QND Computer Science Day 9

Mr. Schmidt

Agenda

- Recap
- Guess My Number Game
  - Greater than or less than
  - Loops
  - Color
  - Random number generation
  - `var`s

Recap

- Calculator
- Math

Guess My Number Game

- User guesses a number

- Tell them if they are high or low

- Repeat until they get it right

Stage 1: Guess + Check

- Read a number from the user

- Check if it is equal, greater, or less than the secret number

- Print out a message

> or <

```
if guess > secretNumber {
  console.write("Too high!")
}
```

Stage 2: Repeat

- Use a `while true` loop

- Use a `break` statement

- Track guess count

Loops

- `while` loops
  - We will use `while true` today
- `for loops`

While Loops

- `while true` will repeat forever

```
while true {
  console.write("This will repeat forever!")
}
```

break

- Use `break` to exit a loop!

```
while true {
  let command = console.read("Enter a command")
  if command == "q" {
    break
  }
  // do something else
}
```

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

Stage 3: Miscellaneous Improvements
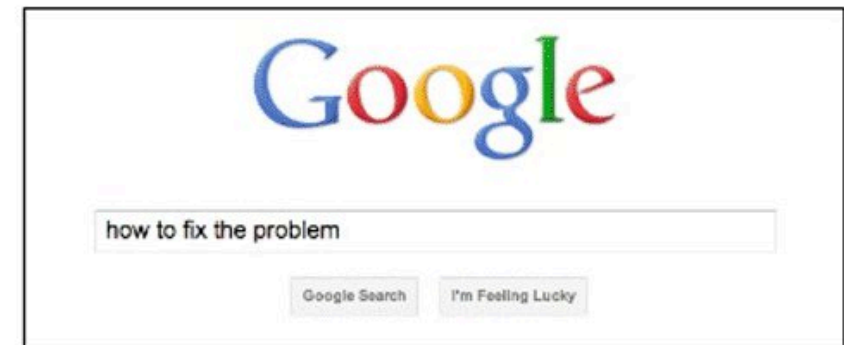
- Random number
- Color

Random Numbers

- How do I generate a random number in Swift?

- You don't need to memorize everything!

- Let's Google it

- AI bots can also be useful

Color

- New Type!

- `ColoredString`

```
let colored = ColoredString("This is blue", .blue)
console.write(colored)
console.write(ColoredString("This is red!", .red))
```