year) {
		this.year = year;
	}
	public void setAuthor(String author) {
		this.author = author;
	}
	public void setPrice(double price) {
		this.price = price;
	}
	public void display() {
		System.out.println("Book Id: "+this.id);
```

```
        System.out.println("Book Name: "+this.title);
        System.out.println("Book noOfPages: "+this.noOfPages);
        System.out.println("Year of publishing: "+this.year);
        System.out.println("Book Author: "+this.author);
        System.out.println("Book Price: "+this.price);
}

public static void AuthorDisplay(Book[] b,String author) {
        System.out.println();
        for(int i=0;i<b.length;i++){
                if(b[i].author.equals(author)) {
                        b[i].display();
                }
        }
}

public static void YearDisplay(Book[] b) {
        System.out.println();
        for(int i=0;i<b.length;i++){
                if(b[i].year.equals("2020")) {
                        b[i].display();
                }
        }
}

public static void leastPages(Book[] b) {
        int small = b[0].noOfPages;
        int value;
        System.out.println();
        for(int i=0;i<b.length;i++){
```

```
                if(small>b[i].noOfPages) {
                        small = b[i].noOfPages;
                }
        }
        for(int i=0;i<b.length;i++){
                if(small==b[i].noOfPages) {
                        b[i].display();
                }
        }

    }
}
public class W2P3 {

    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        Book[] b = new Book[3];
        for(int i=0;i<b.length;i++){
            b[i] = new Book();
            //System.out.println("Enter the Id");
            b[i].setId(input.nextInt());
            input.nextLine();
            //System.out.println("Enter the title");
            b[i].setTitle(input.nextLine());
            //System.out.println("Enter the Author");
            b[i].setAuthor(input.nextLine());
            //System.out.println("Enter the Year of publishing");
            b[i].setYear(input.nextLine());
            //System.out.println("Enter the No. of pages");
            b[i].setNoOfPages(input.nextInt());
```

```
                //System.out.println("Enter the Price of the book");
                b[i].setPrice(input.nextDouble());
            }
            System.out.println("\nShowing display based on year\n");
            Book.YearDisplay(b);
            System.out.println("\nShowing display based on least no. of pages\n");
            Book.leastPages(b);
            System.out.println("\nShowing display based on author-name (Suzzane Collins)\n");
            Book.AuthorDisplay(b, "Suzzane Collins");
        }

}
```

OUTPUT:

- Main.java
- input

```
Enter the Id

123

Enter the title

java

Enter the Author

BMS

Enter the Year of publishing

2020

Enter the No. of pages

235
```

```
Enter the Price of the book

50

Enter the Id

111

Enter the title

C++

Enter the Author

BAMS

Enter the Year of publishing

2021

Enter the No. of pages

52

Enter the Price of the book

12

Enter the Id

111

Enter the title

RVCE

Enter the Author

RNI

Enter the Year of publishing

2023

Enter the No. of pages

23

Enter the Price of the book

562
```

```
Showing display based on year




Book Id: 123

Book Name: java

Book noOfPages: 235

Year of publishing: 2020

Book Author: BMS

Book Price: 50.0


Showing display based on least no. of pages




Book Id: 111

Book Name: RVCE

Book noOfPages: 23

Year of publishing: 2023

Book Author: RNI

Book Price: 562.0
```

// Q2) Players problem:

```
import java.util.*;

class Player{
	int id;
	String name;
	int no;
	Player(int id,String name,int no) {
		this.id = id;
		this.name=name;
		this.no=no;
	}
	int[] scores = new int[100];
	void setScores() {
		Scanner input = new Scanner(System.in);
		System.out.println(this.no);
		for(int i=0;i<this.no;i++){
			scores[i]=input.nextInt();
		}
	}
	double calAvg() {
		int sum=0;
		for(int i=0;i<no;i++) {
			sum+=scores[i];
		}
		return (double)sum/no;
	}
}
public class Main {
	public static void main(String[] args) {
		Scanner input = new Scanner(System.in);
```

```
        String name = input.nextLine();
        int num = input.nextInt();
        Player p1 = new Player(num,name,input.nextInt());
        input.nextLine();
        String name1 = input.nextLine();
        int num1 = input.nextInt();
        Player p2 = new Player(num1,name1,input.nextInt());
        System.out.println("Enter the scores of player-1 in "+p1.no+" matches");
        p1.setScores();
        System.out.println("Enter the scores of player-2 in "+p2.no+" mathches");
        p2.setScores();
        compare(p1.calAvg(),p2.calAvg());
}

public static void compare(double calAvg, double calAvg2) {
        if(calAvg>calAvg2){
                System.out.println("First Player has got the highest Average Score "+calAvg);
        }
        if(calAvg2>calAvg){
                System.out.println("Second Player has got the highest Average Score "+calAvg2);
        }
        if(calAvg==calAvg2){
                System.out.println("Both players have got the same Average Score "+calAvg);
        }
}
```

OUTPUT:

```
DHONI
15
5
MAHI
13
4
Enter the scores of player-1 in 5 matches
5
12  13  15  28  32
Enter the scores of player-2 in 4 mathches
4
23  16  12  3  24
First Player has got the highest Average Score 20.0


...Program finished with exit code 0
Press ENTER to exit console.
```