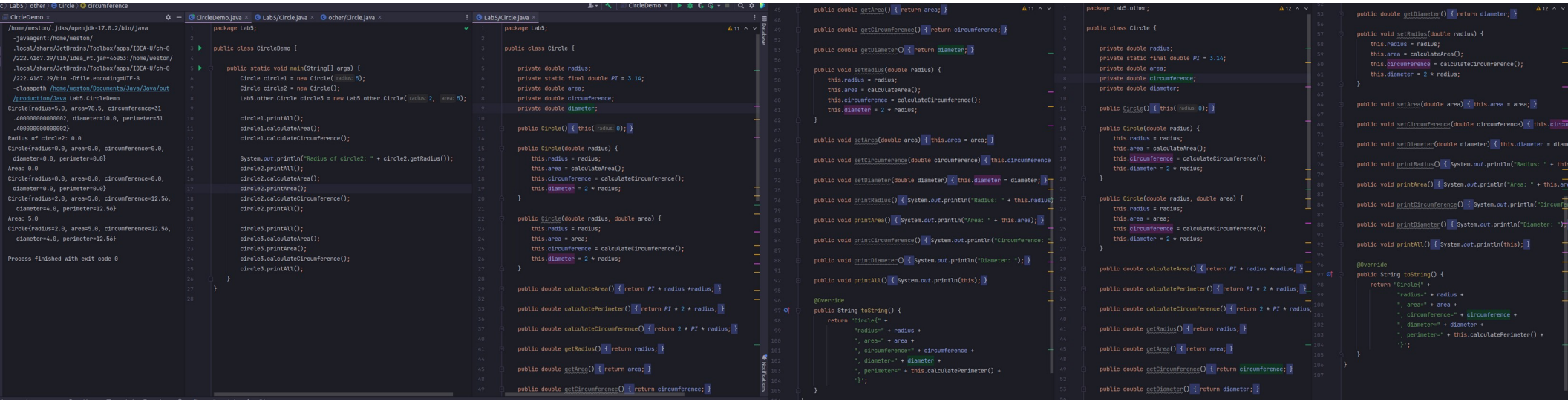
Lab5 › other › Circle › circumference
CircleDemo
/home/weston/.jdks/openjdk-17.0.2/bin/java
-javaagent:/home/weston/
.local/share/JetBrains/Toolbox/apps/IDEA-U/ch-0
/222.4167.29/lib/idea_rt.jar=44053:/home/weston/
.local/share/JetBrains/Toolbox/apps/IDEA-U/ch-0
/222.4167.29/bin -Dfile.encoding=UTF-8
-classpath /home/weston/Documents/Java/Java/out
/production/Java Lab5.CircleDemo
Circle{radius=5.0, area=78.5, circumference=31
.40000000000002, diameter=10.0, perimeter=31
.40000000000002}
Radius of circle2: 8.0
Circle{radius=0.0, area=0.0, circumference=0.0,
diameter=0.0, perimeter=0.0}
Area: 0.0
Circle{radius=0.0, area=0.0, circumference=0.0,
diameter=0.0, perimeter=0.0}
Circle{radius=2.0, area=5.0, circumference=12.56,
diameter=4.0, perimeter=12.56}
Area: 5.0
Circle{radius=2.0, area=5.0, circumference=12.56,
diameter=4.0, perimeter=12.56}
Process finished with exit code 0
CircleDemo.java
Lab5/Circle.java
other/Circle.java
package Lab5;
public class CircleDemo {
public static void main(String[] args) {
Circle circle1 = new Circle(radius: 5);
Circle circle2 = new Circle();
Lab5.other.Circle circle3 = new Lab5.other.Circle(radius: 2, area: 5);
circle1.printAll();
circle1.calculateArea();
circle1.calculateCircumference();
System.out.println("Radius of circle2: " + circle2.getRadius());
circle2.printAll();
circle2.calculateArea();
circle2.printArea();
circle2.calculateCircumference();
circle2.printAll();
circle3.printAll();
circle3.calculateArea();
circle3.printArea();
circle3.calculateCircumference();
circle3.printAll();
}
}
Lab5/Circle.java
CircleDemo
package Lab5;
public class Circle {
private double radius;
private static final double PI = 3.14;
private double area;
private double circumference;
private double diameter;
public Circle() { this(radius: 0); }
public Circle(double radius) {
this.radius = radius;
this.area = calculateArea();
this.circumference = calculateCircumference();
this.diameter = 2 * radius;
}
public Circle(double radius, double area) {
this.radius = radius;
this.area = area;
this.circumference = calculateCircumference();
this.diameter = 2 * radius;
}
public double calculateArea() { return PI * radius *radius; }
public double calculatePerimeter() { return PI * 2 * radius; }
public double calculateCircumference() { return 2 * PI * radius; }
public double getRadius() { return radius; }
public double getArea() { return area; }
public double getCircumference() { return circumference; }
public double getDiameter() { return diameter; }
public void setRadius(double radius) {
this.radius = radius;
this.area = calculateArea();
this.circumference = calculateCircumference();
this.diameter = 2 * radius;
}
public void setArea(double area) { this.area = area; }
public void setCircumference(double circumference) { this.circumference
public void setDiameter(double diameter) { this.diameter = diameter; }
public void printRadius() { System.out.println("Radius: " + this.radius)
public void printArea() { System.out.println("Area: " + this.area); }
public void printCircumference() { System.out.println("Circumference:
public void printDiameter() { System.out.println("Diameter: "); }
public void printAll() { System.out.println(this); }
@Override
public String toString() {
return "Circle{" +
"radius=" + radius +
", area=" + area +
", circumference=" + circumference +
", diameter=" + diameter +
", perimeter=" + this.calculatePerimeter() +
'}';
}
package Lab5.other;
public class Circle {
private double radius;
private static final double PI = 3.14;
private double area;
private double circumference;
private double diameter;
public Circle() { this(radius: 0); }
public Circle(double radius) {
this.radius = radius;
this.area = calculateArea();
this.circumference = calculateCircumference();
this.diameter = 2 * radius;
}
public Circle(double radius, double area) {
this.radius = radius;
this.area = area;
this.circumference = calculateCircumference();
this.diameter = 2 * radius;
}
public double calculateArea() { return PI * radius *radius; }
public double calculatePerimeter() { return PI * 2 * radius; }
public double calculateCircumference() { return 2 * PI * radius; }
public double getRadius() { return radius; }
public double getArea() { return area; }
public double getCircumference() { return circumference; }
public double getDiameter() { return diameter; }
public void setRadius(double radius) {
this.radius = radius;
this.area = calculateArea();
this.circumference = calculateCircumference();
this.diameter = 2 * radius;
}
public void setArea(double area) { this.area = area; }
public void setCircumference(double circumference) { this.circu
public void setDiameter(double diameter) { this.diameter = diam
public void printRadius() { System.out.println("Radius: " + thi
public void printArea() { System.out.println("Area: " + this.ar
public void printCircumference() { System.out.println("Circumfe
public void printDiameter() { System.out.println("Diameter: ");
public void printAll() { System.out.println(this); }
@Override
public String toString() {
return "Circle{" +
"radius=" + radius +
", area=" + area +
", circumference=" + circumference +
", diameter=" + diameter +
", perimeter=" + this.calculatePerimeter() +
'}';
}
}