| Hands-on Exercise Objective |
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After completing the hands-on exercises, you will be able to:

* Develop simple Java program using if-else if - else statement.

## Problem Statement:

Develop classes named **"Circle", "Square"**, and **"Triangle"** .Each class should have a method named calculateArea() which calculates the area based on the below logic and display the appropriate message

| Class Name | Method Name | Variable Name | Variable Type | Logic |
|---|---|---|---|---|
| Circle | calculateArea | Radius | int | 3.14 *radius * radius |
| Triangle | calculateArea | Sides | int | 0.433 * sides * sides |
| Square | calculateArea | Sides | int | sides * sides |

Develop a class "*Shapes*" inside a package "*com.hcl.shapes*". The class should have one instance variables of type int named ""numberOfSides" and a method called calculateShapeArea(). This method takes two arguments one for identifying the shape and other for side length.

*This method should identify the shape based on the numberOfSides and calculate the area and print it in console as follows*

   *If* numberOfSides is 1 then invoke the "calculateArea" of the Circle Object.

      This method will also display the following message in the console.

         "The Area of the Circle is"<area>

   *If* numberOfSides is 3 then invoke the "calculateArea" of the Triangle Object.

      This method will also display the following message in the console.

         "The Area of the Triangle is"<area>

   *If* numberOfSides is 4 then invoke the "calculateArea" of the Square Object.

      This method will also display the following message in the console.

         "The Area of the Square is"<area>

   *If* numberOfSides is other than the specified ones then display the message "No Shapes Present".

**Note: <area> -** The value would be printed based on the above logics of different shapes such as Circle, Triangle and Square.

In the Shapes class add a main method which sets the values and invoke the following methods in the *Shapes* object.

**Test Case 1:** Specify the following values and run the main method

1. Set the value of numberOfSides as 3 and sideLength as 12**.**
2. Invoke the method calculateShapeArea ().

**Expected Output:** The following messages should be displayed in the console

The Area of the Triangle is  62.3538

**Test Case 2:** Specify the following values and run the main method

1. Set the value of numberOfSides as 4 and sideLength as 15**.**
2. Invoke the method calculateShapeArea ().

**Expected Output:** The following messages should be displayed in the console

The Area of  the  Square  is  225

**Test Case 3:** Specify the following values and run the main method

1. Set the value of numberOfSides as 5 and sideLength as 15**.**
2. Invoke the method calculateShapeArea().

**Expected Output:** The following messages should be displayed in the console

No Shapes Present