Lab1.2
Q2.Version.1(using argument name);

```
public abstract class Shape {                   //line 1
    private String name;                        //line 2

    public Shape(String name){                  //line 3
        this.name = name;                       //line 4
    }

    public abstract double area();              //line 5
}
public class Square extends Shape {             //line 6
    private int side;                           //line 7

    public Square(String name, int side){
        super(name);                            //line 8
        this.side = side;                       //line 9
    }

    public double area(){
        return side*side;
    }
    public String getName() {return name;}      // Added for comfort look
    public String toString() {                  // Added for comfort look
        return getName() + ": " + area();       // Added for comfort look
    }
}
public class Circle extends Shape {             //line 10
    private int radius;                         //line 11

    public Circle(String name, int r){
        super(name);                            //line 12
        radius = r;                             //line 13
    }

    public double area(){
        return radius*radius*3.1416;
    }
    public String getName() {return name;}      // Added for comfort look
    public String toString() {                  // Added for comfort look
        return getName() + ": " + area();       // Added for comfort look
    }
}
public class TestShape {
    public static void main(String[] args){     //line 14
        Shape[] s = new Shape[2];               //line 15
        s[0] = new Square("Square1", 4);        //line 16
        s[1] = new Circle("Circle1", 2);        //line 17

        for (int i = 0; i < s.length; i++)      //line 18
            System.out.println("Area of " + s[i].toString());
    }
}
```

Version.2(Using shape's name);

```
public abstract class Shape {                    //line 1
    private String name;                         //line 2

    public Shape(String name){                   //line 3
        this.name = name;                        //line 4
    }

    public abstract double area();               //line 5
}
public class Square extends Shape {              //line 6
    private int side;                            //line 7

    public Square(String name, int side){
        super("Square");                         //line 8
        this.side = side;                        //line 9
    }

    public double area(){
        return side*side;
    }
    public String getName() {return name;}       // Added for comfort look
    public String toString() {                   // Added for comfort look
        return getName() + ": " + area();        // Added for comfort look
    }
}
public class Circle extends Shape {              //line 10
    private int radius;                          //line 11

    public Circle(String name, int r){
        super("Circle");                         //line 12
        radius = r;                              //line 13
    }

    public double area(){
        return radius*radius*3.1416;
    }
    public String getName() {return name;}       // Added for comfort look
    public String toString() {                   // Added for comfort look
        return getName() + ": " + area();        // Added for comfort look
    }
}
public class TestShape {
    public static void main(String[] args){      //line 14
        Shape[] s = new Shape[2];                //line 15
        s[0] = new Square("Square1", 4);         //line 16
        s[1] = new Circle("Circle1", 2);         //line 17

        for (int i = 0; i < s.length; i++)       //line 18
            System.out.println("Area of " + s[i].toString());
    }
}
```