

Assignment 2

//Problem Statement::

/*

Identify commonalities and differences between Publication, Book and Magazine classes.

Title, Price, Copies are common instance variables and saleCopy is common method.

The differences are, Bookclass has author and orderCopies().

Magazine Class has data members as orderQty, Current issue and method receiveNewissue().Write a program

to find how many copies of the given books are ordered and display total sale of publication.

*/

import java.util.*;

class publication {

 //private data members

 private String title;

 private int price;

 private int copies;

 private int total;

 Scanner sc=new Scanner(System.in);//scanner class object

 public void settitle(String title) {

 //setter method for title

 this.title=title;

 }

 public void setcopies(int copies) {

 //setter method for copies

```
        this.copies=copies;
    }
}
```

```
public String gettitle() {
    //getter method for title
    return title;
}
```

```
public int getTotal() {
    //getter method for price
    return total;
}
```

```
public int getCopies() {
    //getter method for copies
    return copies;
}
```

```
public int getprice() {
    return price;
}
```

```
void read_publ() {
    //read or input method for common data members of magazine and book class
```

```
    System.out.print("enter title : ");
    title=sc.next();
    System.out.print("enter price: ");
    price=sc.nextInt();
```

```

        System.out.print("enter copies: ");
        copies=sc.nextInt();
    }

    void display() {
        //display method for common data members of book and magazine class

        System.out.print(title+"\t"+price+"\t"+copies);
    }

    void sale_copy(int number) {
        //common method to sale book or magazine and generate bill
        if (number <= copies)
            //if customer needed copies are less than available
            {
                copies=copies-number;
                total=total + number*price;
                System.out.println("\tYOU PURCHASED " +number + " COPIES \n\tYOU HAVE
TO PAY : "+(price*number));
            }
        else
            //if customer needs copies more than available in stock
            System.out.println("  INSUFFICIENT STOCK!!!!!!!!!!");
    }

}

//===== CLASS book =====//
class book extends publication {

```

```

private String author;

//data member of book class only


void order_copies(int number) {           //increase available copies of book by ordering
    int x=getCopies()+number;
    setcopies(getCopies()+number);
    //as data members are private, we access them with the help of methods
    System.out.println("\n\tORDER SUCESSFUL....");
    System.out.println("\tCOPIES AVAILABLE : "+x);
}

void read_book() {
    //method calling read method of publication class and also reading author
    read_publ();
    System.out.print("enter author book: ");
    author=sc.next();
}

void display_book(){
    System.out.println("title \tprice \tcopy \tauthor");
    display();//call to display defined in publication class
    System.out.println("\t"+author);
}
}

//===== CLASS magazine =====//
class magazine extends publication{
    //magazine class is inherited from publication

```

```

private int order_qty; //data members

private String issue_date;

void receive_issue(String new_issue_date) {
    //method to issue new or upgraded magazine
    System.out.println("ENTER NEW COPIES ORDERED: ");
    order_qty=sc.nextInt();

    setcopies(order_qty);
    //setting values to copies by setter method

    issue_date=new_issue_date;
    System.out.println("\tTHE MAGAZINE "+gettitle()+" \n\t WITH ISSUE DATE
"+issue_date+"AVAILABLE");
}

void read_mag() { //method to read or input magazine details
    read_publ(); //call to read method defined in publication class
    System.out.print("Enter THE Current Issue Date [dd/mm/yyyy]");
    issue_date=sc.next();
}

void display_mag() { //display method to display
    System.out.println("title \tprice \tcopy \tdate");
    display();
    System.out.println("\t"+issue_date);
}
}

//===== CLASS Main =====//

public class Main {

```

```

public static void main(String[] args) {

    Scanner sc=new Scanner(System.in);

    book b=new book();

    magazine m=new magazine();


    int outer;

    do {

        System.out.println("\n\n\tCHOOSE ONE OF THE
FOLLOWING....\n\n\t1.BOOK \t\t2.MAGAZINE"

                                + "\n\n\t3.TOTAL SALE AMOUNT\t4.REVENUE OF
PUBLICATION\n\n");

        System.out.print("Choice::");

        int k=sc.nextInt();

        int a;

        aa:

        if(k==1) {

            do {

                int c;

                System.out.print("\n\t\tMENU  FOR  BOOK\n");

                System.out.print("\t1.read book \t\t2.display \n\t3.sale copies
\t\t4.order copies");

                System.out.print("\n\tChoice::");

                c=sc.nextInt();

                switch (c){

                    case 1:

```

```

        System.out.println("=====
=====\\n");

        b.read_book();

        System.out.println("=====
=====\\n");

        break;

        case 2:

        System.out.println("=====
=====\\n");

        b.display_book();

        System.out.println("=====
=====\\n");

        break;

        case 3:

        System.out.println("=====
=====\\n");

        System.out.print("HOW MANY COPIES YOU(for customer
WANT : ");

        int n1=sc.nextInt();

        b.sale_copy(n1);

        System.out.println("=====
=====\\n");

        break;

        case 4:

        System.out.println("=====
=====\\n");

        System.out.print("ENTER COPIES WANT TO ORDER(for
shop): ");

        int n2=sc.nextInt();

        b.order_copies(n2);

```

```

        System.out.println("=====
=====\\n");

                break;

        default:

                System.out.println("invalid");

        }

        System.out.println("Do you want to continue with book
section[1/0]\\n\\t1.YES \\t\\t0.NO");

        System.out.print("\\tChoice::");

        a=sc.nextInt();

        if(a==0)

                break aa;

    }while(a==1);

}

else if(k==2)

{

        mm:

        do {

                System.out.println("\\n\\t\\tMENU  FOR  MAGAZINE...\\n\\n\\t1.READ
\\t\\t2.DISPLAY \\n\\t3.SALE MAGAZINE COPIES \\t4.RECEIVE NEW ISSUE\\n");

                int d;

                System.out.print("\\n\\tChoice::");

                d=sc.nextInt();

                switch(d) {

                case 1:

```



```

        System.out.println("=====
=====\\n");

        m.read_mag();

        System.out.println("=====
=====\\n");

        break;

        case 2:

        System.out.println("=====
=====\\n");

        m.display_mag();

        System.out.println("=====
=====\\n");

        break;

        case 3:

        System.out.println("=====
=====\\n");

        System.out.println("HOW MANY COPIES YOU
WANT(customer)?? ");

        int n3=sc.nextInt();

        m.sale_copy(n3);

        System.out.println("=====
=====\\n");

        break;

        case 4:

        System.out.println("=====
=====\\n");

        System.out.println("ENTER THE NEW ISSUE DATE
[dd/mm/yyyy]: ");

        String date=sc.next();

        m.receive_issue(date);

```

```

        System.out.println("=====
=====\\n");

        break;

    }

    System.out.println("DO YOU WANT TO CONTINUE WITH MAGAZINE
SECTION [1/0]\\n\\t1.YES\\t0.NO");

    System.out.print("\\tChoice::");

    a=sc.nextInt();

    if(a==0)

        break mm;

}while(a==1);

}

else if (k==3) {

    System.out.println("\\n\\tTOTAL SALE AMOUNT IS(to be paid by
customer) = "+(b.getTotal()+m.getTotal())+ " ");

}

else if(k==4) {

    System.out.println("\\n\\tTOTAL REVENUE OF PUBLICATION IS : "+
(b.getCopies()*b.getprice() + m.getCopies()*m.getprice()));

}

else

    System.out.println("invalid key....");

    System.out.println("DO YOU WANT TO CONTINUE WITH
PUBLICATION???\\n\\t1.CONTINUE \\t0.TERMINATE");

    outer=sc.nextInt();

}while(outer!=0);

sc.close();

}

```

}

/*

OUTPUT

CHOOSE ONE OF THE FOLLOWING....

1.BOOK

2.MAGAZINE

3.TOTAL SALE AMOUNT 4.REVENUE OF PUBLICATION

Choice::1

MENU FOR BOOK

1.read book

2.display

3.sale copies

4.order copies

Choice::1

=====

enter title : Geeta

enter price: 450

enter copies: 5

enter author book: Vaibhav

=====

Do you want to continue with book section[1/0]

1.YES

0.NO

Choice::1

MENU FOR BOOK

- | | |
|---------------|----------------|
| 1.read book | 2.display |
| 3.sale copies | 4.order copies |

Choice::2

=====

title	price	copy	author
Geeta	450	5	Vaibhav

=====

Do you want to continue with book section[1/0]

- | | |
|-------|------|
| 1.YES | 0.NO |
|-------|------|

Choice::1

MENU FOR BOOK

- | | |
|---------------|----------------|
| 1.read book | 2.display |
| 3.sale copies | 4.order copies |

Choice::3

=====

HOW MANY COPIES YOU(for customer) WANT : 10

INSUFFICIENT STOCK!!!!!!!!!!

=====

Do you want to continue with book section[1/0]

- | | |
|-------|------|
| 1.YES | 0.NO |
|-------|------|

Choice::1

MENU FOR BOOK

1.read book 2.display
3.sale copies 4.order copies
Choice::3

=====

HOW MANY COPIES YOU(for customer) WANT : 4

YOU PURCHASED 4 COPIES

YOU HAVE TO PAY : 1800

=====

Do you want to continue with book section[1/0]

1.YES 0.NO

Choice::1

MENU FOR BOOK

1.read book 2.display
3.sale copies 4.order copies
Choice::4

=====

ENTER COPIES WANT TO ORDER(for shop): 11

ORDER SUCESSFUL....

COPIES AVAILABLE : 12

=====

Do you want to continue with book section[1/0]

1.YES 0.NO

Choice::0

DO YOU WANT TO CONTINUE WITH PUBLICATION???

1.CONTINUE 0.TERMINATE

1

CHOOSE ONE OF THE FOLLOWING....

1.BOOK

2.MAGAZINE

3.TOTAL SALE AMOUNT 4.REVENUE OF PUBLICATION

Choice::2

MENU FOR MAGAZINE...

1.READ

2.DISPLAY

3.SALE MAGAZINE COPIES

4.RECEIVE NEW ISSUE

Choice::1

=====

enter title : TimeOfIndia

enter price: 15

enter copies: 20

Enter THE Current Issue Date [dd/mm/yyyy]01052020

=====

DO YOU WANT TO CONTINUE WITH MAGAZINE SECTION [1/0]

1.YES 0.NO

Choice::1

MENU FOR MAGAZINE...

- 1.READ
- 2.DISPLAY
- 3.SALE MAGAZINE COPIES
- 4.RECEIVE NEW ISSUE

Choice::

2

=====

title	price	copy	date
TimeOfIndia	15	20	01052020

=====

DO YOU WANT TO CONTINUE WITH MAGAZINE SECTION [1/0]

- 1.YES
- 0.NO

Choice::1

MENU FOR MAGAZINE...

- 1.READ
- 2.DISPLAY
- 3.SALE MAGAZINE COPIES
- 4.RECEIVE NEW ISSUE

Choice::3

=====

HOW MANY COPIES YOU WANT(customer)??

15

YOU PURCHASED 15 COPIES

YOU HAVE TO PAY : 225

=====

DO YOU WANT TO CONTINUE WITH MAGAZINE SECTION [1/0]

1.YES 0.NO

Choice::1

MENU FOR MAGAZINE...

1.READ

2.DISPLAY

3.SALE MAGAZINE COPIES

4.RECEIVE NEW ISSUE

Choice::4

=====

ENTER THE NEW ISSUE DATE [dd/mm/yyyy]:

02072020

ENTER NEW COPIES ORDERED:

5

THE MAGAZINE TimeOfIndia

WITH ISSUE DATE 02072020AVAILABLE

=====

DO YOU WANT TO CONTINUE WITH MAGAZINE SECTION [1/0]

1.YES 0.NO

Choice::1

MENU FOR MAGAZINE...

1.READ

2.DISPLAY

3.SALE MAGAZINE COPIES

4.RECEIVE NEW ISSUE

Choice::2

=====

title	price	copy	date
-------	-------	------	------

TimeOfIndia	15	5	02072020
-------------	----	---	----------

=====

DO YOU WANT TO CONTINUE WITH MAGAZINE SECTION [1/0]

1.YES 0.NO

Choice::0

DO YOU WANT TO CONTINUE WITH PUBLICATION???

1.CONTINUE 0.TERMINATE

1

CHOOSE ONE OF THE FOLLOWING....

1.BOOK

2.MAGAZINE

3.TOTAL SALE AMOUNT 4.REVENUE OF PUBLICATION

Choice::3

TOTAL SALE AMOUNT IS(to be paid by customer) = 2025

DO YOU WANT TO CONTINUE WITH PUBLICATION???

1.CONTINUE 0.TERMINATE

1

CHOOSE ONE OF THE FOLLOWING....

1.BOOK

2.MAGAZINE

3.TOTAL SALE AMOUNT 4.REVENUE OF PUBLICATION

Choice::4

TOTAL REVENUE OF PUBLICATION IS : 5475

DO YOU WANT TO CONTINUE WITH PUBLICATION???

1.CONTINUE 0.TERMINATE

0

*/