

```

abstract class Shape{
    public abstract void numberOfSides();
}
class Triangle extends Shape{
    public void numberOfSides(){
        System.out.println("Number of Sides of triangle= 3");
    }
}
class Rectangle extends Shape{
    public void numberOfSides(){
        System.out.println("Number of Sides of rectangle= 4");
    }
}
class Hexagon extends Shape{
    public void numberOfSides(){
        System.out.println("Number of Sides of hexagon= 6");
    }
}
class TestPolymorphism{
    public static void main(String args[]){
        Rectangle r = new Rectangle();
        Triangle t = new Triangle();
        Hexagon h = new Hexagon();
        t.numberOfSides();
        r.numberOfSides();
        h.numberOfSides();
    }
}

```

output

Number of Sides of triangle= 3
 Number of Sides of rectangle= 4
 Number of Sides of hexagon= 6

```

import java.util.Scanner;
import java.util.InputMismatchException;
class TestException{
    static int[] getValue() throws InputMismatchException{
        Scanner sc =new Scanner(System.in);
        System.out.print("Enter number 1 :");
        int a=sc.nextInt();
        System.out.print("Enter number 2 :");
        int b=sc.nextInt();
        int value[] ={a,b};
        return value;
    }
    public static void main(String args[]){
        try{
            System.out.println("Program to perform Division");
            int value[]=getValue();
            int c=value[0]/value[1];
            System.out.println("result="+c);
        }
        catch(ArithmeticException e){
            System.out.println(e.getMessage());
        }
        catch(InputMismatchException e){
            System.out.println("Invalid integer input");
        }
        finally{
            System.out.println("End of operation");
        }
    }
}

```

Program to perform Division
 Enter number 1 :10
 Enter number 2 :5
 result=2
 End of operation

Program to perform Division
 Enter number 1 :5
 Enter number 2 :0
 / by zero
 End of operation

Program to perform Division
 Enter number 1 :1
 Enter number 2 :k
 Invalid integer input
 End of operation