

OBJECT-ORIENTED PROGRAMMING LAB**Experiment No.: 16****Name: VYSHNAVI BABU S****Roll No: 55****Batch: MCA - B****Date: 24-05-2022****Aim**

Prepare bill with the given format using calculate method from interface.

Order No.

Date :

Product Id	Name	Quantity	unit price	Total
101	A	2	25	50
102	B	1	100	100

Net. Amount 150

Program

```
import java.util.*;
import java.math.*;
interface calcul
{
    void input();
    void area();
    void perimeter();
}
class Circle implements calcul
{
```

```
double area;
double peri;
double radius;
public void area()
{
    area=3.14*radius*radius;
    System.out.println("area of circle "+area);
}

public void perimeter()
{
    peri=2*3.14*radius;
    System.out.println("perimeter of circle "+peri);
}

public void input()
{
    Scanner sc=new Scanner(System.in);
    System.out.println("enter radius");
    radius=sc.nextDouble();
}
}
class Rectangle implements calcul
{
    int p,l,b,a;
    Scanner em= new Scanner(System.in);
    public void input()
    {
```

```
        System.out.print("enter length");
l=em.nextInt();
        System.out.print("enter breadth");
b=em.nextInt();
    }
    public void area()
    {

        a=l*b;
        System.out.println("area of rectangle "+a);
    }
    public void perimeter()
    {
p=2*(l+b);
        System.out.println("perimeter of rectangle "+p);
    }

}

public class Shape
{
public static void main(String[] args)
{
System.out.println("CALCULATIONS ");
        System.out.println("1.area of circle & Rectangle");
        System.out.println("2.perimeter of circle & Rectangle:");

        System.out.println("enter the choice:");
```

```
Scanner pc =new Scanner(System.in);
Rectangle r=new
Rectangle(); Circle c=new
Circle(); int
choice=pc.nextInt();
switch(choice)
{
    case 1: System.out.println("area of circle and rectangle");
            r.input();
            r.area();
            c.input();
            c.area();
            break;
    case 2: System.out.println("perimeter of circle and rectangle");
            r.input();
            r.perimeter();
            c.input();
            c.perimeter();
            break;
    default:
        System.out.println("invalid choice");
        break;
}
}
```

Output Screenshot

```
D:\>java Bill
          _____SHOPPING CART_____

Enter the number of products to be added:
2

Item No:1
Enter the Product ID:
121
Enter the Product Name:
apple
Enter the quantity:
2
Enter the unit price:
100

Item No:2
Enter the Product ID:
123
Enter the Product Name:
pen
Enter the quantity:
3
Enter the unit price:
10

          INVOICE GENERATED

Order no. #70080
Date: 01/06/2022

Product Id      Name      Quantity      unit price      Total
-----
121             apple        2             100.0           200.0
123             pen          3              10.0            30.0
Net. Amount     230.0
```