

SWIFT TRAINING - WEEK 1-2

Conditionals

Conditionals

Sometimes you want to run some code only if some **conditions** are met. For example:

OPEN Xcode and create a Playground. Save this to your Programming Folder. Name the file ***Lastname-Conditionals***

USE *COMMENTS* to mark the purpose of your code.

```
var money = 20 // you have 20$
var burgerPrice = 10 // you ate a good burger
```

```
if money >= burgerPrice {
    print("pay burger")
    money -= burgerPrice
} else {
    print("wash dishes")
}
```

```
if money > 0 {
    print("order desert")
}
```

Operators

You can compare numbers using these operators. They are evaluated as true or false.

- < Less than
- <= Less than or equal
- > Greater than
- >= Greater than or equal
- == Equal
- != Not equal

Samples

```
1 != 2 // true
1 == 2 // false
1 < 2 // true
1 > 2 // false
1 <= 2 // true
3 >= 3 // true
```

Truth tables for AND(&&) and OR(||). Boolean logic is used to check multiple situations.

// AND

```
true && true // true
true && false // false
false && true // false
false && false // false
```

// OR

```
true || true // true
true || false // true
false || true // true
false || false // false
```

You can negate (make opposite) a boolean expression using the ! unary operator.

```
!true // false
!false // true
!(true && true) // false
!(true || false) // false
!(false || false) // true
```

Exercises

2.1 Max

You are given two numbers **a** and **b** print the largest one.

```
var a = 11
var b = 22
```

// your code here

2.2 Even or Odd

You are given a number. Print even if the number is even or odd otherwise.

Hint: Use the % (modulo) division process.

```
let number = 2
```

// your code here

2.3 Divisibility

You are given two numbers **a** and **b**. Print **"divisible"** if **a** is divisible by **b** and **"not divisible"** otherwise. Change the variables to ensure both results work.

```
var a = 12
var b = 3
```

// your code here

2.4 Two of the Same

```
var a = 2
var b = 2
var c = 2
```

HINT: Use the || (OR). To compare multiple values complete this statement: `if (a == b) || ?? || ?? {`
Change the variables to ensure it works results work.

// your code here

Now check alter your code to see if **All Three are the Same**

HINT: Use the && (AND)

// your code here

2.5 Breakfast

You are working on a smart-fridge. The smart-fridge knows when you put inside of it eggs and bacon in days. You know that eggs spoils after 3 weeks (21 days) and bacon after one week (7 days). Given `baconAge` and `eggsAge`(in days) determine if you can cook bacon and eggs or what ingredients you need to throw out. Change the variables to ensure all structures work as designed.

HINT: This requires 3 `if` statements. A main `if` to check both `eggsAge` and `baconAge` then within the `else` of the main `if` check each of the individual items with separate `if` statements.

```
var baconAge = 6 // the bacon is 6 days old
var eggsAge = 12 // eggs are 12 days old
```

// you code here

2.6 Leap Year

You are given a `year`, determine if it's a leap year. A leap year is a year containing an extra day. It has 366 days instead of the normal 365 days. The extra day is added in February, which has 29 days instead of the normal 28 days. Leap years occur every 4 years (**HINT:** `if year % 4 == 0 {`). 2012 is a leap year and so is 2016. Except that every 100 years special rules apply. Years that are divisible by 100 are not leap years if they are not divisible by 400 **HINT:** (`if year % 100 == 0 && year % 400 != 0 {`). For example 1900 was not a leap year, but 2000 was.

HINT: use the sample print statement `print("\year) is a leap year!")`. Adjust for non leap years. Note the inclusion of `\year)` will add that variable to the output.

```
let year = 2014
```

// you code here

2.7 Coin toss

If you call `arc4random()` it will give you a random number. Generate a random number and use it to simulate a coin toss.

// this gives you access to the Swift standard library which includes `arc4random`. Add this line in the playground below `import UIKit`. Use modulo (`randomNumber % 2`) division.

```
import Foundation
```

```
var randomNumber = arc4random()
```

```
// you code here
```

2.8 Minimum Number

You are given four variables `a`, `b`, `c` and `d`. Print the value of the smallest one.

HINT: Assign variable `min = a`, then check if the others are less than `a`, if they are assign `min` to that value and continue checking. Print `min` at the end. Change the variables and test.

```
var a = 5
```

```
var b = 6
```

```
var c = 3
```

```
var d = 4
```

```
// your code here
```

2.9 Testing Divisibility

Test if `number` is divisible by 3, 5 and 7. For example 105 is divisible with 3,5 and 7, but 120 is divisible only by 3 and 5 and not by 7.

HINT: Use a `if` and check multiple modulo (%) divisions using `&&` (AND)

```
let number = 210
```

```
// your code here
```