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 containonly the method printArea( ) that prints the area of the given shape.

```java
import java.util.*;


abstract class Shape {

    int d1,d2;


    Scanner input = new Scanner(System.in);


    abstract void printArea();


}


class Rectangle extends Shape {

    void printArea() {

        System.out.print("Enter length and breadth of rectangle: ");

        d1 = input.nextInt();

        d2 = input.nextInt();

        System.out.println("The area of Rectangle is: " + d1 * d2+"\n");

    }
}


class Triangle extends Shape {

    void printArea() {

        System.out.print("Enter Base And Height of triangle: ");

        d1 = input.nextInt();

        d2 = input.nextInt();
```

```java
        System.out.println("The area of Triangle is: " + (d1*d2) / 2+"\n");

    }

}


class Circle extends Shape {

    void printArea() {

        System.out.print("Enter Radius: ");

        d1 = input.nextInt();

        System.out.println("The area of Cricle is: " + 3.14f * d1 * d1+"\n");

    }

}


public class shapemain {

    public static void main(String[] args) {

        Rectangle rec = new Rectangle();

        rec.printArea();


        Triangle tri = new Triangle();

        tri.printArea();


        Circle cir = new Circle();

        cir.printArea();

    }

}
```

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```java
  6        Scanner input = new Scanner(System.in);
  7
  8        abstract void printArea();
  9
 10  }
 11
 12  class Rectangle extends Shape {
 13      void printArea() {
 14          System.out.print("Enter length and bre
 15          d1 = input.nextInt();
 16          d2 = input.nextInt();
 17          System.out.println("The area of Rectan
 18      }
 19  }
 20
 21  class Triangle extends Shape {
 22      void printArea() {
 23          System.out.print("Enter Base And Heigh
 24          d1 = input.nextInt();
 25          d2 = input.nextInt();
 26          System.out.println("The area of Triang
 27      }
 28  }
 29
 30  class Cricle extends Shape {
 31      void printArea() {
 32          System.out.print("Enter Radius: ");
 33          d1 = input.nextInt();
 34          System.out.println("The area of Cricle
 35      }
 36  }
 37
```

Line 34, Column 74   Spaces: 4   Java

Command Prompt

```
C:\java\LAB>javac shapemain.java

C:\java\LAB>java shapemain
Enter length and breadth of rectangle: 10 20
The area of Rectangle is: 200

Enter Base And Height of triangle: 5 10
The area of Triangle is: 25

Enter Radius: 3
The area of Cricle is: 28.26

C:\java\LAB>
```

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