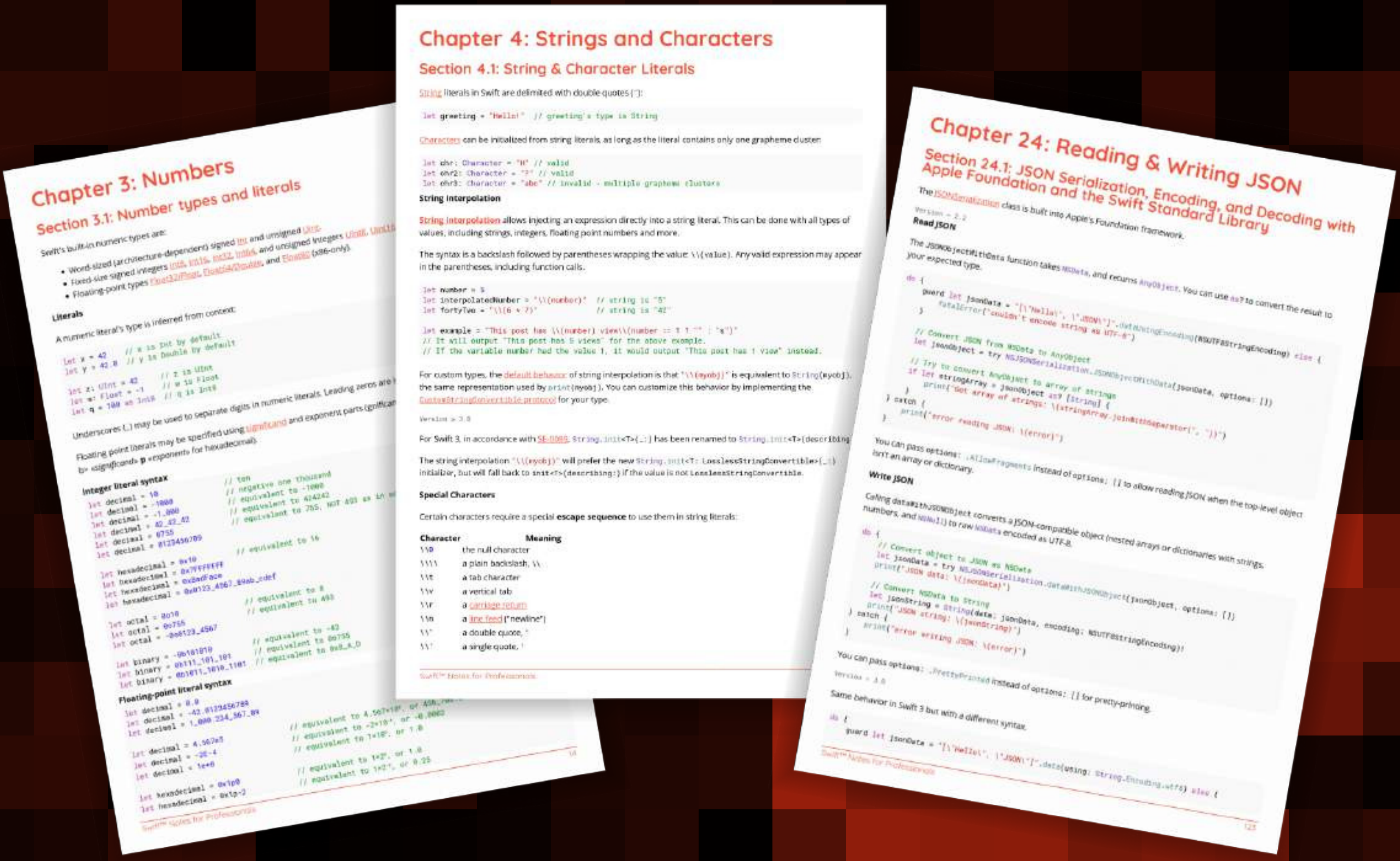
Swift™
Notes for Professionals



Chapter 3: Numbers

Section 3.1: Number types and literals

Chapter 4: Strings and Characters

Section 4.1: String & Character Literals

String literals in Swift are delimited with double quotes ("):

```
let greeting = "Hello!"  // greeting's type is String
```

Characters can be initialized from string literals, as long as the literal contains only one grapheme cluster:

```
let chr: Character = "H" // valid
let chr2: Character = "?" // valid
let chr3: Character = "abc" // invalid - multiple grapheme clusters
```

String interpolation

String interpolation allows injecting an expression directly into a string literal. This can be done with all types of values, including strings, integers, floating point numbers and more.

The syntax is a backslash followed by parentheses wrapping the value: \\(value). Any valid expression may appear in the parentheses, including function calls.

```
let number = 5
let interpolatedNumber = "\\(number)"  // string is "5"
let fortyTwo = "\\(6 * 7)"             // string is "42"

let example = "This post has \\(number) view\\(number == 1 ? "" : "s")"
// It will output "This post has 5 views" for the above example.
// If the variable number had the value 1, it would output "This post has 1 view" instead.
```

For custom types, the default behavior of string interpolation is that "\\(myobj)" is equivalent to String(myobj), the same representation used by print(myobj). You can customize this behavior by implementing the CustomStringConvertible protocol for your type.

Version ≥ 3.0

For Swift 3, in accordance with SE-0089, String.init<T>(_:) has been renamed to String.init<T>(describing

The string interpolation "\\(myobj)" will prefer the new String.init<T: LosslessStringConvertible>(_:) initializer, but will fall back to init<T>(describing:) if the value is not LosslessStringConvertible.

Special Characters

Certain characters require a special **escape sequence** to use them in string literals:

Character	Meaning
\\0	the null character
\\\\	a plain backslash, \\
\\t	a tab character
\\v	a vertical tab
\\r	a carriage return
\\n	a line feed ("newline")
\\"	a double quote, "
\\'	a single quote, '

Swift™ Notes for Professionals

Chapter 24: Reading & Writing JSON

Section 24.1: JSON Serialization, Encoding, and Decoding with Apple Foundation and the Swift Standard Library

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