

# Meteor

The easiest way to write web apps

<http://one-radical-leaderboard.meteor.com>

# Agenda

- What is Meteor?
- HTML
- JavaScript
- Leaderboard Example

# Meteor JS

## HTML



jQuery

## DDP



Underscore.js

## **What Meteor is:**

- JavaScript
- Web server

## **What Meteor is not:**

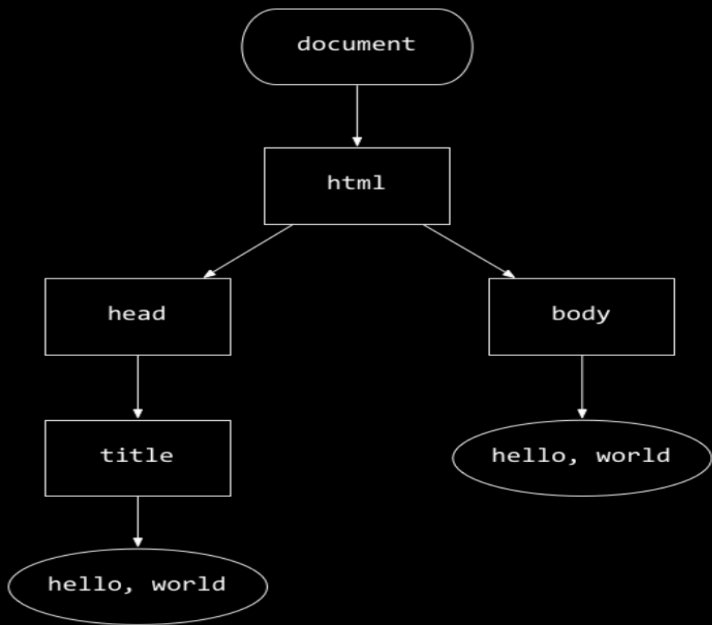
- PHP
- Ruby on Rails

# Demo

- <http://one-radical-leaderboard.meteor.com/>

HTML

# DOM: Document-Object Model



```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title>hello, world</title>
```

```
</head>
```

```
<body>
```

```
hello, world
```

```
</body>
```

```
</html>
```

# JavaScript



"JavaScript is the best programming language currently in existence. Other people will try to tell you otherwise. They are wrong."

***Thomas MacWilliam***  
***Head Teaching Fellow, 2012***



# Hello World

**hello.c**

```
#include <stdio.h>

int main(void)
{
    printf("Hello World\n");
    return 0;
}
```

**hello.js:**

```
console.log("Hello, world!");
```

# Hello World (running it)

## hello.c

```
roger@Roger-MBP:~$ make hello
clang -ggdb3 -O0 -std=c99 -Wall -Werror hello.c -lcs50 -lm -o
hello
roger@Roger-MBP:~$ ./hello
Hello, world!
```

## hello.js:

```
roger@Roger-MBP:~$ node hello.js
Hello, world!
```

# Variable Declaration

C

```
char* s = "CS50";  
float n = 3.14;  
bool b = true;
```

**JavaScript:**

```
var s = "CS50";  
var n = 3.14;  
var b = true;
```

# All your loops still work!

C

```
// prints numbers 0 to 4
for (int i = 0; i < 5; i++)
{
    printf(“%d\n”, i);
}
```

**JavaScript:**

```
// prints numbers 0 to 4
for (var i = 0; i < 5; i++)
{
    console.log(i);
}
```

# Functions are variables in JavaScript

C

```
int add(int x, int y)
{
    return x + y;
}

void hi()
{
    printf("Hi\n");
}

// calling a function
add(1,2);
hi();
```

JavaScript:

```
var add = function (x,y)
{
    return x + y;
}

var hi = function ()
{
    console.log("Hi");
}

// calling a function
add(1,2)
hi();
```

# Arrays in JavaScript

```
var arr = [];
```

```
var arr2 = ["Arrays", "in", "JS"];
```

```
var thirdElement = arr2[2];
```

```
var arr2len = arr2.length;
```

```
var arr3 = [2.3, true, 5];
```

```
arr3[2] = "not a number";
```

# C structs = JavaScript Objects

C

```
struct student
{
    char* name;
    int year;
    char gender;
}

struct student s;
s.name = "Roger";
s.year = 2016;
s.gender = 'M';
```

JavaScript:

```
// no struct definition needed
var s =
{
    name: "Roger",
    year: 2016,
    gender: 'M'
}

console.log(s.name)
```

```
printf("%s\n", s.name);
```

# Objects in JavaScript (2)

```
var CS50 = {  
    "course": "CS50",  
    "instructor": "David J. Malan '99",  
    "tfs": ["R.J.", "Ben", "Pat", "Chris"],  
    "psets": 8,  
    "taped": true  
};
```



# Arrays of Objects!

```
var cottages = [  
  {name: "James", house: "Winthrop"},  
  {name: "Molly", house: "Cabot"},  
  {name: "Carl", house: "Kirkland"}  
];  
  
for(var i = 0; i < cottages.length; i++)  
{
```

# Let's get started with Meteor!

<http://www.github.com/rzurawicki/leaderboard>

Follow instructions from there

More info at: [www.meteor.com](http://www.meteor.com)