Week-4

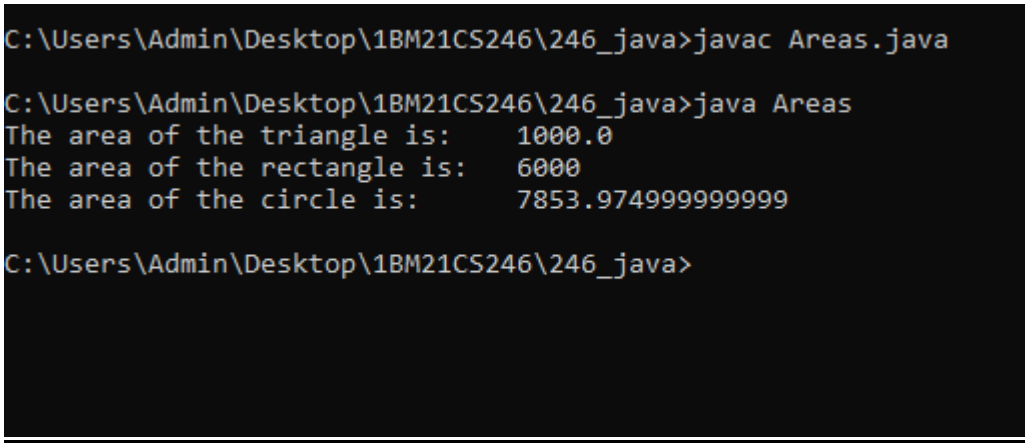
Develop a Java program to create an abstract class named Shape that contains
two integers and an empty method named printArea( ). Provide three classes
named Rectangle, Triangle and Circle such that each one of the classes extends the class Shape. Each one of the classes contain only the method
printArea( ) that prints the area of the given shape.

Code:

```
abstract class Shape
{
	int one; int two;
	void initial(int o, int t)
	{
		one = o; two = t;
	}
	abstract void printArea();
}

class Rectangle extends Shape
{
	void printArea()
	{
		System.out.println("The area of the rectangle is:\t"+ one*two);
	}
}

class Triangle extends Shape
```

```
{
	void printArea()
	{
		System.out.println("The area of the triangle is:\t"+ (double)0.5*one*two);
	}
}

class Circle extends Shape
{
	void printArea()
	{
		System.out.println("The area of the circle is:\t"+ (double) 3.14159*one*two);
	}
}

class Areas
{
	public static void main(String args[])
	{
		Triangle t1 = new Triangle();
		Rectangle r1 = new Rectangle();
		Circle c1 = new Circle();
		t1.initial(50, 40); t1.printArea();
		r1.initial(100, 60); r1.printArea();
		c1.initial(50, 50); c1.printArea();
	}
}
```

Output:


C:\Users\Admin\Desktop\1BM21CS246\246_java>javac Areas.java
C:\Users\Admin\Desktop\1BM21CS246\246_java>java Areas
The area of the triangle is: 1000.0
The area of the rectangle is: 6000
The area of the circle is: 7853.974999999999
C:\Users\Admin\Desktop\1BM21CS246\246_java>