Name: Giselle Guaman  
Prof. Aljamal  
CSC-117-02 Java Programming  
Due Date: 3/3/2021  
What does the program do: This program demonstrates using a switch statement to calculate the area of a shape

Design:

1. Initialize variables
   1. Number
   2. Side
   3. Length
   4. Width
   5. Base
   6. Height
   7. Radius
   8. Area
   9. Pi
2. Create new scanner
3. Display “this program calculates the area of a shape”
4. Display “please select one of the choices”
5. Display “enter 1 for square”
6. Display “enter 2 for rectangle”
7. Display “enter 3 for triangle”
8. Display “enter 4 for circle”
9. Set number
10. Switch(number)
    1. Start
    2. Case 1: display “you chose 1: square”
       1. Break
    3. Case 2: display “you chose 2: rectangle”
       1. Break
    4. Case 3: display “you chose 3: triangle”
       1. Break
    5. Case 4: display “you chose 4: circle”
       1. Break
    6. Default: display “invalid choice”
    7. End
11. If (number == 1)
    1. Display “please enter the side length”
    2. Set side
    3. If (side > 0)
       1. Area = side \* side
       2. Display “the area of the square is: ” + Area
    4. Else
       1. Display “side cannot be 0 or less”
12. Else if(number == 2)
    1. Display “please enter the length”
    2. Set length
    3. If (length > 0)
       1. Display “please enter the width”
       2. Set width
       3. Area = length \* width
       4. Display “the area of the rectangle is: ” + Area
    4. Else
       1. “length cannot be 0 or less”
13. Else if(number == 3)
    1. Display “please enter the base length”
    2. Set base
    3. If (base > 0)
       1. Display “please enter the height”
       2. Set height
       3. Area = base \* height \* 0.5
       4. Display “the area of the triangle is: ” + Area
    4. Else
       1. Display “base cannot be 0 or less”
14. Else if(number == 4)
    1. Display “please enter the radius”
    2. Set radius
    3. If (radius > 0)
       1. Area = pi \* radius \* radius
       2. Display “the area of the circle is: ” + Area
    4. Else
       1. Display “radius cannot be 0 or less”