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Subject: Object Oriented Programming Lab

Practical-3

- **Problem Definition:**

Write a program in java to overload the method area for the different shapes, like, circle square and triangle

- **Program:**

```
class Shape{
    void Area(int L, int b){
        System.out.println("Area of rectangle = "+ L*b + " sq. unit\n");
    }
    void Area(int Radius){
        System.out.println("Area of circle = " + 3.14 * Radius * Radius + " sq. unit\n");
    }
    void Area(double b, double h){
        System.out.println("Area of triangle = "+ 0.5*b*h + " sq. unit\n");
    }
}
class Practical3{
    public static void main(String[] args) {
        Shape s= new Shape();
        s.Area(4, 5);
        s.Area(7);
        s.Area(8.0 , 6.0);
    }
}
```

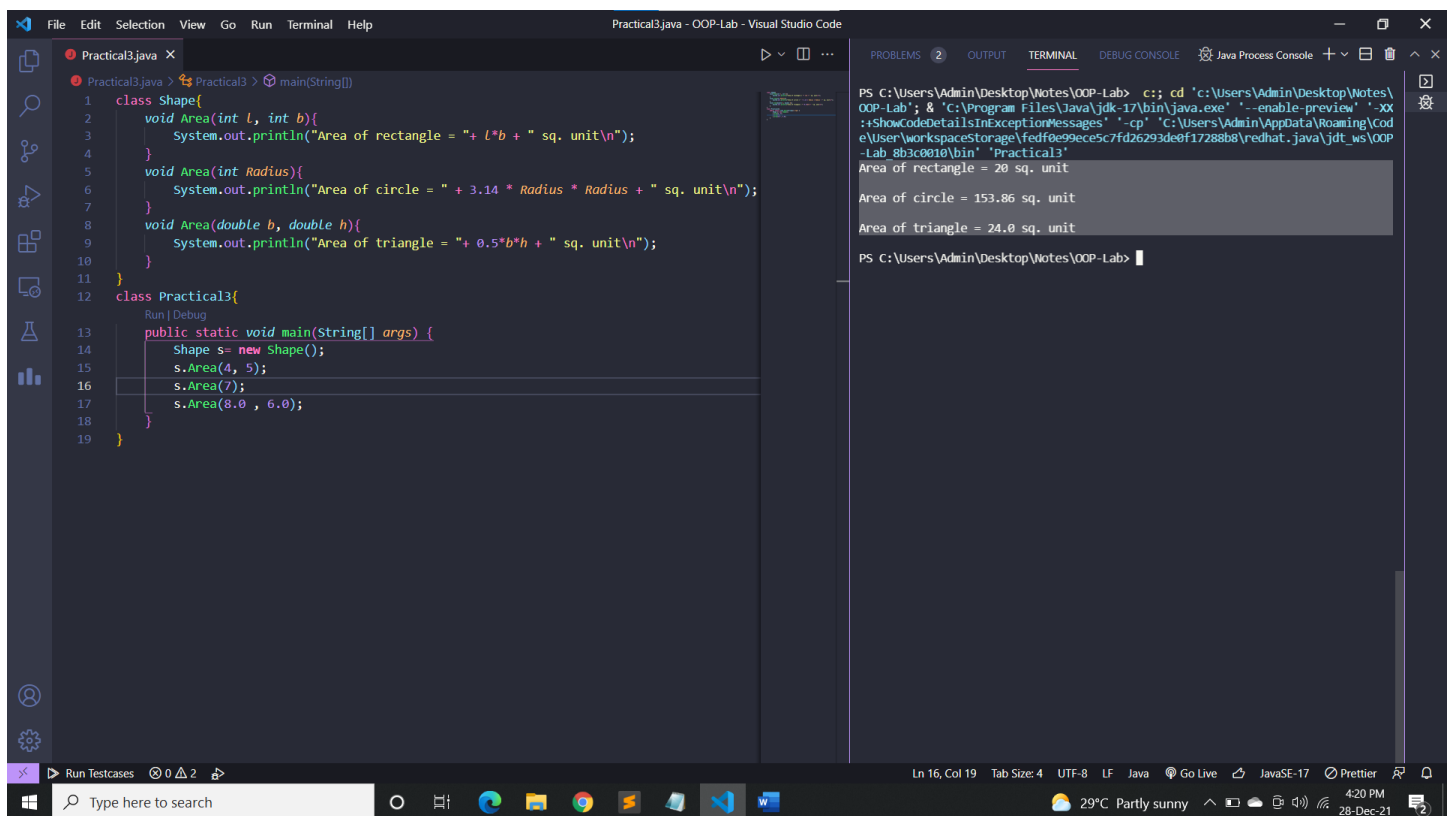
- **Output:**

Area of rectangle = 20 sq. unit

Area of circle = 153.86 sq. unit

Area of triangle = 24.0 sq. unit

- **Screenshot:**



The screenshot displays the Visual Studio Code editor with a Java file named `Practical3.java`. The code defines a `Shape` class with three overloaded `Area` methods: one for a rectangle (taking length and breadth), one for a circle (taking radius), and one for a triangle (taking base and height). The `Practical3` class contains a `main` method that creates a `Shape` object and calls these methods with specific values: `s.Area(4, 5)`, `s.Area(7)`, and `s.Area(8.0, 6.0)`.

The output window on the right shows the execution results:

```
PS C:\Users\Admin\Desktop\Notes\OOP-Lab> c:: cd 'C:\Users\Admin\Desktop\Notes\OOP-Lab'; & 'C:\Program Files\Java\jdk-17\bin\java.exe' '--enable-preview' '-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\Admin\AppData\Roaming\Cod
e\User\workspaceStorage\fedf0e99ece5c7fd26293de0f17288b8\redhat.java\jdt_ws\OOP-Lab_8b3c0010\bin' 'Practical3'
Area of rectangle = 20 sq. unit
Area of circle = 153.86 sq. unit
Area of triangle = 24.0 sq. unit
PS C:\Users\Admin\Desktop\Notes\OOP-Lab>
```

- **Result:**

By studying implementation of concept of function overloading in Java, I have successfully completed Practical-3.