SwiftUI and Apple's CryptoKit

1.
SwiftUI

What is Swift?

- Apple created and maintained
- Open source
- Easy and powerful alternative to Objective-C, the previous Apple language of choice
- Statically typed, classes, structs, etc.
- As powerful as you need it to be

How does SwiftUI do layouts?

- Component Based
- Parent child relationships throughout the structure
- Similar to React-Native
- Possible to do storyboarding (drag and drop UI elements)

Interesting Features

- Pass by reference with “inout” keyword
- Control your data with “?”, “!” or “??” operators
- Manage state and binding with simple component parameters
- Modify class wide modifiable objects with Environment Objects

Advantages

- Layouts are intuitive and generalizable
- Xcode provides powerful debugging and previewing tools to assist with development cycle
- Language can be simple, and powerful handling most of the overhead for you
- Powerful existing documentation as well as documentation creating syntax

Disadvantages

- Need IOS devices to be able to create apps for them
- Types, while beneficial, can be cumbersome to work with properly

Demo SwiftUI

2. CryptoKit

What is CryptoKit?

- Apple created and maintained cryptography software
- Generalizable functions and structures to allow freedom to the developer for what the encryption will do
- Up to date with modern standards (SHA512, C

Capabilities

- Key Agreements
- Ciphers
- Hashing
- Signing

What we will demo

- Key generation
- Storing key data
- Diffie-Hellman exchange
- Encryption/Decryption

Demo CryptoKit