JS Variables

What are they?

What are variables?

- Named containers for storing, and accessing, data
- Variables are ways to store information in memory
    - You assign a name to a certain piece of data or collection of code
    - Think of them as named buckets

How do we create them?

Three Steps!

- **Declaration**
  - Registers a variable in the scope
- **Initialization**
  - Allocates memory for the variable (automatic in JS)
- **Assignment**
  - Assigns a specified value to the variable

Ways of creating variables

- The **var** *keyword*
- A JavaScript *identifier* (the name of the variable)
- A single equals sign
    - **One equals means assignment!**
- A value

```
var myVariable = "Some data";
```

Ways of creating variables

- The **var** keyword
- A JavaScript *identifier* (the name of the variable)

```
var myVariable;
```

What value would this variable be given?

Naming Conventions

Naming Conventions

- Must be one word
- Must consist only of letters, numbers, the dollar sign and underscores
- Must not start with a number
- Must not be one of these reserved words
- Is case sensitive

camelCasing

When you create a variable, be descriptive with the identifier

If you need to use two or more words in your identifier, use camelCasing!

This is where you capitalize all words after the first word

camelCasing

```
var camelCasing = true;
var dataTypes = true;
var playerOneMove = "Rock";
```

Typing

`var`s can change types

```
var myVariable = true;

myVariable = "a string";

myVariable = 42;

myVariable = null;

myVariable = undefined;
```

Note that I don't use `var` after the first line

This is because the variable has already been declared

Static vs. Loose Typing

- **Static typing** (also called strong typing, or strict typing)
    - You have to declare what type a variable is going to be
- **Loose typing** (also called weak typing, or dynamic typing)
    - The data stored in a variable can change

What typing does JavaScript have?

In-class Exercise / Homework

Do the exercises found here