

11. Develop a Java Pgm to create an abstract class named Shape that contains two integer and an empty method, named printArea(). Provide three classes name 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
{
    abstract void printArea();
    int integer1;
    int integer2;
    int result;
}

class Rectangle extends Shape
{
    void printArea()
    {
        System.out.println("Rectangle:");
        Scanner scanner = new Scanner(System.in);
        System.out.println("Enter the width:");
        integer1 = scanner.nextInt();
        System.out.println("Enter the height:");
        integer2 = scanner.nextInt();
        result = (integer1 * integer2);
        System.out.println("The value of area of rectangle is: " + result);
    }
}

class Triangle extends Shape
{
    void printArea()
    {
        System.out.println("Triangle:");
        System.out.println("Enter the base:");
        integer1 = scanner.nextInt();
    }
}
```



```

System.out.println("Enter height:");
Integer2 = scanner.nextInt();
double result = (0.5 * integer1 * integer2);
System.out.println("The value of area of
Triangle is: " + result);
}
}

```

```

class Circle extends Shape
{

```

```

    void printArea()
    {

```

```

        System.out.println("Circle");

```

```

        System.out.println("Enter the radius:");

```

```

        integer1 = scanner.nextInt() nextInt();

```

```

        double result = (3.14 * integer1 * integer2);

```

```

        System.out.println("The value of area
of Circle is: " + result);
    }
}

```

```

class main
{

```

```

    public static void main(String args[])
    {

```

```

        Rectangle R = new Rectangle();

```

```

        Triangle T = new Triangle();

```

```

        Circle C = new Circle();

```

```

        R.printArea();

```

```

        T.printArea();

```

```

        C.printArea();
    }
}

```



O/P

Rectangle

Enter width:

2

Enter height:

2

The value of area of rectangle is 4

Triangle

Enter Base:

2

Enter height:

2

The value of area of Triangle is 2.0

Circle

Enter radius

2.3

~~The~~ value of area of circle is 1661.06