codecademy

Variables

Variables

A variable refers to a storage location in the computer's memory that one can set aside to save, retrieve, and manipulate data.

```
var score = 0
```

Constants

Constants refer to fixed values that a program may not alter during its execution. One can be declared by using the `let` keyword.

```
let pi = 3.14
```

Arithmetic Operators

Swift supports arithmetic operators for:

- `+` addition
- `-` subtraction
- `*` multiplication
- `/` division
- `%` remainder

```
var x = 0

x = 4 + 2  // x is now 6
x = 4 - 2  // x is now 2
x = 4 * 2  // x is now 8
x = 4 / 2  // x is now 2
x = 4 % 2  // x is now 0
```

Types

Type annotation can be used during declaration.
The basic data types are:

- `Int` : integer numbers
- `Double` : floating-point numbers
- `String` : a sequence of characters
- `Bool` : truth values

```
var age: Int = 28

var price: Double = 8.99

var message: String = "good nite"

var lateToWork: Bool = true
```

String Interpolation

String interpolation can be used to construct a `String` from a mix of variables, constants, and others by including their values inside a string literal.

```
var apples = 6

print("I have \(apples) apples!")

// Prints: I have 6 apples!
```

Compound Assignment Operators

Compound assignment operators provide a shorthand method for updating the value of a variable:

- `+=` add and assign the sum
- `-=` subtract and assign the difference
- `*=` multiply and assign the product
- `/=` divide and assign the quotient
- `%=` divide and assign the remainder

```
var numberOfDogs = 100
numberOfDogs += 1

print("There are \(numberOfDogs) dalmations!")

// Prints: There are 101 dalmations!
```