```
import Foundation
class UnitTest {
   var array: [Int] = []
   var times: [Double] = []
   var count: Int
   init(count: Int) {
        self.count = count
   }
   func generateRandomArray() -> [Int] {
        var array = [Int]()
       for _ in 0..<count {</pre>
            let randomNum = Int.random(in: 0...count)
            array.append(randomNum)
        }
       return array
   }
   func insertionSort(_ array: [Int]) -> [Int] {
        var arr = array
        for x in 1..<arr.count {</pre>
            var y = x
            let temp = arr[y]
            while y > 0 && temp < arr[y - 1] {
                arr[y] = arr[y - 1]
                y -= 1
            arr[y] = temp
       return arr
   }
   func timedSort() -> Double {
        self.array = generateRandomArray()
        let start = DispatchTime.now()
        = insertionSort(self.array)
        let end = DispatchTime.now()
        let nanoTime = end.uptimeNanoseconds - start.uptimeNanoseconds
        let timeInterval = Double(nanoTime) / 1_000_000_000
       return timeInterval
   }
   func runTests() {
        for _ in 0..<10 {
            let timeInterval = timedSort()
            times.append(timeInterval)
            print("Time to sort array: \((timeInterval) seconds")
```

```
let sum = times.reduce(0, +)
       let average = sum / Double(times.count)
       print("Average time to sort array with \((count) Elements: \((average) seconds")
   }
}
/*
let testingWith100Elements = UnitTest(count: 100)
testingWith100Elements.runTests()
Prints to console:
Time to sort array: 0.00094881 seconds
Time to sort array: 0.000829145 seconds
Time to sort array: 0.000846065 seconds
Time to sort array: 0.000731513 seconds
Time to sort array: 0.000690834 seconds
Time to sort array: 0.000752676 seconds
Time to sort array: 0.000727487 seconds
Time to sort array: 0.000751963 seconds
Time to sort array: 0.00072596 seconds
Time to sort array: 0.000698107 seconds
Average time to sort array with 300 Elements: 0.000770256 seconds
*/
```