LAB - 2 EXTRA PROBLEM - 1

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1. Develop a Java program to create a class Player with variable id, name, scores, no_of_matches_played with default access specifier. Include the following:
a. Constructor
b. appropriate methods that calculate the average score of the player and displays the score.

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

```
import java.io.*;
import java.util.*;
class Player
 {
 private int[] id = new int[30];
 private String[] name = new String[30];
 private double[] score = new double[30];
 private double[] avg = new double[30];
 private int[] no_of_matches_played = new int[30];
 private int n, i;
 private double sum;
 Player() //default constructor
  {
  }
 void getdetails()
  {
  Scanner sc = new Scanner(System.in);
  System.out.println("*********************");
  System.out.println("Please enter the number of
   Players:");
```

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```
n=sc.nextInt();
for(int i=0;i<n;i++)
{
 System.out.println("***********");
 System.out.println("Please enter the id of Player"+
   (i+1)+":");
 id[i]=sc.nextInt();
 System.out.println("Please enter the name of Player"+
   (i+1)+":");
 name[i]=sc.next();
 System.out.println("Please enter the no of matches
 played by Player"+(i+1)+":");
 no_matches_played[i]=sc.nextInt();
 for(int j=0;j<no_matches_played[i];j++)
 {
  System.out.println("Please enter the score of
 the match!"+(j+1)+":");
 score[j]=sc.nextDouble();
 }
}}
double score_calc()
{sum=0.0f
for(int i=0;i<n;i++)
  {
  for(int j=0;j<no_of_matches_played[i];j++)
   {
   sum=sum+score[j];
  }
  avg[i]=(sum/(no_matches_played[i]=0.0));
 }
```

Scanned with CamScanner

```
return avg[i];
}
void display()
{
for(int i=0;i<n;i++)
 {
 System.out.println("ID of the Player"+(i+1)+":"+id[i]);
 System.out.println("name of the Player"+(i+1)+":"
                    + na[i]);
System.out.println("avrege of Player"+(i+1)+":"+
                    avg[i]);

}}}
class Main{
  public static void main(String[] args)
    {
    Player s1=new Player();
    Player s2=new Player();
s1.getdetails();
s2.getdetails();
 if(s1.score_calc()>s2.score_calc())
 {
  s1.display();
 }
 else
{
s2.display();
}}
```

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LAB 2 - EXTRA PROGRAM - 2

Qwe 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 author name and display the book details
d. Display the booktitle of the most expensive book
e. Display count of books published in 2020.
f. Display book details of the book with least no. of page.

CODE:

```
import java.util.Scanner;
class Book
{
int n;
int cnt=0;
int idx1;
int idx=0;
private String[] bookid=new String[10];
private String[] booktitle = new String[10];
private String[] author = new String[10];
private String[] publisher = new String[10];
private int[] no_of_pages=new int[10];
private int[] year_of_pub = new int[10];
private double[] price = new double[10];
```

```
public void getdetails()
{
Scanner sc=new Scanner(System.in);
system.out.println("Please enter the number of books:");
n=sc.nextInt();
for(int i=0;i<n;i++)
{
System.out.println("* * * * * * * * * * ");
System.out.println("Please enter the book ID of the
book"+(i+1)+":");
bookid[i]=sc.next();
System.out.println("Please enter book title "+(i+1)
+":");
booktitle[i]=sc.next();
System.out.println("Please enter author of book"+
(i+1)+" ");
author[i]=sc.next();
System.out.println("Please enter the publisher of book"
+(i+1)+":");
publisher[i]=sc.next();
system.out.println("Please enter the no of page of
the book"+(i+1)+":");
no_of_pages[i]=sc.nextInt();
System.out.println("Please enter the year of publishing
of book"+(i+1)+":");
year_of_pub[i]=sc.nextInt();
System.out.println("please enter price of book"+(i+1)+":");
price[i]=sc.nextDouble();
}
}
```

```
public void display()
{
for(int i=0;i<n;i++)
{
  System.out.println(" ");
  System.out.println("BOOK ID:"+bookid[i]);
  System.out.println("Book Title:"+booktitle[i]);
  System.out.println("author:"+author[i]);
  System.out.println("publisher:"+publisher[i]);
  System.out.println("no of pages:"+no_of_pages[i]);
  System.out.println("year of pub:"+year_of_pub[i]);
  System.out.println("price:"+price[i]);
}
}
public void most_expensive()
{
 double max=price[0];
for(int i=0;i<n;i++)
{
 if(price[i]>max)
 {
  max=price[i];
  idx=i;
  }}
System.out.println("The book title of the most expensive
                    is:"+booktitle[idx]);
}

public void dis_author()
{
 Scanner sc=new Scanner(System.in);
```

```
System.out.println("Please enter the name of
author whose book details you want:");
String au=sc.next();
for(int i=0;i<n;i++)
{
if(author[i].equals(au))
   {
   display(i);
   }}
void compare()
{
for(int i=0;i<n;i++)
{
if(year_of_pub[i]==2020)
  { cnt++;
    }}
System.out.println("count of books published in
2020!"+cnt);
}
void least_page()
{
int min=no_of_pages[0];
for(int i=0;i<n;i++)
 {if(no_of_page[i]<min)
  { min=no_of_page[i];
    idx1=i;
    }}
System.out.println("details of book with least page is:");
display(idx1);
}
```

```
public void display(int j)
{
System.out.println("Book ID :"+bookid[j]);
System.out.println("Book title:"+booktitle[j]);
System.out.println("author:"+author[j]);
System.out.println("publisher"+publisher[j]);
System.out.println("no of pages:"+no_of_pages[j]);
System.out.println("year_of_pub:"+year_of_pub[j]);
System.out.println("price:"+price[j]);
}}
class Main
{
public static void main(String args[])
{
Book b1 = new Book();
Book b2 = new Book();
Book b3 = new Book();
b1.getdetails();
System.out.println("**********");
b1.display();
System.out.println("**********");
b1.most_expensive();
System.out.println("**********");
b1.disauthor();
System.out.println("**********");
b1.least_pages();
System.out.println("**********");
b1.compare();
}}
```