Unit 2—Lesson 3: Structures

Structures

```
struct Person {
  var name: String
}
```

Capitalize type names

Use lowercase for property names

Structures
Accessing property values

```swift
struct Person {
  var name: String
}


let jasmine = Person(name: "Jasmine")
print(jasmine.name)
```

```
Jasmine
```

Structures
Adding functionality

```swift
struct Person {
  var name: String


 func sayHello() {
    print("Hello there! My name is \(name)!")
  }


}

let jasmine = Person(name: "Jasmine")
jasmine.sayHello()
```

```
Hello there! My name is Jasmine!
```

Instances

```swift
struct Shirt {
  var size: String
  var color: String
}


let myShirt = Shirt(size: "XL", color: "blue")


let yourShirt = Shirt(size: "M", color: "red")
```

Initializers
Default values

```swift
struct Odometer {
  var count: Int = 0
}


let odometer = Odometer()
print(odometer.count)
```

```
0
```

Initializers
Memberwise initializers

```swift
let odometer = Odometer(count: 27000)
print(odometer.count)
```

```
27000
```

Initializers
Memberwise initializers

```swift
struct Person {
  var name: String
}
```

Initializers
Memberwise initializers

```swift
struct Person {
  var name: String

  func sayHello() {
    print("Hello there!")
  }
}

let person = Person(name: "Jasmine") // Memberwise initializer
```

Computed properties

```swift
struct Temperature {
  let celsius: Double
  let fahrenheit: Double
  let kelvin: Double
}

let temperature = Temperature(celsius: 0, fahrenheit: 32, kelvin: 273.15)
```

```swift
struct Temperature {
  var celsius: Double

  var fahrenheit: Double {
    celsius * 1.8 + 32
  }
}


let currentTemperature = Temperature(celsius: 0.0)
print(currentTemperature.fahrenheit)


32.0
```

Challenge
Add support for Kelvin

Modify the following to allow the temperature to be read as Kelvin

```swift
struct Temperature {
  let celsius: Double


  var fahrenheit: Double {
    celsius * 1.8 + 32
  }


}
```

Hint: Temperature in Kelvin is Celsius + 273.15

```swift
struct Temperature {
  let celsius: Double

  var fahrenheit: Double {
    celsius * 1.8 + 32
  }


  var kelvin: Double {
    celsius + 273.15
  }

}

let currentTemperature = Temperature(celsius: 0.0)
print(currentTemperature.kelvin)

273.15
```