Exercise1:

```
package com.company;

public class divNumbers {
    private int number1;
    private int number2;
    private int result;

    public divNumbers(int number1, int number2){
        this.number1 = number1;
        this.number2 = number2;
    }

    public int getNumber1(){
        return number1;
    }

    public int getNumber2(){
        return number1;
    }

    public int div(int number1, int number2) {
        result = number1 / number2;
        try{
            if (number2 == 0)
                System.out.println("Divided by Zero!!");
        }
        catch (ArithmeticException e) {
            //System.out.println("Divided by Zero!!");
            System.out.println(e);

        }
        return result;
    }

    public String toString(){
        return "The division is: " + result;
    }

}
```

Exercise2:

```
package com.company;

public class calculateTax {
    private int price;
    private int reqTax;

    public calculateTax(int price) {
        this.price = price;

    }

    public int calculateTax1(int price) {
        this.price = price;

        try {
            if (price < 100 && price > 500)
                System.out.println("The price out of range!");
        }catch(Exception e){
            System.out.println(e);
        }

        return reqTax = (price * 15/100);
    }
    public String toString(){
        return "The ReqTax is : " + reqTax;
    }
    }
```

Exercise3:

```
package com.company;

public class Circle {
    private double radius;

    public Circle(){
        radius = 1.0;
    }

    public Circle(double radius){
        this.radius = radius;
    }

    public double getRadius(){
        return radius;
    }
    public void setRadius(double radius){
        this.radius = radius;
    }
```

```
    public double getArea(){
        return Math.PI;
    }
    public double getCircumference(){
        return Math.PI;
    }
    public String toString(){
        return "Circle[radius= " + radius + "]";
    }


}
```

Exercise4:

```
package com.company;

public class Customer {
    private int id;
    private String name;
    private int discount;
    private char gender;

    public Customer(int id, String name, int discount){
        this.id = id;
        this.name = name;
        this.discount = discount;
    }

    public int getId(){
        return id;
    }

    public String getName(){
        return name;
    }

    public char getGender(){
        return gender;
    }

    public String toString(){
        return name + "( " + id + ")";
    }
}
```

Exercise5:

```
package com.company;

import java.awt.*;
import java.util.ArrayList;
import java.util.List;

public class PolyLine {
    private List<Point> points;

    public PolyLine(){
        points = new ArrayList<Point>();
    }

    public PolyLine(List<Point> points) {
        this.points = points;
    }

    public void appendPoint(int x, int y){
        Point newPoint = new Point(x, y);
        points.add(newPoint);
    }

    public void appendPoint(Point point){
        points.add(point);
}

    public String toString(){
        StringBuilder s1 = new StringBuilder("{");
        for (Point aPoint : points) {
            s1.append(aPoint.toString());
        }
        s1.append("}");
        return s1.toString();
    }

}
```

Main Code:

```
package com.company;

import java.awt.*;
import java.util.ArrayList;

public class Main {
    public static void main(String[] args) {

        //EX1
       divNumbers divNum = new divNumbers(5,0);
        //divNum.div(5,0);
        System.out.println(divNum.toString());
```

```
        //EX2
        calculateTax calcTax = new calculateTax(100);
        System.out.println(calcTax.toString());

        //EX3

        Circle circle = new Circle(5.5);
        System.out.println(circle.toString());

        //EX4

        Customer customer = new Customer(123,"Haneen",10);
        System.out.println(customer.toString());

        //EX5

    PolyLine l1 = new PolyLine();
    System.out.println(l1);

    l1.appendPoint(new Point(1, 5));
    l1.appendPoint(7, 2);
    l1.appendPoint(1, 3);
    System.out.println(l1);

    ArrayList<Point> points = new ArrayList<Point>();
    points.add(new Point(11, 12));
    points.add(new Point(13, 14));
    PolyLine l2 = new PolyLine(points);
    System.out.println(l2);


    }
}
```