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

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for (int i = 0; i < s.length; i++) //line 18

System.out.println("Area of " + s[i].toString());

}

}