

## Assignment No. 2

**Aim :** Polymorphism

**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, Book class has author and orderCopies(). Magazine Class has orderQty, Currentissue, receiveissue(). Write a program to find how many copies of the given books are ordered and display total sale of publication.

### 1. Publication.java

```
public class publication
{
    public String title;
    public double price;
    public int copies;
    //Default constructor to assign data member
    public publication()
    {
        this.title=null;
        this.price=0;
        this.copies=0;
    }
    public publication(String title,double price,int copies)
    {
        this.title = title;
        this.price = price;
        this.copies = copies;
    }
    public void sellcopy(int qty)
    {
        System.out.println("Total Publication sell:Rs." + (qty *
price));
    }
}
```

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## **2. Book.java**

```
public class Book extends publication
{
    private String author;
    //Define constructor to assign data member
    public Book()
    {
        super();
        this.author=null;
    }
    public Book(String title,double price,int copies,String
author)
    {
        super(title,price,copies);
        this.author = author;
    }
    //method sellcopy() of superclass publication is overridden
    public void sellcopy(int qty)
    {
        System.out.println("Total Book sell:Rs." + (qty * price));
    }
}
```

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## **3.Magazine.java**

```
public class Magazine extends publication
{
    private int orderQty;
    private String currIssue;
    public Magazine( String title, double price , int copies , int
orderQty , String currIssue)
    {
        this.orderQty = orderQty;
        this.currIssue = currIssue;
    }
    public void sellcopy(int qty)
    {
        System.out.println("Total Magazine sell: Rs." + (qty * price));
    }
}
```

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#### **4.Mainclass.java**

```
public class Mainclass
{
    public static void main(String[] args)
    {
        publication obj = new publication("java",500,6);
        obj.sellcopy(6);
        publication obj1 = new Book("java",500,5,"James Gaoslin");
        obj1.sellcopy(5);
        publication obj3 = new Magazine("java",200 , 5 , 6 , "sept");
        obj3.sellcopy(5);
    }
}
```

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#### **5.OUTPUT**

Total Publication sell:Rs.3000.0

Total Book sell:Rs.2500.0

Total Magazine sell: Rs.1000.0