LAB-2 PRACTICE PROGRAMS

PROGRAM-1

INPUT:

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login.html | main.js | styles.css | infixpostfix.c | **Playermain.java** | quadratic.java | Student.java

```java
import java.util.Scanner;

class Player
{
    int id;
    String name;
    int no_matches_played;
    int scores[];
    float avg;
    int i;
    Scanner ss = new Scanner(System.in);

    Player()
    {
        System.out.println("\n<----------ENTER PLAYER DETAILS---------->\n");
        System.out.println("Enter the player ID : ");
        id = ss.nextInt();
        System.out.println("Enter the player NAME : ");
        name = ss.next();
        System.out.println("Enter the NUMBER OF MATCHES played : ");
        no_matches_played = ss.nextInt();
        scores = new int[no_matches_played];
        System.out.println("Enter the SCORE of the player in each match :\n");
        for(i = 0; i < no_matches_played; i++)
        {
            System.out.print("Enter the score in the MATCH "+(i+1)+" : ");
            scores[i] = ss.nextInt();
        }
    }

    void calavg()
    {
        int sum = 0;
        for(i = 0; i < no_matches_played; i++)
        {
            sum += scores[i];
        }
        avg = ((float)sum) / no_matches_played;
    }

    void display()
    {
        System.out.println("Player ID : "+id);
        System.out.println("Player NAME : "+name);
        System.out.println("NUMBER OF MATCHES played : "+no_matches_played);
        System.out.println("SCORES in all matches : ");
        for(i = 0; i < no_matches_played; i++)
            System.out.print(scores[i]+"\t");
        System.out.printf("\nAVERAGE score : %.2f", avg);
        System.out.println();
    }
}

class Playermain
{
    public static void main(String[] args)
    {
        Player p1 = new Player();
        p1.calavg();
        Player p2 = new Player();
        p2.calavg();
        System.out.println("\n<-----DETAILS OF PLAYER 1----->");
        p1.display();
        System.out.println("\n<-----DETAILS OF PLAYER 2----->");
        p2.display();
        float avg1 = p1.avg;
        float avg2 = p2.avg;
        System.out.println("\n<------DETAILS OF PLAYER WITH HIGHER AVERAGE----->");
        if(avg1 > avg2)
            p1.display();
        else if(avg2 > avg1)
            p2.display();
        else
            System.out.println("\n<-----BOTH PLAYERS HAVE THE SAME AVERAGE SCORE---->");
    }
}
```

OUTPUT:

```
C:\Users\91944\OneDrive\Desktop\OOJLAB\Lab_2>javac Playermain.java

C:\Users\91944\OneDrive\Desktop\OOJLAB\Lab_2>java Playermain

<----------ENTER PLAYER DETAILS---------->

Enter the player ID :
100
Enter the player NAME :
Ram
Enter the NUMBER OF MATCHES played :
3
Enter the SCORE of the player in each match :

Enter the score in the MATCH 1 : 50
Enter the score in the MATCH 2 : 60
Enter the score in the MATCH 3 : 70

<----------ENTER PLAYER DETAILS---------->

Enter the player ID :
101
Enter the player NAME :
Shyam
Enter the NUMBER OF MATCHES played :
3
Enter the SCORE of the player in each match :

Enter the score in the MATCH 1 : 50
Enter the score in the MATCH 2 : 80
Enter the score in the MATCH 3 : 60

<-----DETAILS OF PLAYER 1----->
Player ID : 100
Player NAME : Ram
```

```
NUMBER OF MATCHES played : 3
SCORES in all matches :
50      60      70
AVERAGE score : 60.00

<-----DETAILS OF PLAYER 2----->
Player ID : 101
Player NAME : Shyam
NUMBER OF MATCHES played : 3
SCORES in all matches :
50      80      60
AVERAGE score : 63.33

<------DETAILS OF PLAYER WITH HIGHER AVERAGE----->
Player ID : 101
Player NAME : Shyam
NUMBER OF MATCHES played : 3
SCORES in all matches :
50      80      60
AVERAGE score : 63.33
```

PROGRAM-2

INPUT:

File Edit Selection Find View Goto Tools Project Preferences Help

login.html   main.js   styles.css   Student.java   Playermain.java   **Bookmain.java**

```java
import java.util.Scanner;

class Book
{
    String bookid;
    String booktitle;
    int no_of_pages;
    int year_of_pub;
    String author;
    String publisher;
    float price;
    Scanner ss = new Scanner(System.in);

    void accept()
    {
        System.out.println("Enter the book ID :");
        bookid = ss.next();
        System.out.println("Enter the TITLE of the book :");
        booktitle = ss.next();
        System.out.println("Enter the NUMBER OF PAGES in the book :");
        no_of_pages = ss.nextInt();
        System.out.println("Enter the YEAR OF PUBLICATION :");
        year_of_pub = ss.nextInt();
        System.out.println("Enter the name of the AUTHOR :");
        author = ss.next();
        System.out.println("Enter the name of the PUBLISHER :");
        publisher = ss.next();
        System.out.println("Enter the PRICE of the book :");
        price = ss.nextFloat();
    }

    void srchauthor(Book b1, Book b2, Book b3)
    {
        System.out.print("\nEnter the name of the AUTHOR whose book you want to search for : ");
        String auth = ss.next();
        if(auth.equals(b1.author))
            b1.display();
        else if(auth.equals(b2.author))
            b2.display();
        else if(auth.equals(b3.author))
            b3.display();
        else
            System.out.println("\nENTERED AUTHOR NAME DOES NOT MATCH TO ANY BOOK!!\n");
    }

    void mostexp(Book b1, Book b2, Book b3)
    {
        if((b1.price > b2.price) && (b1.price > b3.price))
            System.out.println("THE MOST EXPENSIVE BOOK IS : "+b1.booktitle);
        else if((b2.price > b1.price) && (b2.price > b3.price))
            System.out.println("THE MOST EXPENSIVE BOOK IS : "+b2.booktitle);
        else if((b3.price > b1.price) && (b3.price > b2.price))
            System.out.println("THE MOST EXPENSIVE BOOK IS : "+b3.booktitle);
        else
            System.out.println("ALL BOOKS HAVE THE SAME COST!!");
        System.out.println("\n<--------------------------------------------->\n");
    }

    void countbooks(Book b1, Book b2, Book b3)
    {
        int count = 0;
        if(b1.year_of_pub == 2020)
            count++;
        if(b2.year_of_pub == 2020)
            count++;
        if(b3.year_of_pub == 2020)
            count++;
        System.out.println("THE NUMBER OF BOOKS PUBLISHED IN 2020 IS : "+count);
        System.out.println("\n<--------------------------------------------->\n");
    }

    void display()
    {
        System.out.println("<--------------------------------------------->\n");
        System.out.println("ID : "+bookid);
        System.out.println("TITLE : "+booktitle);
        System.out.println("NUMBER OF PAGES : "+no_of_pages);
        System.out.println("YEAR OF PUBLICATION : "+year_of_pub);
        System.out.println("AUTHOR : "+author);
        System.out.println("PUBLISHER : "+publisher);
        System.out.println("PRICE : "+price);
        System.out.println("\n<--------------------------------------------->");
    }
}

class Bookmain
{
    public static void main(String[] args)
    {
        Scanner ss = new Scanner(System.in);
        Book b = new Book();
```

```java
 92          System.out.println("\n<-----ENTER BOOK 1 DETAILS------>\n");
 93          Book b1 = new Book();
 94          b1.accept();
 95          System.out.println("\n<-----ENTER BOOK 2 DETAILS------>\n");
 96          Book b2 = new Book();
 97          b2.accept();
 98          System.out.println("\n<-----ENTER BOOK 3 DETAILS------>\n");
 99          Book b3 = new Book();
100          b3.accept();
101          System.out.println("\n<----------BOOK 1 DETAILS----------->");
102          b1.display();
103          System.out.println("\n<----------BOOK 2 DETAILS----------->");
104          b2.display();
105          System.out.println("\n<----------BOOK 3 DETAILS----------->");
106          b3.display();
107          b.srchauthor(b1, b2, b3);
108          b.mostexp(b1, b2, b3);
109          b.countbooks(b1, b2, b3);
110      }
111  }
```

OUTPUT:

```
C:\Users\91944\OneDrive\Desktop\OOJLAB\Lab_2>java Bookmain

<-----ENTER BOOK 1 DETAILS------>

Enter the book ID :
111
Enter the TITLE of the book :
Sherlock
Enter the NUMBER OF PAGES in the book :
200
Enter the YEAR OF PUBLICATION :
2020
Enter the name of the AUTHOR :
James
Enter the name of the PUBLISHER :
Waterlily
Enter the PRICE of the book :
199

<-----ENTER BOOK 2 DETAILS------>

Enter the book ID :
222
Enter the TITLE of the book :
Goosebumps
Enter the NUMBER OF PAGES in the book :
300
Enter the YEAR OF PUBLICATION :
2018
Enter the name of the AUTHOR :
Williams
Enter the name of the PUBLISHER :
Mcgraw
```

```
Enter the PRICE of the book :
250

<-----ENTER BOOK 3 DETAILS------>

Enter the book ID :
333
Enter the TITLE of the book :
Heist
Enter the NUMBER OF PAGES in the book :
100
Enter the YEAR OF PUBLICATION :
2020
Enter the name of the AUTHOR :
John
Enter the name of the PUBLISHER :
MorningStar
Enter the PRICE of the book :
150

<----------BOOK 1 DETAILS----------->
<--------------------------------------------->

ID : 111
TITLE : Sherlock
NUMBER OF PAGES : 200
YEAR OF PUBLICATION : 2020
AUTHOR : James
PUBLISHER : Waterlily
PRICE : 199.0

<--------------------------------------------->
```

```
<----------BOOK 2 DETAILS----------->
<-------------------------------------------->

ID : 222
TITLE : Goosebumps
NUMBER OF PAGES : 300
YEAR OF PUBLICATION : 2018
AUTHOR : Williams
PUBLISHER : Mcgraw
PRICE : 250.0

<-------------------------------------------->

<----------BOOK 3 DETAILS----------->
<-------------------------------------------->

ID : 333
TITLE : Heist
NUMBER OF PAGES : 100
YEAR OF PUBLICATION : 2020
AUTHOR : John
PUBLISHER : MorningStar
PRICE : 150.0

<-------------------------------------------->

Enter the name of the AUTHOR whose book you want to search for : Williams
<-------------------------------------------->

ID : 222
TITLE : Goosebumps
NUMBER OF PAGES : 300
YEAR OF PUBLICATION : 2018
AUTHOR : Williams
PUBLISHER : Mcgraw
PRICE : 250.0

<-------------------------------------------->
THE MOST EXPENSIVE BOOK IS : Goosebumps

<-------------------------------------------->

THE NUMBER OF BOOKS PUBLISHED IN 2020 IS : 2

<-------------------------------------------->


C:\Users\91944\OneDrive\Desktop\OOJLAB\Lab_2>
```