GIRLS WHO CAN

JAVASCRIPT WORKSHOP APRIL 09042018

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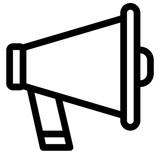
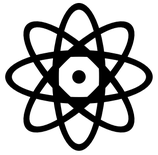


WELCOME

Introductions and setup confirmation

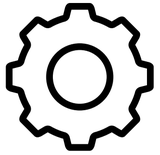
HISTORY

A little history lesson on how thins came to be



LEARNING

Get stuck in to some real JS along with scenarios



ACTION

Review and look ahead for future learning

INTRODUCTIONS

ADAM JARVIS

SOFTWARE ENGINEER

E - adam.d.jarvis@ibm.com

- @jarvis

SETUP CONFIRMATION

OPEN YOUR TERMINAL

- Mac: spotlight->terminal
- Windows: search->command prompt (cmd)

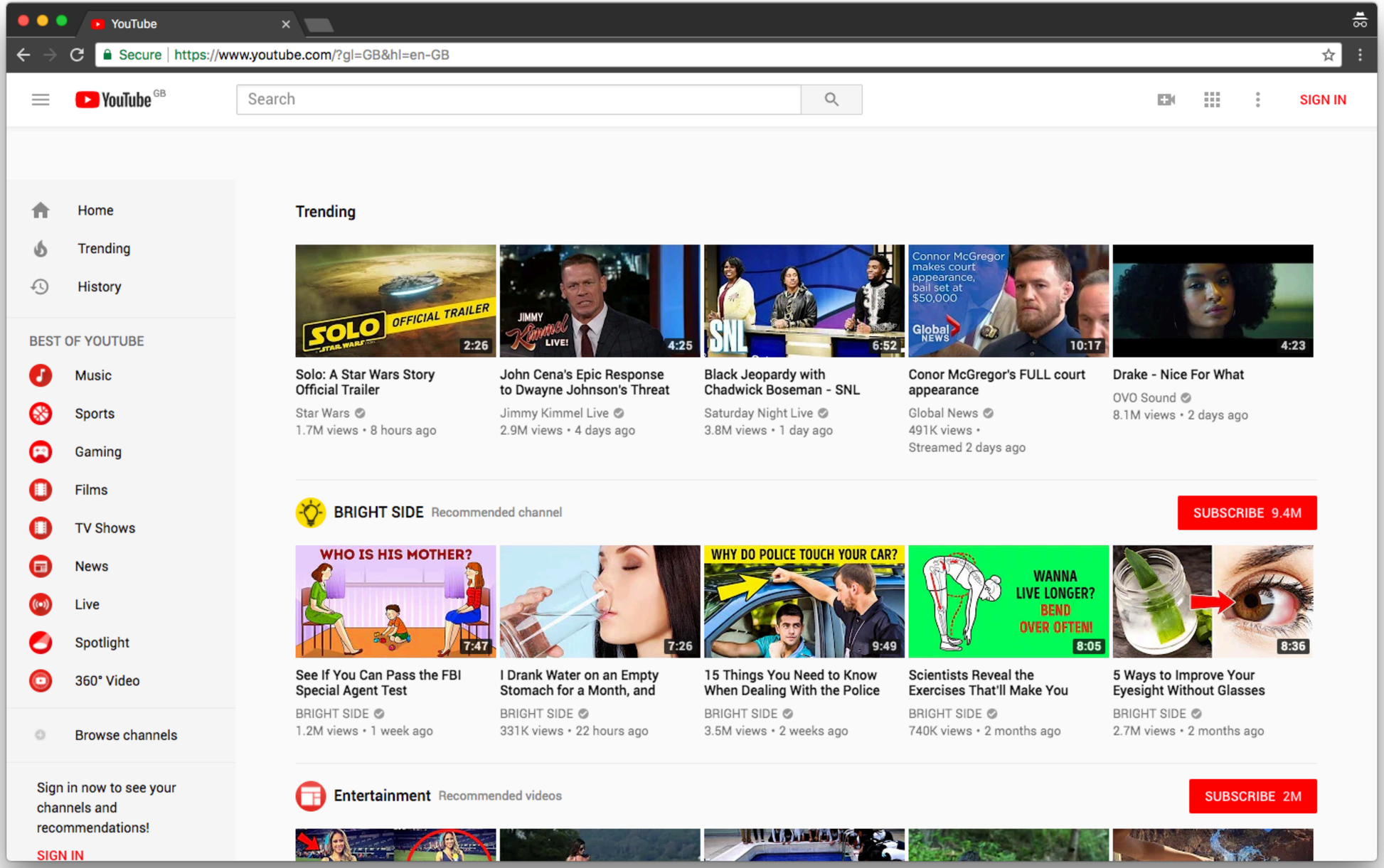
SETUP CONFIRMATION

```
$ node -v
v9.10.1
```

Windows users may have an issue, just let me know

SETUP CONFIRMATION

WHAT EVEN IS JS?


YouTube
Secure https://www.youtube.com/?gl=GB&hl=en-GB
YouTube GB
Search
SIGN IN
Home
Trending
History
BEST OF YOUTUBE
Music
Sports
Gaming
Films
TV Shows
News
Live
Spotlight
360° Video
Browse channels
Sign in now to see your channels and recommendations!
SIGN IN
Trending
SOLO OFFICIAL TRAILER 2:26
Solo: A Star Wars Story Official Trailer
Star Wars
1.7M views • 8 hours ago
JIMMY Kimmel LIVE! 4:25
John Cena's Epic Response to Dwayne Johnson's Threat
Jimmy Kimmel Live
2.9M views • 4 days ago
SNL 6:52
Black Jeopardy with Chadwick Boseman - SNL
Saturday Night Live
3.8M views • 1 day ago
Connor McGregor makes court appearance, bail set at $50,000
Global NEWS 10:17
Conor McGregor's FULL court appearance
Global News
491K views •
Streamed 2 days ago
4:23
Drake - Nice For What
OVO Sound
8.1M views • 2 days ago
BRIGHT SIDE Recommended channel
SUBSCRIBE 9.4M
WHO IS HIS MOTHER? 7:47
See If You Can Pass the FBI Special Agent Test
BRIGHT SIDE
1.2M views • 1 week ago
7:26
I Drank Water on an Empty Stomach for a Month, and
BRIGHT SIDE
331K views • 22 hours ago
WHY DO POLICE TOUCH YOUR CAR? 9:49
15 Things You Need to Know When Dealing With the Police
BRIGHT SIDE
3.5M views • 2 weeks ago
WANNA LIVE LONGER? BEND OVER OFTEN! 8:05
Scientists Reveal the Exercises That'll Make You
BRIGHT SIDE
740K views • 2 months ago
8:36
5 Ways to Improve Your Eyesight Without Glasses
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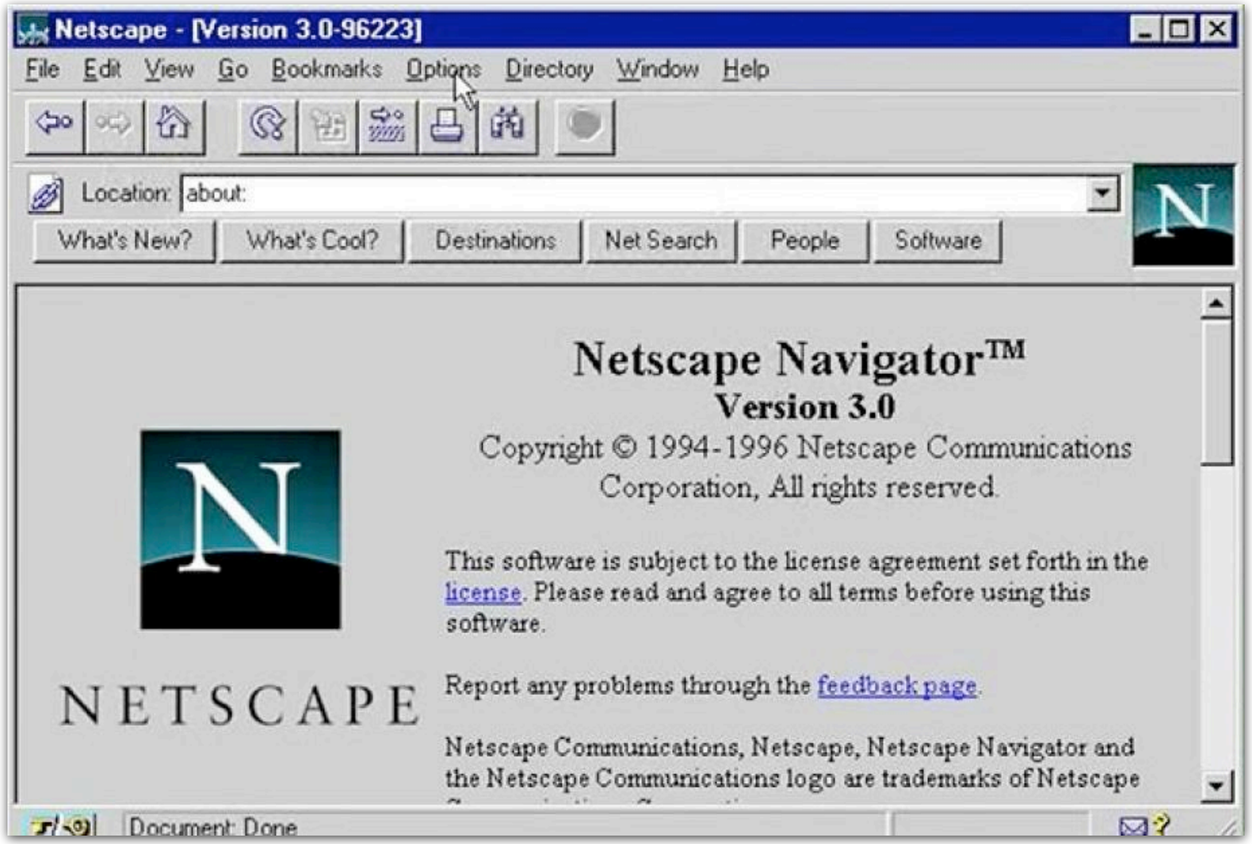
JS


Netscape - [Version 3.0-96223]
File Edit View Go Bookmarks Options Directory Window Help
Location: about:
What's New? What's Cool? Destinations Net Search People Software
Netscape Navigator™
Version 3.0
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NETSCAPE
Document: Done

python

vs

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QUICK POINTS

```
$ https://goo.gl/zysx8v
```

```
$ node file.js
```

GIRLS WHO CAN

0 - HOME

```
// printing
console.log("Hey there everyone!");

// comments aren't run as `code`
```

GIRLS WHO CAN

0 - HOME

```
// printing
console.log("My name is Adam”);
```

GIRLS WHO CAN

1 - VARIABLES

```
// text
var name = "Adam";
console.log(name);

// numbers
var number = 2;

// printing and combining
console.log("my number is: " +
number);
```

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2 - BOOLEANS

```
// a boolean
var isAlive = true;

console.log(isAlive);

// inverse of boolean
console.log(!isAlive);
```

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3 - CONDITIONALS

```
var isAlive = true;

// if isAlive = true
if (isAlive) {
    console.log('im alive!');
}

// reverse isAlive
if (!isAlive) {
    console.log('im dead!');
}
```

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3 - CONDITIONALS

```
// else if example
var number = 6;

if (number > 10) {
    console.log('its greater than 10');
}
else {
    console.log('its not greater than 1,
and not smaller than 5');
}
```

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4 - MATHS

```
// division
console.log(5 / 2);

// addition
console.log(5 + 5);

// multiplication
console.log(5 * 2);

// subtraction
console.log(5 - 3);

// modulus
console.log(5 % 3); // remainder 2
console.log(5 % 5); // remainder 0;
console.log(5 % 1); // remainder 0;
```

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SCENARIO 1 STUDENT RESULT CALCULATOR

RESULTS

- Coursework mark = 75
- Exam mark = 80

WEIGHTS

- Coursework = 30
- Exam = 70

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SCENARIO 1 STUDENT RESULT CALCULATOR

TWO MARKS

- Coursework mark: 75
- Exam Result mark: 80

TWO WEIGHTS

- Coursework 30%
- Exam Result 70%

ONE FINAL MARK

- Student overall Mark in %

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5 - LOOPS

```
// for loop
for (var counter = 0; counter < 10;
counter++) {
    console.log(counter);
}

console.log("-----");

// while loop
var counter = 0;
while(counter < 10) {
    console.log(counter++);
}
```

GIRLS WHO CAN

5 - LOOPS

```
// Dangerous!
while(true) {
    console.log("Hey");
}
```

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6 - ARRAYS

```
// set it to a variable
var fruits = ['apple', 'pear', 'orange'];
// 0 = apple
// 1 = pear
// 2 = orange

// checking the first item
console.log(fruits[0]);

// looping through the array
for (var item of fruits) {
    console.log(item);
}
```

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SCENARIO 2
PRINT ALL STORE PRICES

MY SHOP

- Apple: £1
- Pear: £5
- Orange £2
- Coke: £1.50
- Lemonade: £2.20
- Water: £9.99

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SCENARIO 2 PRINT ALL STORE PRICES

2 ARRAYS

- Name + price
- Match the **INDEX**
- Loop over the array

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7 - FUNCTIONS

```
// our function
function sayName() {
    console.log("My name is Adam");
}

// it is run everytime we 'call it'
sayName();
sayName();

// a function with parameters
function addNumbers(number1, number2) {
    console.log("value is: " + (number1 +
number2));
}
addNumbers(5,10);
```

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8 - CLASSES + OBJECTS

```
class Person {
    constructor(name, age) {
        // create our variables and set them
        this.name = name;
        this.age = age;
    }

    // function to print this persons name
    sayName() {
         console.log("my name is: " + this.name);
    }
}
```

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8 - CLASSES + OBJECTS

```
// create our first person as a variable
var dude1 = new Person("John", 12);

// call the function for the previous variable
dude1.sayName();

// access their properties
console.log(dude1.name);
console.log(dude1.age);

// change properties
dude1.name = "Adam";
console.log(dude1.name);
```

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SCENARIO 3 ADVANCED STUDENT RESULT CALCULATOR

JOHN

- Exam: 74.5%
- Coursework: 52%

SALLY

- Exam: 93.5%
- Coursework: 66%

BILL

- Exam: 44.2%
- Coursework: 45%

Use the same weights as previously

CW - 30
Exam - 70

GIRLS WHO CAN

SCENARIO 3 ADVANCED STUDENT RESULT CALCULATOR

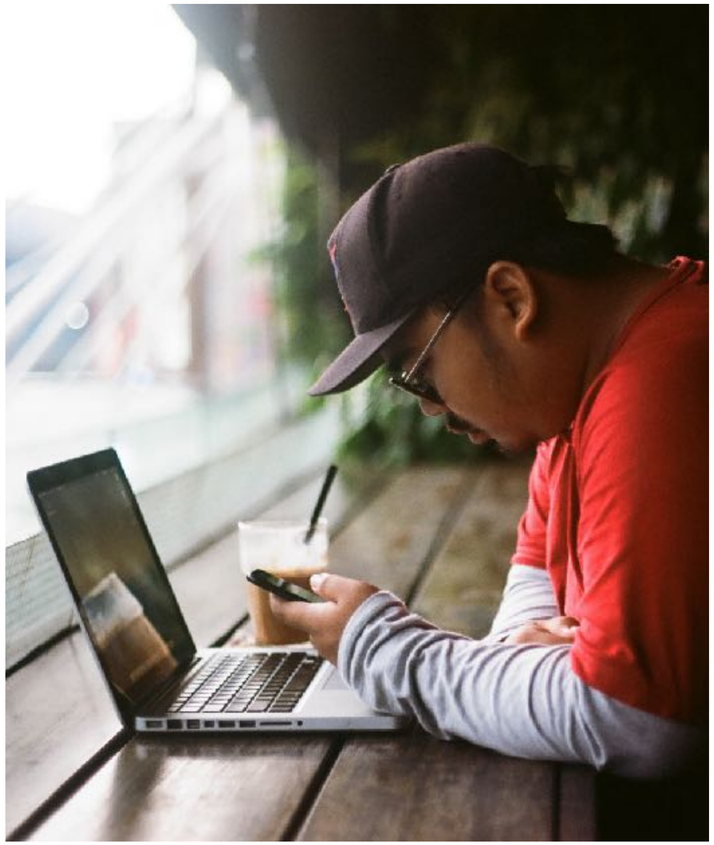
ARRAYS, CLASSES AND LOOPS

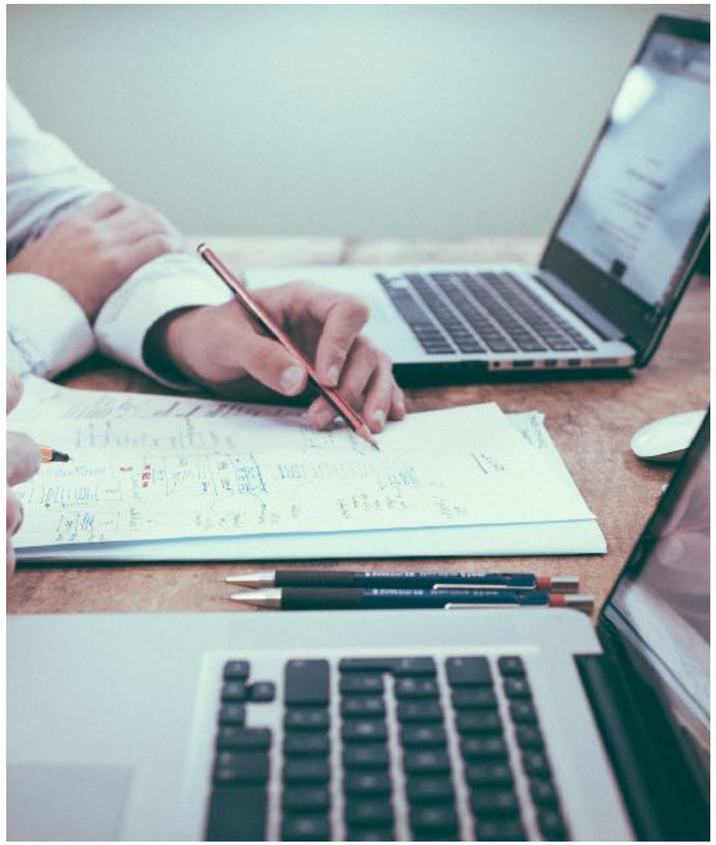
- Array of students
- Loop over array
- Function for getting result

REVIEW + PERSONAL LEARNING

Problems to solve will be in the same place as the demo code:

https://goo.gl/zysx8v





G I R L S W H O C A N

”Learning to code is useful no matter what your career ambitions are.”

Adapt and overcome your challenges

GET IN TOUCH WITH ME