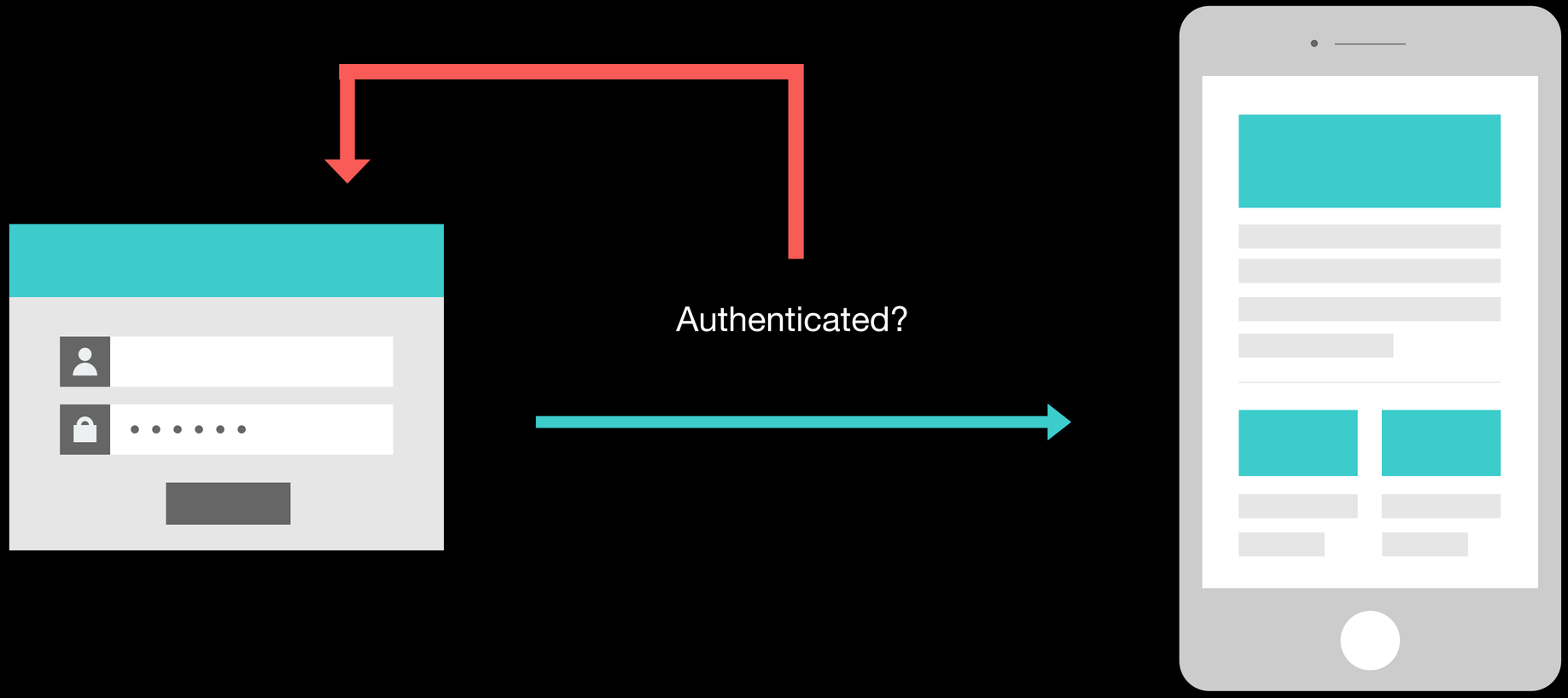
Unit 1 — Lesson 4: Control Flow

Conditional flow



Logical operators

Operator	Description
`==`	Two items must be equal
`!=`	The values must not be equal to each other
`>`	Value on the left must be greater than the value on the right
`>=`	Value on the left must be greater than or equal to the value on the right
`<`	Value on the left must be less than the value on the right
`<=`	Value on the left must be less than or equal to the value on the right
`&&`	AND—The conditional statement on the left and right must be true
`||`	OR—The conditional statement on the left or right must be true
`!`	Returns the opposite of the conditional statement immediately following the operator

if statements

```
if condition {
    code
}
```

```
let temperature = 100
if temperature >= 100 {
  print("The water is boiling.")
}
```

```
The water is boiling
```

if-else statements

```
if condition {
    code
} else {
    code
}
```

```
let temperature = 100
if temperature >= 100 {
  print("The water is boiling.")
} else {
  print("The water is not boiling.")
}
```

Boolean values

```
let number = 1000
let isSmallNumber = number < 10
```

```
let speedLimit = 65
let currentSpeed = 72
let isSpeeding = currentSpeed > speedLimit
```

Boolean values

NOT

```
var isSnowing = false
if !isSnowing {
  print("It is not snowing.")
}
```

```
It is not snowing.
```

Boolean values

AND

```
let temperature = 70
if temperature >= 65 && temperature <= 75 {
  print("The temperature is just right.")
} else if temperature < 65 {
  print("It's too cold.")
} else {
  print("It's too hot.")
}
```

```
The temperature is just right.
```

Boolean values

OR

```
var isPluggedIn = false
var hasBatteryPower = true
if isPluggedIn || hasBatteryPower {
  print("You can use your laptop.")
} else {
  print("😱")
}
```

switch statement

```
switch value {
case n:
   code
case n:
   code
case n:
   code
default:
   code
}
```

```
let numberOfWheels = 2
switch numberOfWheels {
case 0:
    print(“Missing something?”)
case 1:
    print("Unicycle")
case 2:
    print("Bicycle")
case 3:
    print("Tricycle")
case 4:
    print("Quadcycle")
default:
    print("That's a lot of wheels!")
}
```

switch statement

Multiple conditions

```
let character = "z"

switch character {
case "a", "e", "i", "o", "u" :
    print("This character is a vowel.")
default:
    print("This character is not a vowel.")
}
```

switch statement

Ranges

```
switch distance {
case 0...9:
    print("Your destination is close.")
case 10...99:
    print("Your destination is a medium distance from here.")
case 100...999:
    print("Your destination is far from here.")
default:
    print("Are you sure you want to travel this far?")
}
```

switch challenge

Rewrite the following using a switch statement:

```
let temperature = 70
if temperature >= 65 && temperature <= 75 {
  print("The temperature is just right.")
} else if temperature < 65 {
  print("It's too cold.")
} else {
  print("It's too hot.")
}
```

Hint: The smallest possible value for an integer is `Int.min`

switch challenge

Solution

```
let temperature = 76
switch temperature {
case Int.min...64:
    print("It's too cold.")
case 65...75:
    print("The temperature is just right.")
default:
    print("It's too hot.")
}
```

Ternary operator

```
var largest: Int
let a = 15
let b = 4

if a > b {
  largest = a
} else {
  largest = b
}
```

Ternary operator

?:

```
variable = condition ? true_value : false_value
```

```
var largest: Int
let a = 15
let b = 4

largest = a > b ? a : b
```

Unit 1 — Lesson 4

Lab: Control Flow

Open and complete the exercises in `Lab - Control Flow.playground`