

**FALL 2023 COSC 4355**  
**Homework #1**

**Optional (will not be graded)**

0. For the code below:

- Change the value of the optionalName variable to nil.
- What greeting do you get?
- Add an else clause that sets a different greeting if optionalName is nil.

```
var optionalString: String? = "Hello"
print(optionalString == nil)

var optionalName: String? = "John Appleseed"
var greeting = "Hello!"
if let name = optionalName {
    greeting = "Hello, \ \(name)"
}
```

1. In the code below:

- Remove the day parameter from the greet function.
- Add a parameter to include today's lunch special in the greeting.

```
func greet(person: String, day: String) -> String {
    return "Hello \ \(person), today is \ \(day)."
}
greet(person: "Bob", day: "Tuesday")
```

2. Rewrite the closure to return zero for all even numbers.

```
var numbers = [20, 19, 7, 12]

numbers.map({ (number: Int) -> Int in
    let result = 3 * number
    return result
})
```

3. Using the code below. Make another subclass of NamedShape called Circle that takes a radius and a name as arguments to its initializer. Implement an circumference() and a simpleDescription() method on the Circle class.

```
class NamedShape {  
    var numberOfSides: Int = 0  
    var name: String  
  
    init(name: String) {  
        self.name = name  
    }  
  
    func simpleDescription() -> String {  
        return "A shape with \(numberOfSides) sides."  
    }  
}
```

References:

<https://docs.swift.org/swift-book/LanguageGuide/TheBasics.html>

<https://docs.swift.org/swift-book/GuidedTour/GuidedTour.html>