FEWD - VARIABLES CONDITIONALS

NICO CASTRO

Web Developer at Red Badger

AGENDA

- Review
- Variables
- Conditionals
- Lab Time

REVIEW

What is a JavaScript?

JavaScript is a lightweight scripting **language**. It takes the HTML DOM and "scripts" it, meaning it has the ability to tell the DOM how to behave.

Much like an actor reading from a script essentially tells him how to behave.

REVIEW

What is a program?

A **program** is a set of sequential instructions that you write to tell a computer what to do

VARIABLES

What are variables?

VARIABLES

- We can tell our program to remember values for us to use later on
- The action of saving a value to memory is called assignment
- The entity we use to store the value is called a variable

VARIABLES

- The action of getting the value from a variable is called accessing the variable
- We will use all the above techniques to store values into variables, and generate new values using existing variables

VARIABLES - DECLARATION AND ASSIGNMENT

Declaration: `var age;`

Assignment: `age = 21;`

Both at the same time: `var age = 21;`

VARIABLES - ACCESSING

Assuming you have `var age = 21;`

Accessing: `console.log(age);`

VARIABLE - RE-ASSIGNMENT

Assignment: `var name = "Jo";`

Re-assignment: `name = Amir;`

VARIABLE CONVENTIONS

Use `camelCase`

- Variables start with a lower case letter
- If they contain multiple words, subsequent words start with an upper case letter

```
var numberOfStudents = 10;
```

VARIABLES & DATA TYPES

What can you store in a variables?

DATA TYPES

The types of different values we support include:

- **String** text
- **int**, **float** numbers
- **Boolean** true or false

SCORE KEEPER

STRINGS

- Stores textual information
- String is surrounded by quotes

```
"How is the weather today?"
```

```
'Warm'
```

STRINGS

Double vs single quoted strings:

```
'They "purchased" it'
```

```
"It's a beautiful day"
```

STRINGS

Escaping

```
"They \"purchased\" it"

'It\'s a beautiful day'
```

CONVERSION: STRING TO NUMBER

```
var intString = "4";
var intNumber = parseInt(intString, 10);
var floatString = "3.14159";
var floatNumber = parseFloat(floatString);
```

CONVERSION: NUMBER TO STRING

```
var number = 4;
number.toString(); => "4"
```

OR

```
number + ""; => "4"
```

NUMBERS

Represent numerical data

`int: 42`

`float: 3.14159265`

NUMBERS

Signed

`int: +6`

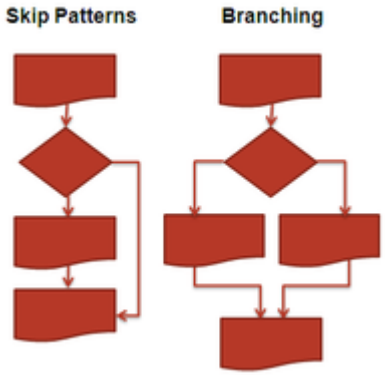
`float: -8.2`

JavaScript can perform arithmetic on number data types

ARITHMETIC IN JAVASCRIPT

Operator	Meaning	Example
+	Addition	8 + 10
-	Subtraction	10 – 8
*	Multiplication	12 * 2
/	Division	10 / 5
%	Modulus	10 % 6

CONDITIONALS



MAKING DECISIONS

It's either TRUE or FALSE (like booleans)

If you are greater than 18 you are an adult

```
if (age > 18) {
    document.write("You are an adult");
}
```

COMPARE THAT

COMPARISONS - EQUALITY

Are two things equal?

```
10 === 10 //true
10 === 5 //false
"hi" === "hi" //true
```

COMPARISONS - EQUALITY

Are two things equal?

```
5 == '5' //true
5 === '5' //false
```

LOGICAL OPERATORS

x = 3

Logical Operators			
Operator	Description	Comparing	Returns
==	equal to	x == 8	FALSE
===	exactly equal to(value and type)	x=== “3”	FALSE
		x===3	TRUE
!=	is not equal	x!=8	TRUE
!==	is not equal(neither value nor type)	x!== “3”	TRUE
		x!==3	FALSE
>	greater than	x>8	FALSE
<	less than	x<8	TRUE
>=	greater than or equal to	x>=8	FALSE
<=	less than or equal to	x<=8	TRUE

CONDITIONAL SYNTAX

```
if (condition is true) {
    //Do cool stuff
}
```

CONDITIONAL SYNTAX

```
if (condition is true) {
    //Do cool stuff
} else {
    //Do other cool stuff
}
```

CONDITIONAL SYNTAX

```
var topic = "JS";

if (topic == "JS") {
    console.log("You're learning JavaScript");
} else if (topic == "JavaScript") {
    console.log("You're still learning JavaScript");
} else {
    console.log("You're learning something else");
}
```

MULTIPLE CONDITIONS

```
if (name == "GA" && password == "yellowpencil") {
    // Allow access to internet
}
```

THE TRUTH TABLE

AND - &&	TRUE	FALSE
TRUE	true	false
FALSE	false	false

THE TRUTH TABLE

```
if (day == "Tuesday" || day == "Thursday"){
    // We have class today
}
```

THE TRUTH TABLE

OR - ||	TRUE	FALSE
TRUE	true	true
FALSE	true	false

THE CONSOLE

```
console.log("some text/value I want to
display in the console");
```

BLACKOUT

TEMP CONVERTER

C * 9/5 + 32 = F

HOMEWORK

Complete Temperature Converter so that given an initial input in Celsius, it `console.log`'s the result in Fahrenheit (ie: `104°F`)

Bonus 01: If you have time, build the HTML necessary so that you can acquire the `<input>` (the temperature in C) from the user and display the result (the temperature in F) somewhere in the HTML (see the *Compare That* code-along for help)

HOMEWORK - BONUS (CONT)

Bonus 02: Flip it! Make it so that your app *also* accepts an initial input that's in *Fahrenheit* and converts it to Celsius

Bonus 03: Add a "clear" button that clears the values in the `<input>`'s. Make it so that instead of displaying the result somewhere on the page, it displays the result as the `value` of the other `<input>`

Bonus 04: Make it pretty! Add some styling <3