Program 2: Area of a Triangle

Save the following program as AreaOfTriangle.java

Create a program that calculates the area of a scalene triangle using either Heron’s formula or using trigonometry. Ask the user which method they would like to use to calculate the area.

Recall that Heron’s formula is : area=√s(s-a)(s-b)(s-c) where s is the semi-perimeter of the triangle

s=(a+b+c)/2

Use the following formula to calculate the area using trigonometry.

1. Area = a\*h/2
2. Area = a\*b\*sin(C)/2
3. Area = a^2\*sin(B)\*sin(C)/(2\*sin(B+C)
4. Area = sqrt(s\*(s-a)\*(s-b)\*(s-c))

where s=(a+b+c)/2 is the semi-perimeter

Make certain that you comment your code appropriately. Include comments for

·your name

·date

·program title

·variable descriptions

Provide the user a menu and proper feedback that would allow them to calculate the area of a triangle. If the area of a triangle cannot be calculated, a proper error message should be show to the user.