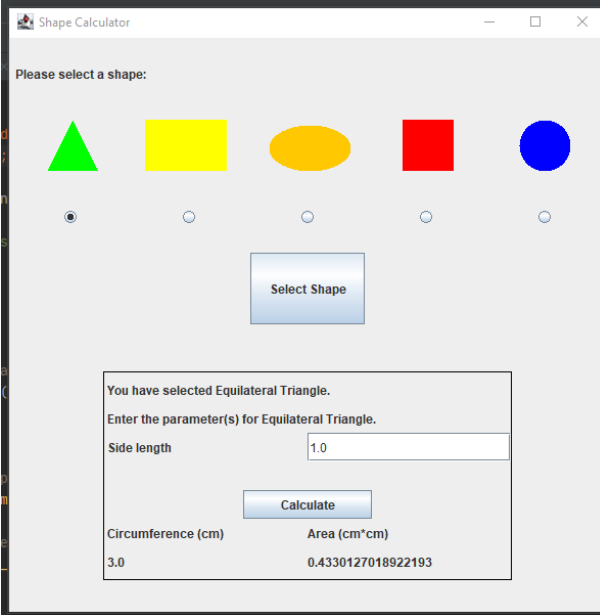


## CMPT 275 Assignment 3 Test Case pdf

**Test case 1:** When a shape is selected, the parameter(s) for that shape are shown and set to a default value. The area and circumference are also updated using those default values.



Shape Calculator

Please select a shape:

☒ ☐ ☐ ☐ ☐

Select Shape

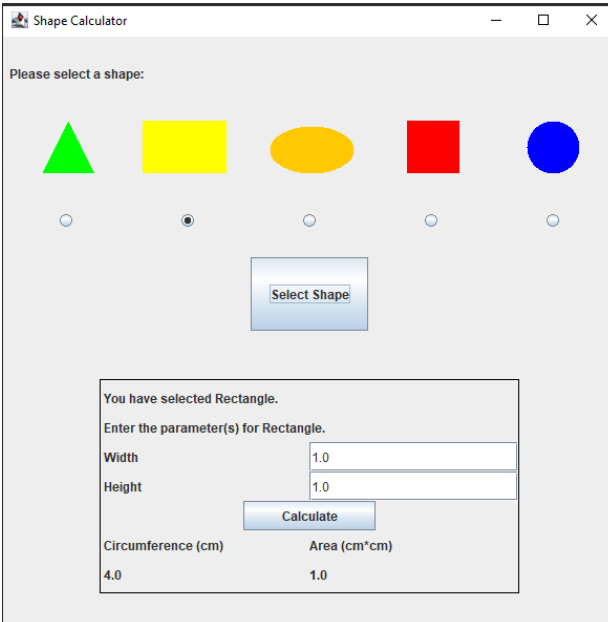
You have selected Equilateral Triangle.  
Enter the parameter(s) for Equilateral Triangle.

Side length

Calculate

Circumference (cm)	Area (cm*cm)
3.0	0.4330127018922193

Figure 1: Correct side length parameter is shown for Equilateral triangle



Shape Calculator

Please select a shape:

☐ ☒ ☐ ☐ ☐

Select Shape

You have selected Rectangle.  
Enter the parameter(s) for Rectangle.

Width

Height

Calculate

Circumference (cm)	Area (cm*cm)
4.0	1.0

Figure 2: Correct height and width parameters are shown for the rectangle

Shape Calculator

Please select a shape:

☐ ☐ ☒ ☐ ☐

Select Shape

You have selected Ellipse.

Enter the parameter(s) for Ellipse.

Radius 1 (cm)

Radius 2 (cm)

Calculate

Circumference (cm)	Area (cm*cm)
6.28	3.141592653589793

Figure 3: Parameters for the ellipse are shown after user selects the ellipse shape

Shape Calculator

Please select a shape:

☐ ☐ ☐ ☒ ☐

Select Shape

You have selected Square.

Enter the parameter(s) for Square.

Side length (cm)






Calculate

Circumference (cm)	Area (cm*cm)
4.0	1.0

Figure 4: Correct parameter of side length for a square is shown

Shape Calculator

Please select a shape:

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Select Shape

You have selected Circle.

Enter the parameter(s) for Circle.

Radius (cm)

Calculate






Circumference (cm)	Area (cm*cm)
6.283185307179586	3.141592653589793

Figure 5: Circle default parameter shown

## Test Case 2: Demonstrate circumference and area calculation for each shape

Shape Calculator

Please select a shape:

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Select Shape

You have selected Equilateral Triangle.

Enter the parameter(s) for Equilateral Triangle.

Side length






Calculate

Circumference (cm)	Area (cm*cm)
6.0	1.7320508075688772

Figure 6: Triangle area and circumference recalculated with user inputs

Shape Calculator

Please select a shape:

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Select Shape

You have selected Rectangle.

Enter the parameter(s) for Rectangle.

Width

Height






Calculate

Circumference (cm)	Area (cm*cm)
12.0	8.0

Figure 7: Rectangle area and circumference calculated based on user inputs

Shape Calculator

Please select a shape:

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Select Shape

You have selected Ellipse.

Enter the parameter(s) for Ellipse.

Radius 1 (cm)

Radius 2 (cm)






Calculate

Circumference (cm)	Area (cm*cm)
9.929551852928713	6.283185307179586

Figure 8: Ellipse recalculated area and circumference with user radii inputs

Shape Calculator

Please select a shape:

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Select Shape

You have selected Square.

Enter the parameter(s) for Square.

Side length (cm)






Calculate

Circumference (cm)	Area (cm*cm)
8.0	4.0

Figure 9: Square area and circumference using user inputted side length value

Shape Calculator

Please select a shape:

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Select Shape

You have selected Circle.

Enter the parameter(s) for Circle.

Radius (cm)

Calculate

Circumference (cm)	Area (cm*cm)
12.566370614359172	12.566370614359172

Figure 10: Circle area and circumference with user inputted values

### Test Case 3: Validations on inputs that they must be doubles

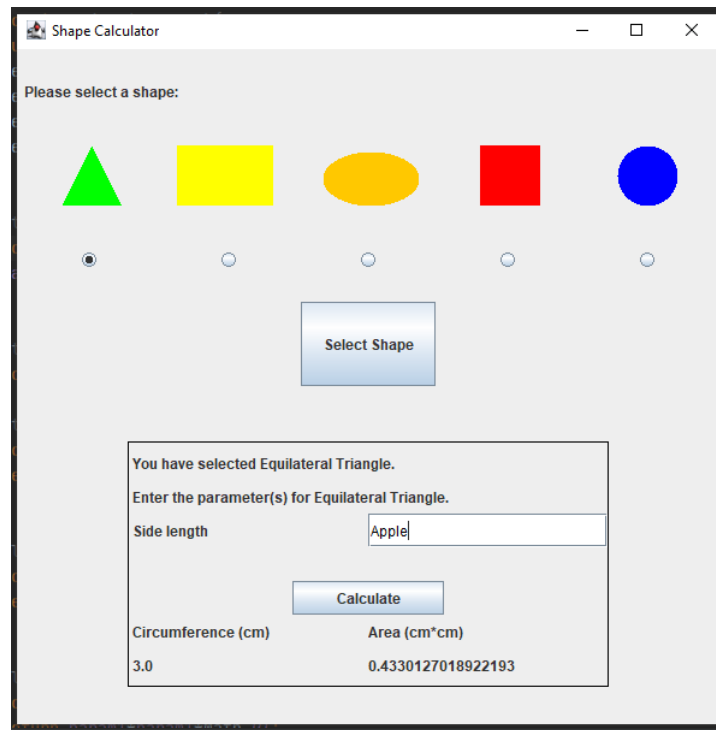


Figure 11: User about to calculate with string in input

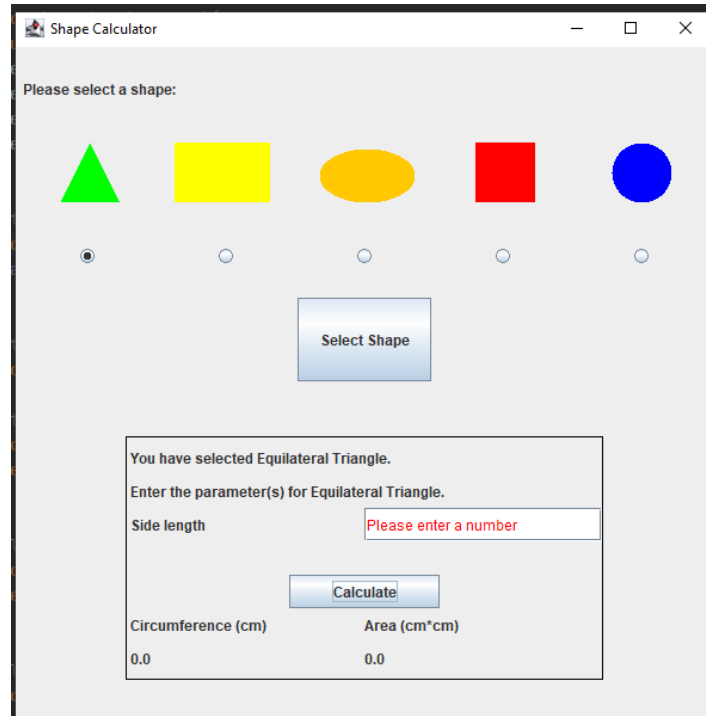







Figure 12: Error message for an invalid input

Shape Calculator

Please select a shape:

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Select Shape

You have selected Rectangle.

Enter the parameter(s) for Rectangle.

Width

Height

Calculate






Circumference (cm) Area (cm\*cm)

6.0 2.0

Figure 13: User inputting strings to both parameters for the rectangle

Shape Calculator

Please select a shape:

☐
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☐

Select Shape

You have selected Rectangle.

Enter the parameter(s) for Rectangle.

Width

Height

Calculate

Circumference (cm) Area (cm\*cm)

0.0 0.0

Figure 14: Program can detect the errors in the inputs and informs the user