

OOJ LAB PROGRAM 4

WEEK 8

4.

abstract class Shape

```
{  
    int side1,side2;  
    double area;  
    abstract void printArea();  
}
```

class Rectangle extends Shape

```
{  
    Rectangle(int l, int b)  
    {  
        side1=l;  
        side2=b;  
    }  
    void printArea()  
    {  
        area=side1*side2;  
        System.out.println("The area of the Rectagle is: "+area);  
    }  
}
```

class Triangle extends Shape

```
{  
    Triangle(int h, int b)  
    {  
        side1=h;  
        side2=b;  
    }  
    void printArea()  
    {  
        area=0.5*side1*side2;  
        System.out.println("The Area of the triangle is: "+area);  
    }  
}
```

class Circle extends Shape

```
{  
    Circle(int r)  
    {  
        side1=r;  
    }  
}
```

```

void printArea()
{
    area=3.14*side1*side1;
    System.out.println("The Area of the Circle is: "+area);
}
}

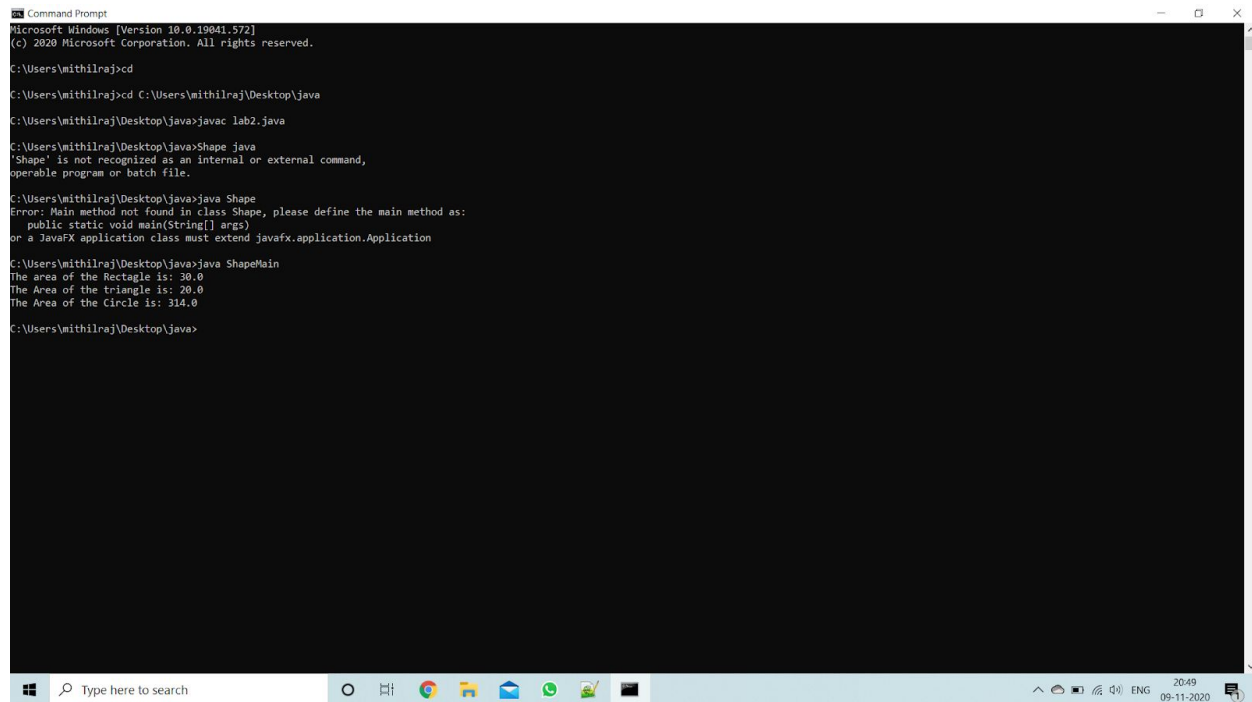
```

```

class ShapeMain
{
    public static void main(String args[])
    {
        Rectangle rect=new Rectangle(5,6);
        rect.printArea();
        Triangle tri=new Triangle(5, 8);
        tri.printArea();
        Circle cir=new Circle(10);
        cir.printArea();
    }
}

```

OUTPUT:-



```

C:\Users\mithilraj>cd
C:\Users\mithilraj>cd C:\Users\mithilraj\Desktop\java
C:\Users\mithilraj\Desktop\java>javac lab2.java
C:\Users\mithilraj\Desktop\java>java Shape
Error: Main method not found in class Shape, please define the main method as:
  public static void main(String[] args)
or a JavaFX application class must extend javafx.application.Application
C:\Users\mithilraj\Desktop\java>java ShapeMain
The area of the Rectangle is: 30.0
The Area of the Triangle is: 20.0
The Area of the Circle is: 314.0
C:\Users\mithilraj\Desktop\java>

```

EXECUTION:-

```
C:\Users\mithiraj\Desktop\java\lab8\java - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
lab8.java
1 abstract class Shape
2 {
3     int side1,side2;
4     double area;
5     abstract void printArea();
6 }
7
8 class Rectangle extends Shape
9 {
10     Rectangle(int l, int b)
11     {
12         side1=l;
13         side2=b;
14     }
15     void printArea()
16     {
17         area=side1*side2;
18         System.out.println("The area of the Rectangle is: "+area);
19     }
20 }
21
22 class Triangle extends Shape
23 {
24     Triangle(int h, int b)
25     {
26         side1=h;
27         side2=b;
28     }
29     void printArea()
30     {
31         area=0.5*side1*side2;
32         System.out.println("The Area of the triangle is: "+area);
33     }
34 }
35
36 class Circle extends Shape
37 {
38     Circle(int r)
39     {
40         side1=r;
41     }
42     void printArea()
43     {
44         area=3.14*side1*side1;
45     }
46 }
47
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62
Java source file
length: 1,104 lines: 62 Ln: 28 Col: 6 Sel: 0 | 0 Windows (CR LF) UTF-8 INS
20:55 09-11-2020
```

```
C:\Users\mithiraj\Desktop\java\lab8\java - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
lab8.java
19 }
20 }
21
22 class Triangle extends Shape
23 {
24     Triangle(int h, int b)
25     {
26         side1=h;
27         side2=b;
28     }
29     void printArea()
30     {
31         area=0.5*side1*side2;
32         System.out.println("The Area of the triangle is: "+area);
33     }
34 }
35
36 class Circle extends Shape
37 {
38     Circle(int r)
39     {
40         side1=r;
41     }
42     void printArea()
43     {
44         area=3.14*side1*side1;
45         System.out.println("The Area of the Circle is: "+area);
46     }
47 }
48
49
50 class ShapeMain
51 {
52     public static void main(String args[])
53     {
54         Rectangle rect=new Rectangle(5,6);
55         rect.printArea();
56         Triangle tri=new Triangle(5, 8);
57         tri.printArea();
58         Circle cir=new Circle(10);
59         cir.printArea();
60     }
61 }
62
Java source file
length: 1,104 lines: 62 Ln: 28 Col: 6 Sel: 0 | 0 Windows (CR LF) UTF-8 INS
20:55 09-11-2020
```