

- * Develop a Java program to create an abstract class named shape that contains two integers and an empty method named printArea(). Provide three class named Rectangle, Triangle and circle such that each one of the classes extends the class shape. Each one of the classes contains only the method printArea() that prints the area of the given shape.

```

import java.util.Scanner;
class InputScanner {
    Scanner s;
    InputScanner() {
        s = new Scanner(System.in);
    }
}

```

```

abstract class shape extends InputScanner {
    double a;
    double b;

```

```

    abstract void getInpt();
    abstract void displayArea();
}

```

```
Class Rectangle extends Shape {
```

```
void get Input() {
```

```
    InputScanner is = new Input Scanner();
```

```
    System.out.println("Enter the length  
and breadth of the rectangle :");
```

```
    a = is.s.nextDouble();
```

```
    b = is.s.nextDouble();
```

```
}
```

```
void display Area() {
```

```
    System.out.println("The area of  
the rectangle is: " + (a*b));
```

```
}
```

```
}
```

```
Class Triangle extends Shape {
```

```
void get Input() {
```

```
    Input Scanner is = new Input Scanner
```

```
    System.out.println("Enter ( );
```

```
the base and height of the triangle:");
```

```
    a = is.s.nextDouble();
```

```
    b = is.s.nextDouble();
```

```
}
```

```
void display Area() {
```

```
    System.out.println("The area of the  
triangle is: " + (a*b*0.5));
```

```
}
```


}

Class Circle extends Shape {

void getInput() {

InputScanner is = new InputScanner();
System.out.println("Enter radius of
the circle:");

a = is.s.nextDouble();

}

void displayArea() {

System.out.println("The area
of the circle is: " + (3.14 * a * b));

}

}

Public class Abstract main {

public static void main(String args
[]) {

System.out.println("HI");

Rectangle rect = new Rectangle();

rect.getInput();

rect.displayArea();

Triangle triangle = new Triangle();

triangle.getInput();

triangle.displayArea();

```
Circle circle = new Circle();  
circle.getInput();  
circle.DisplayArea();
```

```
System.out.println("Name: Shiv Sundar Sah");  
System.out.println("USN: LBM22CS258");  
}
```

```
}
```

Output:

Enter the length & breadth of rectangle: 5 6

The area of rectangle is: 30.0

Enter the base & height of triangle: 8 9

The area of triangle is 36.0

Enter the radius of the circle: 45

The area of circle is: 6358.500

Name: Shiv Sundar Sah

USN: LBM22CS258