1)PROGRAM-1

```java
import java.util.*;
import java.lang.*;
import java.io.*;
public class prog1
{
    public static String id;
    public static String name;
    public static int[] scores;
    public static int no_of_matches_played;
    static double sum=0;
    static double average;
    public extra5(String i,String n,int mat)
    {
        id=i;
        name=n;
        no_of_matches_played=mat;
        scores=new int[no_of_matches_played];
    }
    public static void read()
    {
        Scanner sc=new Scanner(System.in);
        System.out.println("Enter the Scores Of The Player In The
matches");
        for(int i=0;i<no_of_matches_played;i++)
        {
            System.out.println("enter the Score Scored By The Player in the
match " + (i+1));
            scores[i]=sc.nextInt();
        }

    }
    public static double calc()
    {

        for(int i=0;i<no_of_matches_played;i++)
        {
            sum+=scores[i];
        }

        average=sum/no_of_matches_played;
        //System.out.println("Sum Of His Scores In All Matches " + sum);
        sum=0;
        return average;
    }

    public static void display()
    {
        System.out.println("ID of the player is " + id);
        System.out.println("Name Of The Player is " + name);
        System.out.println("Total Score scored by the player is " + sum);
        System.out.println("Average Score Of The Player is " + calc());

    }
}
```

2)PROGRAM-2

```java
import java.util.*;
```

```java
import java.io.*;
import java.lang.*;
public class prog2
{
    public static String bookid;
    public static String booktitle;
    public static int[] no_of_pages;
    public static int[] year_of_pub;
    public static String author;
    public static String publisher;
    public static double[] price;
    public static int n;
    public extra6(String id,String title,String au,String pub,int count)
    {
        bookid=id;
        booktitle=title;
        author=au;
        publisher=pub;
        n=count;

    }
    public prog5()
    {
        no_of_pages=new int[3];
        price=new double[3];
        year_of_pub=new int[3];
    }
    public static void read()
    {
        Scanner sc=new Scanner(System.in);
        System.out.println("Enter the Number Of books ");
        n=sc.nextInt();
        System.out.println("Enter the price of the book");
        for(int i=0;i<n;i++)
        {
            System.out.println("Enter the price of book " + (i+1));
            price[i]=sc.nextDouble();
            System.out.println("Enter the no of pages of book " + (i+1));
            no_of_pages[i]=sc.nextInt();
            System.out.println("Enter the year of publication ");
            year_of_pub[i]=sc.nextInt();
        }
    }
    public static double most_exp()
    {
        double max=0;
        for(int i=0;i<n;i++)
        {
            if(price[i]>max)
            {
                max=price[i];
            }

        }
        return max;
    }
    public static int pub_in_2020()
    {
        int count=0;
        for(int i=0;i<n;i++)
        {
```

```
                if(year_of_pub[i]==2020)
                count++;
            }
        return count;
        }
    public static int least()
    {
        int min=no_of_pages[0];
        for(int i=0;i<n;i++)
        {
            if(no_of_pages[i]<min)
            {
                min=no_of_pages[i];
            }
        }
        return min;
    }
    public static void display()
    {
        System.out.println("Book Name is " + booktitle);
        System.out.println("BookiD is " + bookid);
        System.out.println("Author of book is " + author);
        System.out.println("Publisher of book is " + publisher);
    }

}
```

3)PROGRAM-3

```
import java.util.*;
import java.io.*;
import java.lang.*;
public class testbook
{
    public static String[] bookid;
    public static String[] booktitle;
    public static String[] author;
    public static String[] publisher;
    static int n;
    public static void main(String[] args)
    {
        double a=0;
        double b=0;
        Scanner sc=new Scanner(System.in);

        System.out.println("Enter the number of books ");
        n=sc.nextInt();
        bookid=new String[n];
        booktitle=new String[n];
        author=new String[n];
        publisher=new String[n];
        for(int i=0;i<n;i++)
        {
            System.out.println("Enter the book id of book " + (i+1));
            bookid[i]=sc.next();
            System.out.println("Enter the book title of the book " +
(i+1));
            booktitle[i]=sc.next();
```

```java
            System.out.println("Enter the author of book " + (i+1));
            author[i]=sc.next();
            System.out.println("Enter the name of the publisher for the
book " + (i+1));
            publisher[i]=sc.next();
        }
        extra6 ob=new extra6();
        ob.read();
        extra6 ob1=new
extra6(bookid[0],booktitle[0],author[0],publisher[0],n);
        a=ob1.most_exp();
        b=ob1.least();
        if(ob1.price[0]==a)
        {
            System.out.println("*****************Details Of the Costliest
Book is ************");
            System.out.println("Price Of the Costliest Book Is " + a);
            ob1.display();
            a=0;
        }
        if(ob1.no_of_pages[0]==b)
        {
            System.out.println("****************Details Of the Book Least
Number Of Pages******************");
            System.out.println("Number Pages In the book is " + b);
            ob1.display();
            b=0;
        }
        extra6 ob2=new
extra6(bookid[1],booktitle[1],author[1],publisher[1],n);
        a=ob2.most_exp();
        b=ob2.least();
        if(ob2.price[1]==a)
        {
            System.out.println("*****************Details Of the Costliest
Book is ************");
            System.out.println("Price Of the Costliest Book Is " + a);
            ob2.display();
            a=0;
        }
        if(ob2.no_of_pages[1]==b)
        {
            System.out.println("****************Details Of the Book Least
Number Of Pages ************");
            System.out.println("Number Pages In the book is " + b);
            ob2.display();
            b=0;
        }

        extra6 ob3=new
extra6(bookid[2],booktitle[2],author[2],publisher[2],n);
        a=ob3.most_exp();
        b=ob3.least();
        if(ob3.price[2]==a)
        {
            System.out.println("****************Details Of the Costliest
Book is ************");
            System.out.println("Price Of the Costliest Book Is " + a);
            ob3.display();
            a=0;
        }
```

```java
            if(ob3.no_of_pages[2]==b)
            {
                System.out.println("*****************Details Of the Book With
least Number Of Pages is ************");
                System.out.println("Number of Pages In the book is " + b);
                ob3.display();
                b=0;
            }
            int in_2020=ob.pub_in_2020();
            System.out.println();
            System.out.println("Numnber Of Book Published in 2020 is " +
in_2020);

        }
}
```

4)PROGRAM-4

```java
import java.util.*;
import java.lang.*;
public class testplayer
{
    static String[] id;
    static String[] name;
    static int[] no;
    static int n;
    public static void main(String[] args)
    {
        Scanner sc=new Scanner(System.in);
        id=new String[2];
        name=new String[2];
        no=new int[2];

        for(int i=0;i<2;i++)
        {
            System.out.println("Enter the Id Of The Player " + (i+1));
            id[i]=sc.next();
            System.out.println("Enter the name Of Player " + (i+1));
            name[i]=sc.next();
            System.out.println("Enter the Number of matches Played By The Player" + (i+
            no[i]=sc.nextInt();
        }
        extra5 ob1=new extra5(id[0],name[0],no[0]);
        ob1.read();
        double av1=ob1.calc();

        System.out.println(av1);

        extra5 ob2=new extra5(id[1],name[1],no[1]);
        ob2.read();
        double av2=ob2.calc();
        System.out.println("Average of the player 1 is" + av1);
        System.out.println("Average Of the player 2 is " + av2);
        System.out.println("Details Of the Player With Highest Average is");
        System.out.println();

        if(av1>av2)
        {
            extra5 ob=new extra5(id[0],name[0],no[0]);
            ob.display();
```

```java
            System.out.println("Avearge Score of the player is " + av1);
        }
        else if(av1<av2)
        {
            extra5 ob=new extra5(id[1],name[1],no[1]);
            ob.display();
            System.out.println("Avearge Score of the player is " + av2);
        }
        else{
            System.out.println("BOTH THE PLAYERS HAVE SAME AVERAGE");
            System.out.println("Their Details Are ");
            extra5 obj1=new extra5(id[0],name[0],no[0]);
            ob1.display();

            extra5 obj2=new extra5(id[1],name[1],no[1]);
            ob2.display();

        }

        System.out.println(av2);




    }
}
```