OOJ LAB-WEEK 4-EXTRA PROGRAMS

Program and Output

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Program 1-

Develop a Java program to create a class Player with variables id, name, scores,no_matches_played with default access specifier. Include the following:

a. Constructors

b. appropriate methods that calculates the average scores of the player and displays the same.

Create two player objects and display the player details who has the greater average score

```
import java.util.Scanner;

class Player

{

        int id;

        int no_matches_played;

        int[] scores;

        String name;

        Player(String na, int i, int n, int[] s)

        {

                name = na;

                id = i;

                no_matches_played = n;
```

```
        scores = s;
}
Player()
{
        name=null;
        id=0;
        no_matches_played = 0;
}

double avg()
{
        int sum=0;
        for(int i=0;i<no_matches_played; i++)
                sum += scores[i];
        double avgscore = sum/no_matches_played;
        return avgscore;
}

void display()
{
        System.out.println("Name:    "+name);
        System.out.println("ID :         "+id);
        System.out.println("No. of Matches played: "+no_matches_played);
        System.out.print("Scores:      ");
```

```
                for(int i=0;i<no_matches_played;i++)
                        System.out.print(scores[i]+" ");
        }
}
class Main
{
        public static void main(String[] args)
        {
                Scanner in = new Scanner(System.in);
                double avg1=0, avg2=0;
                System.out.println("Enter player name-");
                String na = in.next();
                System.out.println("Enter ID");
                int id = in.nextInt();
                System.out.println("Enter no. of matches played");
                int n = in.nextInt();
                System.out.println("Enter the scores");
                int[] s = new int[n];
                for(int i =0;i<n;i++)
                        s[i] = in.nextInt();
                Player p1 = new Player(na, id, n, s);
                avg1 = p1.avg();

                System.out.println("Enter player name-");
```

```
            na = in.next();
            System.out.println("Enter ID");
            id = in.nextInt();
            System.out.println("Enter no. of matches played");
            n = in.nextInt();
            int[] si = new int[n];
            System.out.println("Enter the scores");
            for(int i =0;i<n;i++)
                  si[i] = in.nextInt();
            Player p2 = new Player(na, id, n, si);
            avg2 = p2.avg();
            if(avg1>avg2)
                  p1.display();
            else
                  p2.display();
      }
}
```

Program 2-

Develop a Java program to create a class Book with members – bookid, booktitle, no_of_pages, year_of_pub, author, publisher and price. Create three objects of book class. Include methods in Book class that do the following:

a. Accepting the book details

b. Displaying the book details

c. Accept the author name and display the book details.

d. Display the booktitle of the most expensive book

e. Display the count of the books published in the year 2020.

f. Display the book details of the book with the least number of pages.

```
import java.util.Scanner;
class Book
{
	int bookid, no_of_pages, year_of_pub;
	double price;
	String booktitle, author, publisher;

	void getDetails()
	{
		Scanner in = new Scanner(System.in);
		System.out.println("Enter book id");
		bookid = in.nextInt();
		System.out.println("Enter book title");
		booktitle = in.nextLine();
		System.out.println("Enter number of pages");
		no_of_pages = in.nextInt();
		System.out.println("Enter year of publish");
		year_of_pub = in.nextInt();
		System.out.println("Enter author");
		author = in.nextLine();
		System.out.println("Enter Publisher");
		publisher = in.nextLine();
		System.out.println("Enter the price");
```

```
        price = in.nextDouble();
}

void printDetails()
{
        System.out.println("Book ID:  "+bookid);
        System.out.println("Book title:          "+booktitle);
        System.out.println("No. of pages:      "+no_of_pages);
        System.out.println("Year of publish:  "+year_of_pub);
        System.out.println("Author:   "+author);
        System.out.println("Publisher:          "+publisher);
        System.out.println("Price:      "+price);
        }

void authorname(String a)
{
        if(a==author)
        {
                printDetails();
        }
}

String me()
{
        System.out.println("the title of the most expensive book is "+booktitle);
        return booktitle;
```

```
	}

	int pages()
	{
		return no_of_pages;
	}
}

class BoMain
{
	public static void main(String[] args)
	{
		Scanner in = new Scanner(System.in);
		System.out.println("Enter 1st book details");
		Book b1 = new Book();
		b1.getDetails();
		System.out.println("Enter 2nd book details");
		Book b2 = new Book();
		b2.getDetails();
		System.out.println("Enter 3rd book details");
		Book b3 = new Book();
		b3.getDetails();
		System.out.println();
		System.out.println("Enter the name of author");
		String a = in.next();
		b1.authorname(a);
```

```
b2.authorname(a);
b3.authorname(a);
if(b1.price>b2.price)
{
        if(b1.price>b3.price)
        {
                b1.me();
        }
        else (b1.price<b3.price)
                b3.me();
}
else if(b2.price>b1.price)
{
        if(b2.price>b3.price)
        {
                b2.me();
        }
        else(b3.price<b2.price)
                {
                   b3.me();
                }
}
System.out.println();

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("No. of books published in 2020 is:      "+count);
        if(b1.pages()<b2.pages())
        {
                if(b1.pages()<b3.pages())
                {
                        b1.printDetails();
                }
                else
                        b3.printDetails();
        }
        else
        {
                if(b2.pages()<b3.pages())
                        b2.printDetails();
                else
                        b3.printDetails();
        }
    }
}
```