Intro (Part 1)

**Introduction to Combine**

Brief description. Quote from Apple docs.

1. Note about functional reactive programming.
2. Publisher/Subscriber (maybe mention marble diagrams)
3. When to use Combine
   1. Note about disadvantages/difficulties
      1. Paradigm shift for Developers. May slow development or onboarding.
      2. Difficult to Debug
      3. Can be difficult to find help/examples for more specific use cases.
4. Link to sources:
   1. <https://developer.apple.com/documentation/combine>
   2. <https://heckj.github.io/swiftui-notes/>

**Dive into Concepts**

1. Publisher
   1. Convenience Publishers: <https://developer.apple.com/documentation/combine#3341324>
   2. Examples of URLSession, NotificationCenter, Timer
2. Subscriber
   1. Cancellable
3. Operators
4. Subjects

(Part 2)

**Revisit concepts**

1. Publisher
   1. Connectable publisher: <https://developer.apple.com/documentation/combine/controlling_publishing_with_connectable_publishers>
2. Operators are the magic

**More concepts**

1. Single result vs. continuous sequence
2. Lifecycle
3. Type erasure
4. Back pressure

**Developing with Combine (rename this)**

1. Creating publishers
   1. Probably shouldn’t need to implement the Publisher protocol directly.
   2. Just, Empty, Fail
   3. Future
   4. Deferred
   5. DeferredFuture
   6. Record
   7. @Published
   8. @ObservedObject
2. Implementing Publisher
3. Threading
4. Errors
   1. Catch
   2. mapError
   3. tryMap
   4. assertNoFailure
   5. retry
   6. delay

(Part 3)

**Patterns & Recipes (rename)**

1. Convert closure-based API to Combine
2. One-shot asynchronous call with Future
3. Merge results using operators
4. Normalizing errors
5. Observe state changes using Subject
6. Combining publishers with operators