### **Assignment** **4- Structure in Swift**

**Lab Assignment: Structures in Swift**

This assignment will help you understand and practice using structures in Swift. Follow the instructions below to complete the assignment.

**Objectives:**

* Understand basic structure syntax and usage.
* Create and initialize structures with stored properties.
* Implement methods within structures.
* Use mutating methods to modify structure properties.
* Work with structures that contain computed properties.

**Instructions:**

**Step 1: Basic Structure Syntax and Usage**

* Define a simple structure called Rectangle that has two properties: width and height.

**Step 2: Initializing Structures with Stored Properties**

* Add a method to the Rectangle structure to calculate the area of the rectangle.

**Step 3: Implementing Methods within Structures**

* Add a method to the Rectangle structure to calculate the perimeter of the rectangle.

**Step 4: Using Mutating Methods to Modify Structure Properties**

* Add a mutating method to the Rectangle structure to scale its size by a given factor.

**Step 5: Working with Computed Properties**

Add a computed property to the Rectangle structure to calculate the diagonal of the rectangle.

**Conclusion**

In this lab assignment, you learned how to:

* Define and use basic structures.
* Initialize structures with stored properties.
* Implement methods within structures.
* Use mutating methods to modify structure properties.
* Work with structures that contain computed properties.

Make sure to test your structures thoroughly and document your code with comments explaining each part of the logic. If you have any questions or need further clarification, feel free to ask. Happy coding!