Main

package HomeTask;

/\*\*

\*

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\*/

public class NewMain {

/\*\*

\* @param args the command line arguments

\*/

public static void main(String[] args) {

// TODO code application logic here

//Shape a1 = new Shape();

//System.out.println(a1.toString());

Shape a2 = new Shape("brown", true);

System.out.println(a2.toString());

Rectangle a = new Rectangle();

System.out.println(a.toString());

//Rectangle b = new Rectangle(3.0, 4.0);

//System.out.println(b.toString());

//Rectangle c = new Rectangle(5.0, 5.0, "black", true);

//System.out.println(c.toString());

Square ob1 = new Square();

System.out.println(ob1.toString());

/\*Square ob2 = new Square(4.0);

System.out.println(ob2.toString());

Square ob3 = new Square(4.0, "brown", true);

System.out.println(ob3.toString());\*/

}

}

Shape

public class Shape

{

protected String color;

protected boolean filled;

public Shape()

{

this.color = "green";

this.filled = false;

}

public Shape(String color, boolean filled)

{

this.color = color;

this.filled = filled;

}

public String getColor() {

return color;

}

public boolean isFilled() {

return filled;

}

public void setColor(String color) {

this.color = color;

}

public void setFilled(boolean filled) {

this.filled = filled;

}

@Override

public String toString() {

return String.format("A << "+(filled?"filled":"Not filled")+" >> Shape with << "+color+" >> color");

}

}

Rectangle

public class Rectangle extends Shape{

protected double width;

protected double length;

public Rectangle() {

super();

this.width = 1.0;

this.length = 1.0;

}

public Rectangle(double width, double lenght){

super();

this.width = width;

this.length = lenght;

}

public Rectangle(double width, double lenght, String color, boolean filled){

super(color, filled);

this.width = width;

this.length = lenght;

}

public double getWidth() {

return width;

}

public double getLength() {

return length;

}

public void setWidth(double width) {

this.width = width;

}

public void setLength(double length) {

this.length = length;

}

public double getArea(){

return length\*width;

}

public double getPerimeter() {

return 2\*length+2\*width;

}

public String toString()

{

return String.format("A Rectangle with width=<<"+ width +">> and length= <<"+ length +">>, which is a subclass of <<"+super.toString()+" >>");}}

Square

public class Square extends Rectangle

{

public Square()

{

super();

}

public Square(double side)

{

super(side, side);

}

public Square(double side, String color, boolean filled)

{

super(side, side, color, filled);

}

public double getWidth() {

return width;

}

public double getLength() {

return length;

}

public void setWidth(double width) {

this.width = width;

}

public void setLength(double length) {

this.length = length;

}

public String toString()

{

return String.format("A Square with side="+getWidth()+", which is a subclass of "+super.toString());

}

}