Logo

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**LAB**

JAN 2022

TEB1113

Algorithm & Data Structure

*Lab 2*

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| --- | --- | --- | --- |
| **NO.** | **NAME** | **STUDENT ID** | **PROGRAM (IT / IS / CS / BM)** |
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Program 1

public class Shape{

public static void main(String[] args){

// Creating Objects

Rectangle rect = new Rectangle();

Square sqr = new Square();

Circle circ = new Circle();

// Set parameters

rect.setLength(5);

rect.setWidth(6);

sqr.setLength(8);

circ.setRadius(3);

// Calculating Area

System.out.println("Area of Rectangle: " + rect.calcArea());

System.out.println("Area of Square: " + sqr.calcArea());

System.out.println("Area of Circle: " + circ.calcArea());

}

}

class Rectangle{

// Attributes

private float length;

private float width;

// Methods

public void setLength(float newLength){

this.length = newLength;

}

public float getLength(){

return length;

}

public void setWidth(float newWidth){

this.width = newWidth;

}

public float getWidth(){

return width;

}

public float calcArea(){

return (width\*length);

}

}

class Square{

// Attributes

private float length;

// Methods

public void setLength(float newLength){

this.length = newLength;

}

public float getLength(){

return length;

}

public float calcArea(){

return (length\*length);

}

}

class Circle{

// Attributes

private float radius;

// Methods

public void setRadius(float newRadius){

this.radius = newRadius;

}

public float getRadius(){

return radius;

}

public float calcArea(){

return ((22/7)\*radius\*radius);

}

}

Text

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Program 2

1. Shape.java

import AllShape.\*;

public class Shape{

public static void main(String[] args){

// Creating Objects

Rectangle rect = new Rectangle();

Square sqr = new Square();

Circle circ = new Circle();

// Set parameters

rect.setLength(5);

rect.setWidth(6);

sqr.setLength(8);

circ.setRadius(3);

// Calculating Area

System.out.println("Area of Rectangle: " + rect.calcArea());

System.out.println("Area of Square: " + sqr.calcArea());

System.out.println("Area of Circle: " + circ.calcArea());

}

}

2. AllShape.java

package AllShape;

class Rectangle{

// Attributes

private float length;

private float width;

// Methods

public void setLength(float newLength){

this.length = newLength;

}

public float getLength(){

return length;

}

public void setWidth(float newWidth){

this.width = newWidth;

}

public float getWidth(){

return width;

}

public float calcArea(){

return (width\*length);

}

}

class Square{

// Attributes

private float length;

// Methods

public void setLength(float newLength){

this.length = newLength;

}

public float getLength(){

return length;

}

public float calcArea(){

return (length\*length);

}

}

class Circle{

// Attributes

private float radius;

// Methods

public void setRadius(float newRadius){

this.radius = newRadius;

}

public float getRadius(){

return radius;

}

public float calcArea(){

return ((22/7)\*radius\*radius);

}

}

Text

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