

Q1) Develop a java program to create a class Player with variable id, name, scores, no-matches played with default access specifier. Include the following:

- Constructors
- 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
{
```

```
    String id;
    String name;
    int scores[];
    int no_matches_played;
    Player () {}
```

```
    void getDetails ()
    {
```

```
        Scanner sc = new Scanner (System.in);
        System.out.println ("Enter Player Details:");
        System.out.println ("Enter ID:");
        id = sc.next ();
        System.out.println ("Enter Name:");
        name = sc.next ();
        System.out.println ("Enter number of matches played:");
```



```

no_matches_played = sc.nextInt();
scores = new int[no_matches_played];
for (int i=0; i<no_matches_played; i++) {

```

```

    System.out.println("Enter the score of match " +
                        (i+1) + ":");

```

```

    scores[i] = sc.nextInt();

```

```

}

```

```

}

```

```

void printDetails()

```

```

{

```

```

    System.out.println("The Player Details are");

```

```

    System.out.println("ID: " + id + "\nName: " +
                        name + "\nNo of matches played: "
                        + no_matches_played);

```

```

    for (int i=0; i<no_matches_played; i++) {

```

```

        System.out.println("The score of the match " +
                            (i+1) + ": " + scores[i]);

```

```

    }

```

```

}

```

```

double avg()

```

```

{

```

```

    int sum=0;

```

```

    for (int i=0; i<no_matches_played; i++) {

```

```

    {

```

```

        sum += scores[i];

```

```

    }

```

```

    return (sum / (no_matches_played + 0.0));

```

```

}

```

```

}

```

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```
class Playermain
{
    public static void main (String [] args)
    {
        double p1 avg, p2 avg;
        Player p1 = new Player();
        p1.getDetails();
        Player p2 = new Player();
        p2.getDetails();
        p1 avg = p1.avg();
        p2 avg = p2.avg();
p1.printDetails();
p2.printDetails();
        if (p1 avg > p2 avg)
        {
            System.out.println ("Player 1 has the greatest average  
score" + p1 avg);
            p1.printDetails();
        }
        else
        {
            System.out.println ("Player 2 has the greatest  
average score" + p2 avg);
            p2.printDetails();
        }
    }
}
```




OUTPUT:-

Enter player details :

Enter ID

578585

Enter Name

John

Enter number of matches played

4

Enter the score of match 1 :

16

Enter the score of match 2 :

45

Enter the score of match 3 :

56

Enter the score of match 4 :

76

~~The~~ Enter player details :

Enter ID:

79879

Enter Name :

Simon

Enter number of matches played:

4

Enter the score of match 1 :

32

Enter the score of match 2 :

56

Enter the score of match 3 :

16

Enter the score of match 4 :

29



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Player 1 has the greatest average score 48.25

The Player Details are :

ID : 578585

Name : John

No. of matches played : 4

The score of match 1 : 16

The score of match 2 : 45

The score of match 3 : 56

The score of match 4 : 76



Date ____ / ____ / ____

- Q2 Develop a Java program to create a class Book with members - bookid, booktitle, no. of pages, year of pub, author, publishes and price. Create three objects of book class. Include methods in Book class that do the following:
- Accepting the book details
 - Displaying the book details
 - Accept the author name and display the book details
 - Display the booktitle of the most expensive book
 - Display the count of the books published in the year 2020
 - Display the book details of the book with the least number of pages.

```
import java.util.Scanner;  
class Book  
{
```

```
    int bookid;  
    String booktitle;  
    int no. of pages;  
    int year of pub;  
    String author;  
    String publishes;  
    double price;  
    void acceptDetails()  
{
```

```
        Scanner b = new Scanner(System.in);  
        System.out.println("Enter the Bookid:");  
        bookid = b.nextInt();  
        System.out.println("Enter the Booktitle:");  
        booktitle = b.next();  
        System.out.println("Enter the no. of pages);
```




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```
no-of-page = b.nextInt();  
System.out.println("Enter the year of publication:");  
year-of-pub = b.nextInt();  
System.out.println("Enter the Author's name:");  
author = b.next();  
System.out.println("Enter the Publisher:");  
publisher = b.next();  
System.out.println("Enter the Price");  
price = b.nextDouble();  
}
```

```
void displayDetails()
```

```
{  
    System.out.println("*****BOOK DETAILS*****");  
    System.out.println("Book id : " + bookid);  
    System.out.println("Booktitle : " + booktitle);  
    System.out.println("Number of pages in book : " +  
                        no-of-pages);  
    System.out.println("Year of Publication : " + year-of-pub);  
    System.out.println("Author's name : " + author);  
    System.out.println("Publisher : " + publisher);  
    System.out.println("Price of the book : " + price);  
}
```

```
}
```

```
class BookMain
```

```
{
```

```
    public static void main (String args [])
```

```
{
```

```
        Book b1 = new Book();
```

```
        b1.acceptDetails();
```

```
        Book b2 = new Book();
```

```
        b2.acceptDetails();
```

```
        Book b3 = new Book();
```



```

    b3.acceptDetails();
    if ((b1.price > b2.price) && (b1.price > b3.price))
    {
        System.out.println("The Booktitle of the most expensive book is : " + b1.booktitle);
    }
    else if ((b2.price > b1.price) && (b2.price > b3.price))
    {
        System.out.println("The Booktitle of the most expensive book is " + b2.booktitle);
    }
    else
    {
        System.out.println("The Booktitle of the most expensive book is " + b3.booktitle);
    }
    if ((b1.year-of-pub == 2020) && (b2.year-of-pub == 2020) && (b3.year-of-pub == 2020))
    {
        System.out.println("The number of book published in year 2020 is 3");
    }
    else if ((b1.year-of-pub == 2020) || (b2.year-of-pub == 2020) || (b3.year-of-pub == 2020))
    {
        System.out.println("The number of book published in year 2020 is 2");
    }
    else
    {

```



```
System.out.println (" The number of book published  
in year 2020 is 1");
```

```
}
```

```
if ((b1.no-of-pages < b2.no-of-pages) &&  
    (b1.no-of-pages < b3.no-of-pages))
```

```
{
```

```
System.out.println ("The book details of the book  
with least number of pages :");
```

```
b1.displayDetails();
```

```
}
```

```
else if else if ((b2.no-of-pages < b1.no-of-pages) &&  
                (b2.no-of-pages < b3.no-of-pages))
```

```
{
```

```
System.out.println ("The book details of the book  
with least number of pages :");
```

```
b2.displayDetails();
```

```
}
```

```
else
```

```
{
```

```
System.out.println ("The book details of the  
book with least number of pages :");
```

```
b3.displayDetails();
```

```
}
```

```
}
```

```
}
```

OUTPUT:-

Enter the Bookid :

5768

Enter the Booktitle :

Ambassadors

Enter the no. of pages :

220

Enter the year of publication :

2019

Enter the Author's Name :

John.M

Enter the Publisher :

SimonLivre

Enter the Price :

560.25

Enter the Bookid :

78977

Enter the Booktitle :

Communication

Enter the no. of pages :

157

Enter the year of publication :

2020

Enter the Author's name :

JenniferG

Enter the ~~Author~~ Publisher :

Rowman.J

Enter the Price

326.90

Enter the Bookid :

759827

Enter the Booktitle :

Report

Enter the no. of pages :

420

Enter the year of publication :

2020

Enter the Author's name :

M. K. Singh

Enter the Publisher :-

RD Sanket

Enter the price

430.75

The Book title of the most expensive book is : Ambassadors

The number of book published in year 2020 is 2

The Book details of the book with last number of pages :

***** BOOK DETAILS *****

Bookid : 78977

Booktitle : Communication

Number of pages in book : 157

Year of Publication : 2020

Author's Name : Jennifer G

Publisher : Rowman J

Price of the book : 326.90