Experiment Name:	Java program to create an abstract class named shape that contains an empty method named numberofsides()				
Experiment No. :	20	Date :	05.09.2024		
Compiler :	javac	Filename :	Main3.java		
Aim :	Implement a java program to create an abstract class				

PROGRAM:

```java
import java.util.*;
abstract class Shape{
 abstract void noofsides();
 }
 class triangle extends Shape{
 void noofsides(){
System.out.println("Triangle has 3 sides");
}
double area(double b,double h){
double area=(b*h)/2;
return area;
}
}
class rectangle extends Shape{
void noofsides(){
System.out.println("rectangle has 4 sides");
}
double area(double l,double b){
double area=l*b;
return area;
}
}
class hexagon extends Shape{
void noofsides(){
System.out.println("hexagon has 6 sides");
}
double area(double a)
{
double area=(3*1.75*a*a)/2;
return area;
}
```

```java
}
public class Main3{
public static void main(String[] args){
Scanner sc=new Scanner(System.in);
triangle T=new triangle();
rectangle R=new rectangle();
hexagon H=new hexagon();
System.out.println("enter the base and height of the triangle");
double b=sc.nextDouble();
double h=sc.nextDouble();
T.noofsides();
 System.out.println("the area of the triangle is: "+T.area(b,h));
System.out.println("enter the length and breadth of the rectangle");
double l=sc.nextDouble();
b=sc.nextDouble();
R.noofsides();
System.out.println("the area of the rectangle is: "+R.area(l,b));
System.out.println("enter the side of the hexagon");
double a=sc.nextDouble();
H.noofsides();
System.out.println("the area of the Hexagon is: "+H.area(a));
}
}
```

OUTPUT:

```
student@cslab2pc01:~/aruncs$ java Main3
enter the base and height of the triangle
5
4
Triangle has 3 sides
the area of the triangle is: 10.0
enter the length and breadth of the rectangle
4
6
rectangle has 4 sides
the area of the rectangle is: 24.0
enter the side of the hexagon
4
hexagon has 6 sides
the area of the Hexagon is: 42.0
```