Introduction to Swift

Part 10: Enumerations

What Are Enumerations?

⚙ Common type for a group of related values

```
let Clubs = 1
let Diamonds = 2
let Hearts = 3
let Spades = 4

var cardSuitBad = Diamonds
cardSuitBad = 23
```

```
enum Suit {
    case Clubs, Diamonds, Hearts, Spades
}


var cardSuit1 = Suit.Clubs
// cardSuit1 = 23 // error

let cardSuit2: Suit  = .Clubs
```

raywenderlich.com

Default Values

⚙ Enumerators are not assigned a default value when created

⚙ Values must be strings, characters, integers, and floating point

⚙ Values must be unique

⚙ Integers will auto-increment

```swift
enum Rating: Int {
  case Terrible = 1
  case NotGreat
  case Average
  case Great
  case Epic

  init() {
    self = .Average
  }
}
```

Raw Values

⚙ To get the raw value, you do the following:

```swift
enum Currency: Int {
  case None = 0
  case FunBucks
  case Money
}
Currency.FunBucks.rawValue // 1
```

Associated Values

⚙ Different enumerations can hold different types of values

```
enum Currency {
    case Funbucks(Int, Double)
    case Money(Double)
}
```

```
switch player.preferredMoney {
  case .Money(let cash):
    println("\(cash)")
  case .FunBucks(let amount, let conversion):
    println("\(amount) - \(conversion)")
}
```

Default Values vs. Associated Values

⚙ Associated values can change over time. Default values cannot.

⚙ Default values are assigned at compile time. Associated values are assigned at runtime.

⚙ Associated values act as C Union. Default values act as a tag

⚙ You can only pick one!

Demo
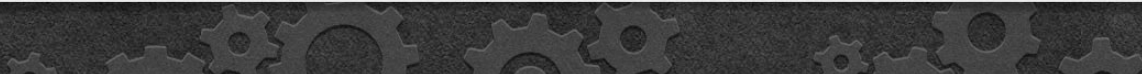
Challenge Time!

⚙ ## Make an enum with Microsoft's CEOs:
  ⚙ ### Bill Gates
  ⚙ ### Steve Ballmer
  ⚙ ### Satya Nadella (default)
⚙ ## Add description method

```
let currentCEO = MicrosoftCEOs()
println(currentCEO.description())

let oFirstCEO = MicrosoftCEOs.fromRaw(1)
if let firstCEO = oFirstCEO {
  println(firstCEO.description())
} else {
  println("No such value")
}
```