

- Develop a Java program to create an abstract class named Shape that contains two integers and an empty method named printArea(). Provide three classes extends 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 print 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 getInput();
```

```
abstract void displayArea();
```

```
}
```

```
class Rectangle extends Shape &
```

```
void getInput() &
```

```
System.out.println("Finding the area of Rectangle");
```

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

```
a = s.nextFloat();
```

```
System.out.println("Enter the width of rectangle");
```

```
b = s.nextFloat();
```

```
}
```

```
void displayArea() {
```

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

```
}
```

```
}
```

```
class Triangle extends Shape {
```

```
void getInput() {
```

```
System.out.println("Finding the area of triangle");
```

```
System.out.println("Enter the height of triangle");
```

```
a = s.nextInt();
```

```
System.out.println("Enter the base of triangle");
```

```
b = s.nextInt();
```

```
}
```

```
void displayArea() {
```

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

```
}
```

```
}
```

```
class Circle extends Shape {
```

```
void getInput() {
```

```
System.out.println("Finding the area of circle");
```

```
System.out.println("Enter the radius of circle");
```

```
a = s.nextInt();
```

```
}
```

```
void displayArea() {
```

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

```
}
```

```
}
```



