QND Computer Science Day 10

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Agenda

- Recap

- Loops

- `var` variables

- Booleans (you've been using them already)

- Making a game!
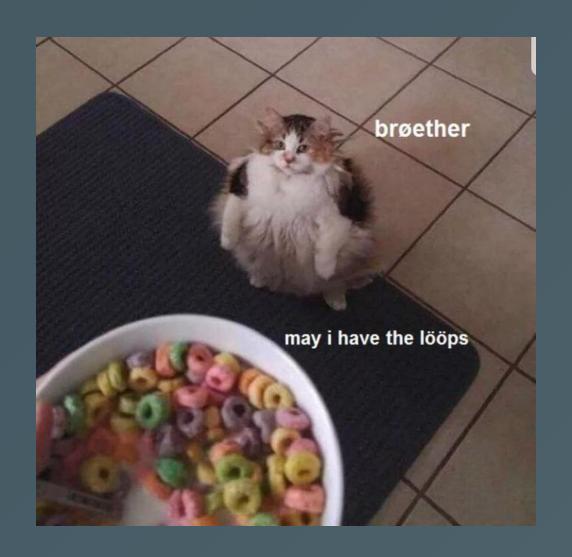
Recap

- Calculator

var

```
var count = 0
```

- Read as "set variable count to 0"

```
count = count + 1
```

- Read as "set count to count + 1"
- `let` cannot be changed
- `var` can

Loops

- `while` loops
- `for loops`

Repeating code

```
var count = 1
while count < 5 {
    print("Hello, World! Count = \(count)")
    count = count + 1
}
```

Here be dragons!

```swift
var count = 1
while count > 0 {
    print("Hello, World! Count = \(count)")
    count = count + 1
}
```

Infinite Loops

- "Why isn't my program running?"
- This program will never end
- To exit early, use STOP button
- Beware of overflowing resources!

when you forget to write an exit condition for your while loop

This little maneuver is gonna cost us 51 years

Booleans

- `true` or `false`

- We've already used them!

- Result of any kind of comparison

  - `==`

  - `!=`

  - `>`

  - `<`

  - `>=`

  - `<=`

Loops!

```swift
var running = true
while running {
    print("Enter a number")
    let firstNumber = Int(readLine()!)!

    print("Enter another number")
    let secondNumber = Int(readLine()!)!

    print("Enter a command")
    if command == "q" || command == "quit" {
        running = false
    } else if command == "add" {
        ...
    }
}
```

Today's Task

- Guess My Number Game