Property Wrappers

What are they?

→ New in 5.1

→ Java-like annotations

→ Can accept (generic) parameters

→ Used in SwiftUI

Purpose

Examples

SwiftUI

```swift
struct ContentView: View {
  @State private var value = 0.0

  var body: some View {
    VStack {
      Text("Value is \(value)")
      Slider(value: $value)
    }
  }
}
```

UIKit/
Foundation

```
class ViewController: UIViewController {
  @Keychain(key: "secret_info") var secretInfo = ""
}
```

Let's make one!

```swift
@propertyWrapper
struct TwelveOrLess {
    private var number = 0

    var wrappedValue: Int {
        get { return number }
        set { number = min(newValue, 12) }
    }
}


// Use
struct S {
    @TwelveOrLess var num = 13 // 12
}
```

```swift
@propertyWrapper
struct Clamped {
  private var number = 0

  private let maxNum: Int
  private let minNum: Int


  var wrappedValue: Int {
    get { return number }
    set { number = max(min(newValue, maxNum), minNum) }
  }
}

// Use
struct S {
  @Clamped(maxNum: 10, minNum: 0) var num = 13 // 10
}
```

Projected values

```
@propertyWrapper
struct State<T> {
    //...
    var projectedValue: Binding<T>
}
```

```swift
struct ContentView: View {
  @State private var isDisabled = false

  var body: some View {
    OtherView($isDisabled) // Binding<Bool>
  }
}
```

Conclusion

More info

→ The Swift Programming Language

→ Burritos