Macoun

Think Codables

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Ablauf

- Was sind Codables?
- (De-)Serialisierung anpassen
- Arbeiten mit Generics
- 3rd Party

Was sind Codables?

Was sind Codables?

- zentrale Protokolle
- Data nach/von Model

JSON Library

```
init(json: JSON) {
  self.firstName = json["first_name"].string
  self.lastName = json["last_name"].string
  self.session = json["session_title"].string
}
```

JSONSerialization

```
init(dict: [String: Any]) {
  self.firstName = dict["first_name"] as? String
  self.lastName = dict["last_name"] as? String
  self.session = dict["session_title"] as? String
}
```

Protokolle

```
typealias Codable = Decodable & Encodable

// Decodable
init(from decoder: Decoder) throws

// Encodable
func encode(to encoder: Encoder) throws
```

Objekt Codable machen

```
struct Session {
  let title: String
  let from: Date
  let duration: TimeInterval
  let details: URL
}

extension Session: Codable {}
```

Existierende Codables

- String
- Int / Float / Double
- Bool
- Data
- Date

- URL
- Array / Set
- Dictionary
- Enum

- CGPoint
- CGSize
- CGRect

- UUID
- Locale
- IndexPath
- ClosedRange

De-/Encoder

- JSON
- Property List

(De-)Serialisierung anpassen

(De-)Serialisierung anpassen

- De-/Encoder Optionen
- CodingKeys
- Initialiser oder encode Methode

De-/Encoder Optionen

PropertyList Encoder

```
var encoder: PropertyListEncoder = .init()

encoder.outputFormat = .openStep

let decoder: PropertyListDecoder = .init()

// no options
```

JSONEncoder

```
var encoder: JSONEncoder = .init()

encoder.outputFormatting = [.prettyPrinted, .sortedKeys]
encoder.keyEncodingStrategy = .convertToCamelCase
encoder.dataEncodingStrategy = .base64
encoder.dateEncodingStrategy = .formatted(formatter)
encoder.nonConformingFloatEncodingStrategy = .throw
```

JSONDecoder

```
var decoder: JSONDecoder = .init()


decoder.keyDecodingStrategy = .convertFromSnakeCase
decoder.dataDecodingStrategy = .base64
decoder.dateDecodingStrategy = .formatted(formatter)
decoder.nonConformingFloatDecodingStrategy = .throw
```

Demo

De-/EncodingContainer

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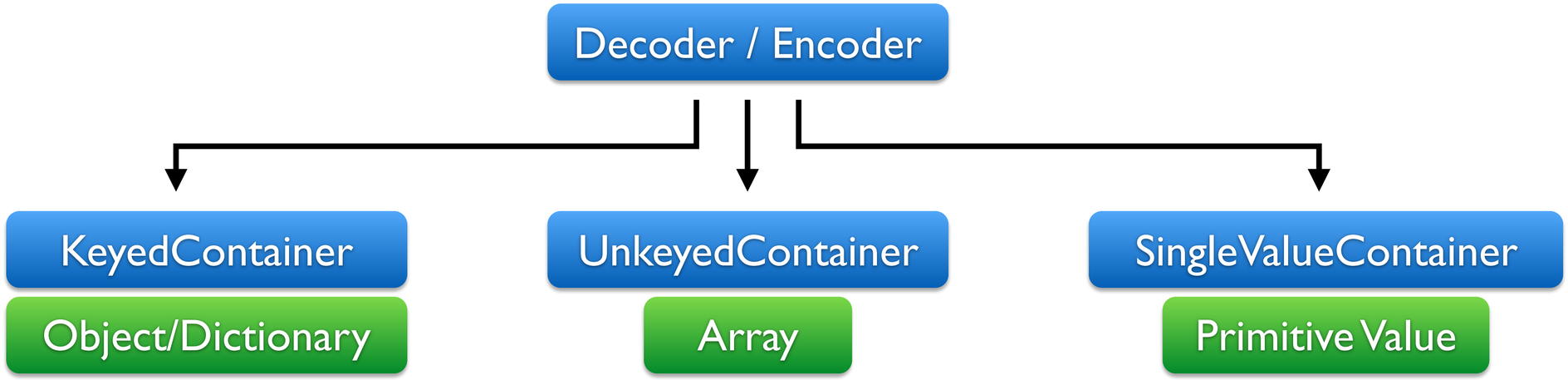
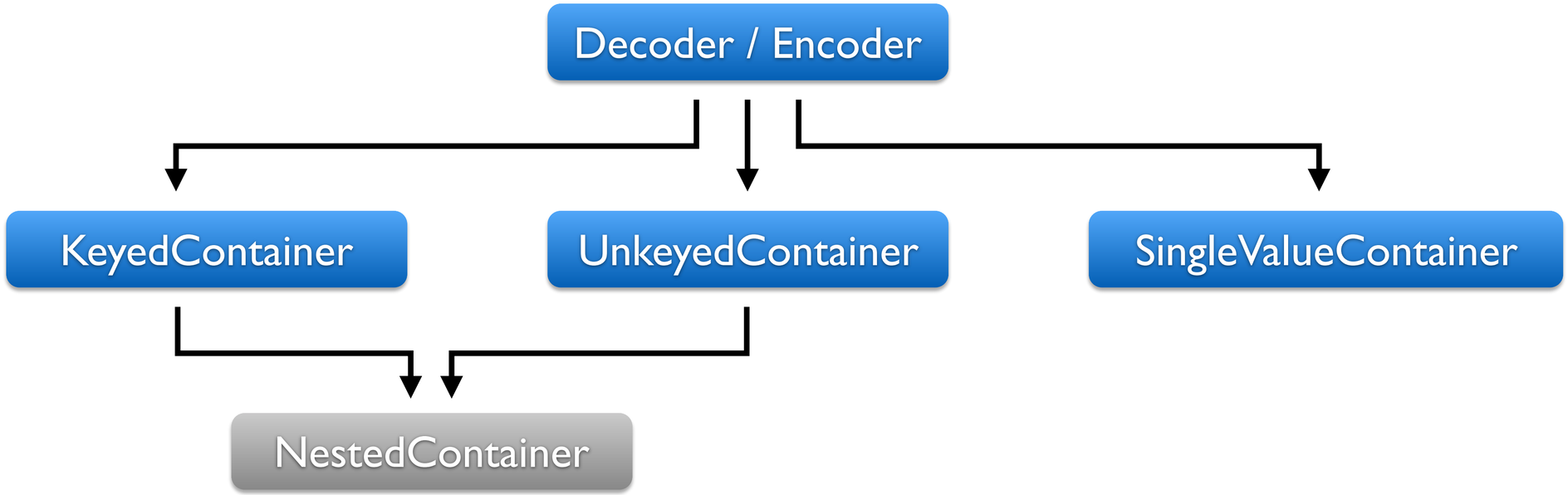
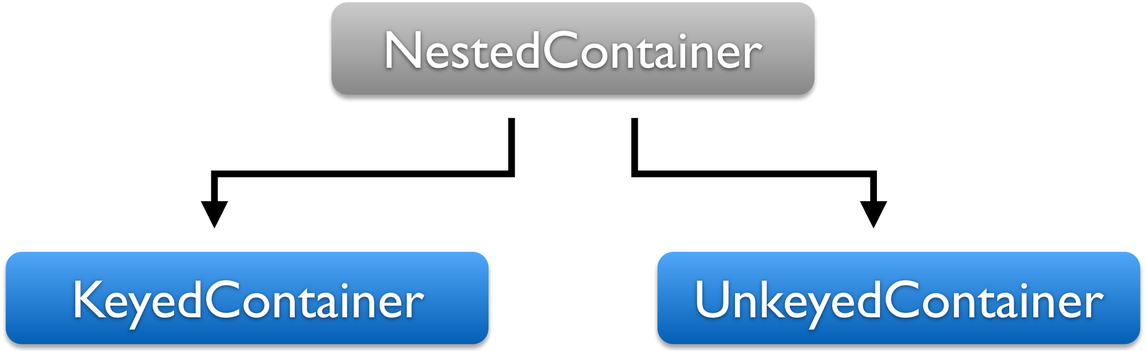


De-/EncodingContainer



De-/EncodingContainer



Codable Mythen

Codable Mythen

- JSONEncoder: Encoder ✗
- Optional Enum ist sicher ✗
- Jeder Datentyp ist wichtig ✓

Generics und Mixed Arrays

Generics und Mixed Arrays

- Proxy Objekt
- Codable konform
- ggf. eigenes Protokoll

Demo

3rd Party

XMLCoder

Max Desiatov
github.com/MaxDesiatov/XMLCoder

MessagePacker

hiro

github.com/hirotakan/MessagePacker

ZippyJSON

Michael Eisel

github.com/michaeleisel/ZippyJSON

Codextended

John Sundell
github.com/JohnSundell/Codextended

Fragen?

Vielen Dank

Macoun