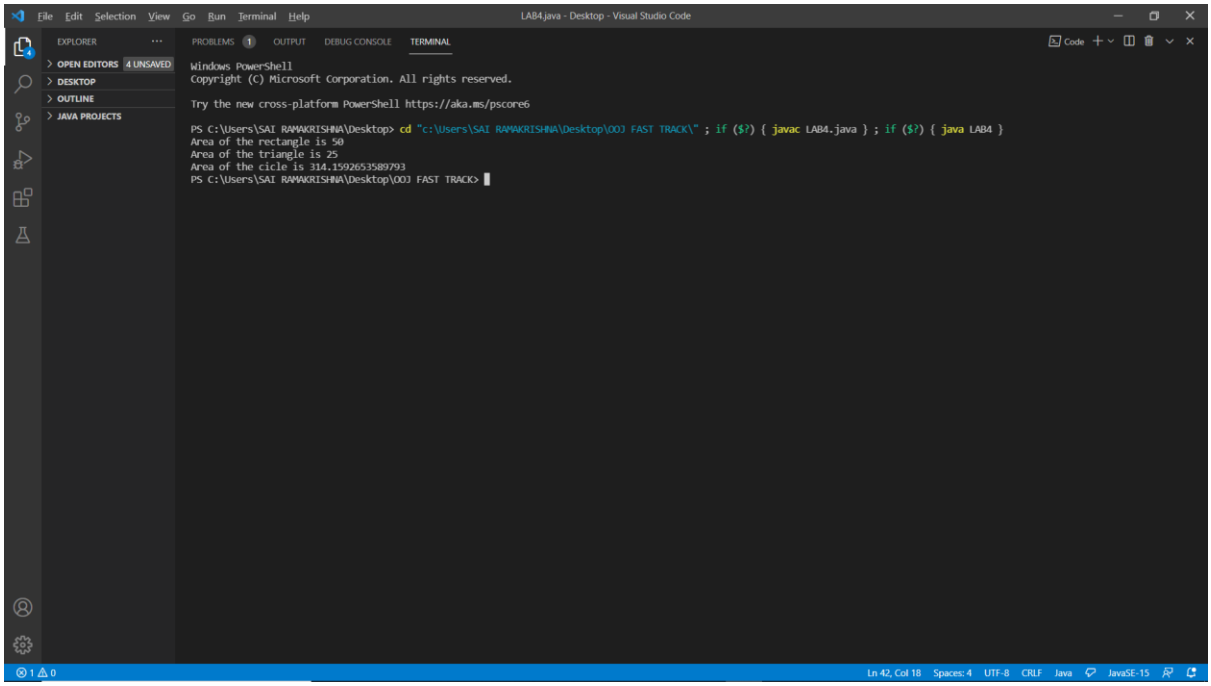
LAB PROGRAM 4

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.

```
import java.util.Scanner;


abstract class Shape{
   int b,h;
   Shape(int b, int h){
      this.b = b;
      this.h = h;
   }
   void printArea(){};
}


class Rectangle extends Shape{
   Rectangle(int b, int h){
      super(b,h);
   }


   void printArea() {
      System.out.println("Area of the rectangle is " + (b*h));
   };
}
```

```
class Triangle extends Shape{
    Triangle(int b, int h){
        super(b,h);
    }

    void printArea() {
        System.out.println("Area of the triangle is " + ((b*h)/2));
    };
}

class Circle extends Shape{
    Circle(int r){
        super(r,r);
    }

    void printArea() {
        System.out.println("Area of the cicle is " + (Math.PI*h*h));
    };
}

public class Lab9{
    public static void main(String[] args) {
        Rectangle rect = new Rectangle(10, 5);
        Triangle tri = new Triangle(10, 5);
        Circle c = new Circle(10);
        rect.printArea();
```

```
        tri.printArea();
        c.printArea();
    }
}
```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PS C:\Users\SAI RAMAKRISHNA\Desktop> cd "c:\Users\SAI RAMAKRISHNA\Desktop\OOJ FAST TRACK\" ; if ($?) { javac LAB4.java } ; if ($?) { java LAB4 }
Area of the rectangle is 50
Area of the triangle is 25
Area of the cicle is 314.1592653589793
PS C:\Users\SAI RAMAKRISHNA\Desktop\OOJ FAST TRACK>
Ln 42, Col 18
Spaces: 4
UTF-8
CRLF
Java
JavaSE-15