Week 2 Practice Programs

1.Player :

import java.util.Scanner;

class Player{

    int id;

    String name;

    int no\_matches\_played;

    int[] score=new int[no\_matches\_played];

    double avg=0;

    Player(int aid,String aname,int np,int[] ascore){

        id=aid;

        name=aname;

        no\_matches\_played=np;

        score=ascore;

    }

    double scoreCal(int np,int[] ascore){

        for(int i=0;i<no\_matches\_played;i++){

            avg+=score[i];

        }

        return avg/no\_matches\_played;

    }

    void getDetails(){

        System.out.print("id = "+id+"\n"+"name = "+name+"\n"+"Average Score = "+avg/no\_matches\_played);

    }

}

public class W2p1 {

    public static void main(String[] args) {

        Scanner s=new Scanner(System.in);

        double s1,s2;

        System.out.println("Enter player1 id , name , no. of matches played");

        int pid=s.nextInt();

        String pname=s.next();

        int pnp=s.nextInt();

        int[] pscore=new int[pnp];

        System.out.println("Enetr scores in each match");

        for(int i=0;i<pnp;i++){

            pscore[i]=s.nextInt();

        }

        Player p1=new Player(pid,pname,pnp,pscore);

        s1=p1.scoreCal(pnp,pscore);

        System.out.println("Enter player2 id , name , no. of matches played");

        int qid=s.nextInt();

        String qname=s.next();

        int qnp=s.nextInt();

        int[] qscore=new int[qnp];

        System.out.println("Enetr scores in each match");

        for(int i=0;i<qnp;i++){

            qscore[i]=s.nextInt();

        }

        s.close();

        Player p2=new Player(qid, qname, qnp, qscore);

        s2=p2.scoreCal(qnp,qscore);

        System.out.println("Player with greater averge Score");

        if(s1>s2)

            p1.getDetails();

        else

            p2.getDetails();

    }

}

2.Book :

import java.util.Scanner;

class Book{

    private String bookid;

    private String booktitle;

    private int no\_of\_pages;

    private int year\_of\_pub;

    private String author;

    private String publisher;

    private double price;

    Scanner sc = new Scanner(System.in);

    void getDetails(){

        System.out.println("Enter book id:");

        bookid = sc.next();

        System.out.println("Enter book title:");

        booktitle = sc.next();

        System.out.println("Enter no of pages:");

        no\_of\_pages = sc.nextInt();

        System.out.println("Enter year of pub:");

        year\_of\_pub = sc.nextInt();

        System.out.println("Enter author name:");

        author = sc.next();

        System.out.println("Enter publisher name:");

        publisher = sc.next();

        System.out.println("Enter price:");

        price = sc.nextDouble();

    }

    void printDetails(){

        System.out.println("The book details are:");

        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 name: "+ author);

        System.out.println("publisher: "+ publisher);

        System.out.println("price: "+ price);

    }

    String bookByAuthor(){

        return author;

    }

    double expensive(){

        return price;

    }

    int count(){

        return year\_of\_pub;

    }

    int pages(){

        return no\_of\_pages;

    }

}

public class E\_2 {

    public static void main(String[] args){

    Book b1 = new Book();

    Book b2 = new Book();

    Book b3 = new Book();

    Scanner sc = new Scanner(System.in);

    System.out.println("\n\nBook 1");

    b1.getDetails();

    System.out.println("\n\nBook 2");

    b2.getDetails();

    System.out.println("\n\nBook 3");

    b3.getDetails();

    System.out.println("\n\nBook 1");

    b1.printDetails();

    System.out.println("\n\nBook 2");

    b2.printDetails();

    System.out.println("\n\nBook 3");

    b3.printDetails();

    String auth, bk1, bk2, bk3;

    System.out.println("\n\nEnter author name to find his book:");

    auth = sc.next();

    bk1 = b1.bookByAuthor();

    if (bk1.equals(auth)){

        b1.printDetails();

    }

    bk2 = b2.bookByAuthor();

    if (bk2.equals(auth)){

        b2.printDetails();

    }

    bk3 = b3.bookByAuthor();

    if (bk3.equals(auth)){

        b3.printDetails();

    }

    double p1, p2, p3;

    p1 = b1.expensive();

    p2 = b2.expensive();

    p3 = b3.expensive();

    System.out.println("\n\nThe details of most expensive book are:");

    if(p1>p2){

        if(p1>p3){

           b1.printDetails();

        }

        else{

            b3.printDetails();

        }

    }

    else {

        if(p2>p3){

            b2.printDetails();

        }

        else{

            b3.printDetails();

        }

    }

    int count = 0,c1, c2, c3;

    c1 = b1.count();

    if(c1==2020){

        count++;

    }

    c2 = b2.count();

    if(c2==2020){

        count++;

    }

    c3 = b3.count();

    if(c3==2020){

        count++;

    }

    System.out.println("\n\nno of books published in 2020: "+ count);

    int page, pg1, pg2, pg3;

    pg1=b1.pages();

    pg2=b2.pages();

    pg3=b3.pages();

    System.out.println("\n\nbook with least pages:");

    if(pg1<pg2){

        if(pg1<pg3){

           b1.printDetails();

        }

        else{

            b3.printDetails();

        }

    }

    else {

        if(pg2<pg3){

            b2.printDetails();

        }

        else{

            b3.printDetails();

        }

    }

}

}