

## Design Doc Simon Says

### Class SimonSaysGame

- Current score
- Current pattern
- Chosen buttons
- Max score
- Func start game
  - After start new game button tapped hide it, show score, level
  - Call generate new pattern
  - Call Show the pattern
  - wait for user input
- Func Restart game
  - After player lost set new max score if applicable
  - Reset difficulty, current score
  - Reset UI
- Func addNewButton()
  - Adds a new button to the pattern
  - Increases difficulty
- Func showButtonsToTap
  - Displays new pattern and waits for the input
- Func chooseButton(ButtonType)
  - After user taps a button, add it to the current user pattern
  - Check current selection using indices, if there is mismatch game over
  - If their length match, check if they are equal go to the next level

Enum ButtonType { .red, .blue, .green, . yellow}

### Struct Button (4 buttons)

- ButtonType enum
- Color
- HighlightedColor

### Struct Score

- Current score
- Max score
- Level