

Lab Sheet 07

Exercise 01:

Output – 100

x variable value cannot change in the class Undergraduate.

Exercise 02:

abstract class Shape

```
{  
    abstract double calculateArea();  
    public void display(double area)  
    {  
        System.out.println("Area is: "+area);  
    }  
}
```

public class Circle extends Shape

```
{  
    private double radius;  
    public Circle(double radius)  
    {  
        this.radius=radius;  
    }  
}
```

```
@Override
double calculateArea()
{
    return Math.PI*radius*radius;
}
}
```

```
public class Rectangle extends Shape
{
    private double width,height;
    public Rectangle(double width,double height)
    {
        this.width=width;
        this.height=height;
    }
    @Override
    double calculateArea()
    {
        return width*height;
    }
}
```

```
public class Shapeobj
{
    public static void main(String[] args)
    {
        Scanner sc1=new Scanner(System.in);
        System.out.println("Enter the radius: ");
        double radius=sc1.nextDouble();
        Circle c1=new Circle(radius);
        double areaC=c1.calculateArea();
        c1.display(areaC);

        Scanner sc2=new Scanner(System.in);
        System.out.println("Enter the width: ");
        double width=sc2.nextDouble();
        System.out.println("Enter the height: ");
        double height=sc2.nextDouble();
        Rectangle r1=new Rectangle(width,height);
        double areaR=r1.calculateArea();
        r1.display(areaR);

    }
}
```