

OBJECT ORIENTED PROGRAMING LAB**Experiment No.: 17****Name : Swetha Prakash****Roll No : 46****Batch : B****Date : 07-06-22****Aim**

Create a Graphics package that has classes and interfaces for figures Rectangle, Triangle, Square and Circle. Test the package by finding the area of these figures.

Source Code

```
package g;
import g.Graphics.Circle;
import g.Graphics.Rectangle;
import g.Graphics.Square;
import g.Graphics.Triangle;
public class Shape{
    public static void main(String[] args){
        g.Graphics.Area r=new Rectangle(8,9);
        g.Graphics.Area T=new Triangle(5,5);
        g.Graphics.Area S=new Square(5);
        g.Graphics.Area C=new Circle(6);
        r.area();
        T.area();
        S.area();
        C.area();
    }
}
```

GRAPHICS

Area.java

Area.java

```
package g.Graphics;  
  
public interface Area  
{  
    void area();  
}
```

Rectangle.java

```
package g.Graphics;  
  
public class Rectangle implements Area  
{  
    int l,b;  
  
    public Rectangle(int l,int b)  
    {  
        this.l=l;  
        this.b=b;  
  
    }  
  
    public void area()  
    {  
        int area;  
        area=l*b;  
  
        System.out.println("AREA of Rectangle="+ area);  
  
    }  
}
```

Triangle.java

```
package g.Graphics;

public class Triangle implements Area
{
    int b,h;
    public Triangle(int b,int h)
    {
        this.b=b;
        this.h=h;
    }
    public void area()
    {
        float area;
        area=(float) (0.5*b*h);
        System.out.println("AREA of Triangle="+ area);
    }
}
```

Square.java

```
package g.Graphics;

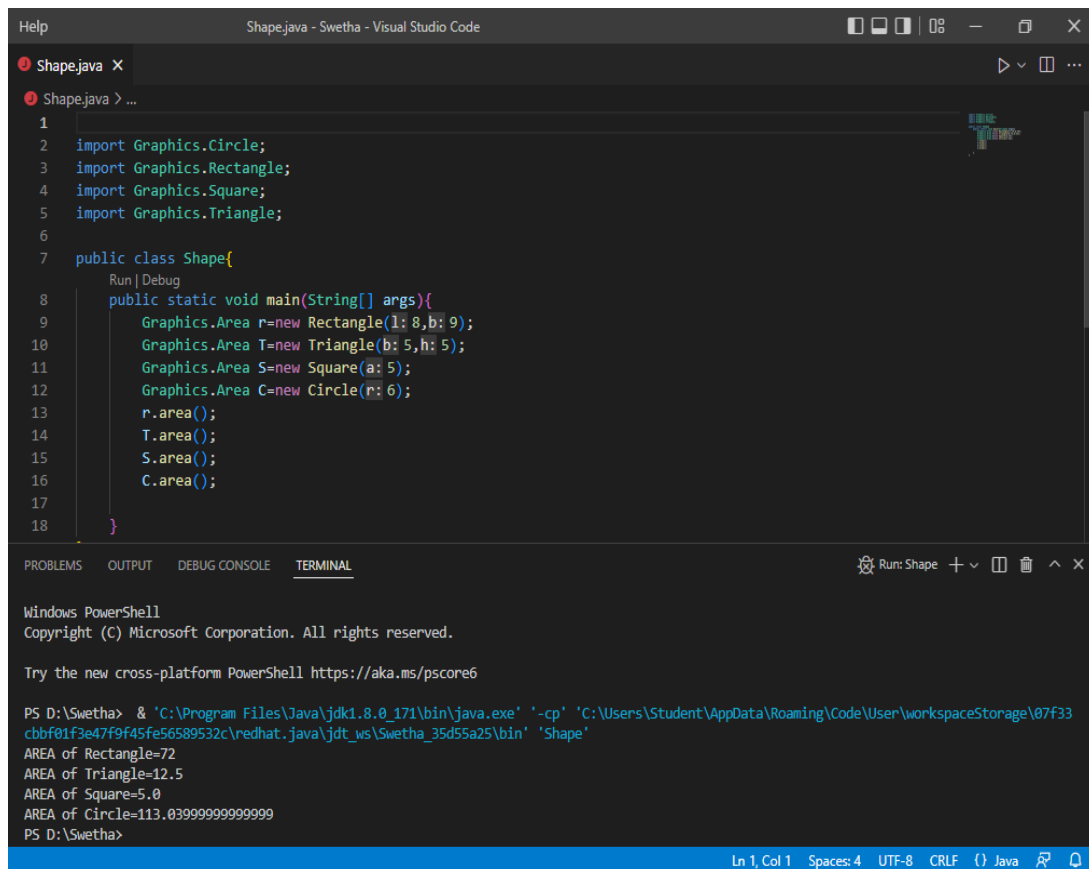
public class Square implements Area
{
    int a;
    public Square(int a)
    {
        this.a=a;
    }
    public void area()
```

```
{  
    float area;  
    area=a;  
    System.out.println("AREA of Square="+ area);  
}  
}
```

Circle.java

```
package g.Graphics;  
public class Circle implements Area  
{  
    int r;  
    public Circle(int r)  
    {  
        this.r=r;  
    }  
    public void area()  
    {  
        double area;  
        area=3.14*r*r;  
        System.out.println("AREA of Circle="+ area);  
    }  
}
```

Output Screenshot



The screenshot displays the Visual Studio Code editor with a file named `Shape.java` open. The code defines a `Shape` class with a `main` method that creates and calculates the area of a Rectangle, Triangle, Square, and Circle. The terminal window at the bottom shows the command to run the program and the resulting output.

```
Shape.java
1
2 import Graphics.Circle;
3 import Graphics.Rectangle;
4 import Graphics.Square;
5 import Graphics.Triangle;
6
7 public class Shape{
8     public static void main(String[] args){
9         Graphics.Area r=new Rectangle(1: 8,b: 9);
10        Graphics.Area T=new Triangle(b: 5,h: 5);
11        Graphics.Area S=new Square(a: 5);
12        Graphics.Area C=new Circle(r: 6);
13        r.area();
14        T.area();
15        S.area();
16        C.area();
17    }
18 }
```

Windows PowerShell
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PS D:\Swetha> & 'C:\Program Files\Java\jdk1.8.0_171\bin\java.exe' '-cp' 'C:\Users\Student\AppData\Roaming\Code\User\workspaceStorage\07f33cbbf01f3e47f9f45fe56589532c\redhat.java\jdt_ws\Swetha_35d55a25\bin' 'Shape'

AREA of Rectangle=72
AREA of Triangle=12.5
AREA of Square=5.0
AREA of Circle=113.03999999999999
PS D:\Swetha>

Ln 1, Col 1 Spaces: 4 UTF-8 CRLF () Java