

# Intro to Javascript

By Taimur Khan

# What is a programming language?

- A programming language is a formal language comprising a set of instructions that produce various kinds of output.
- Programming languages are used in computer programming to implement **algorithms**.
- The portion of the language that a computer can understand is called a “binary.” (1’s and 0’s)
- Translating programming language into binary is known as “compiling.”
- Interesting that the most effective way we’ve found to communicate with a computer borrows so heavily from the way we communicate with each other.

```
00110001 00000001 00000001
00110011 00000001 00000010
01010001 00001011 00000010
00100010 00000010 00001000
01000011 00000001 00000000
01000001 00000001 00000001
00010000 00000010 00000000
01100010 00000000 00000000
```

LEARN ALGORITHMS IN  
JS:

[https://github.com/trekhleb/j  
avascript-algorithms](https://github.com/trekhleb/javascript-algorithms)

# Let's Programme: A short exercise

- Add the numbers from 1 to 10 together and print out the result:  $1 + 2 + \dots + 10 = 55$
- It could be written in English like this:
  1. Store the number 0 in memory location 0.
  2. Store the number 1 in memory location 1.
  3. Store the value of memory location 1 in memory location 2.
  4. Subtract the number 11 from the value in memory location 2.
  5. If the value in memory location 2 is the number 0, continue with instruction 9.
  6. Add the value of memory location 1 to memory location 0.
  7. Add the number 1 to the value of memory location 1.
  8. Continue with instruction 3.
  9. Output the value of memory location 0.
- Oh man....

# Let's Programme: A short exercise

```
let total = 0, count = 1;
```

```
while (count <= 10) {
```

```
  total += count;
```

That's better!

```
  count += 1;
```

```
}
```

```
console.log(total);
```

```
// → 55
```

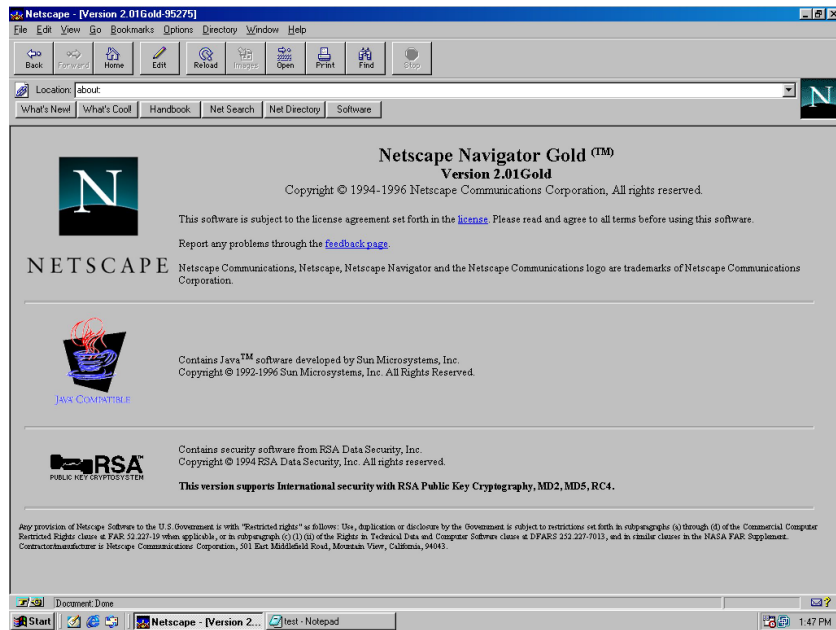
# Interpreted vs Compiled Programming Languages

Reading exercise:

<https://www.freecodecamp.org/news/compiled-versus-interpreted-languages/>

# Enter Brendan Eich

- Hired by Netscape Communications in 1995
- Create Javascript in 10 days...
- Job was to create a small scripting language for the DOM, while Java was supposed to be the component heavy-lifter
- Hence Sun Microsystems (creators of Java) preferred name JavaScript
- Initially called Mocha
- Microsoft reverse-engineered JScript for IE



Source: <https://cdn.auth0.com/blog/js-history/netscape2.png>

# JS vs ECMA

- After its adoption outside of Netscape, a standard document was written to describe the way the JavaScript language should work so that the various pieces of software that claimed to support JavaScript were actually talking about the same language.
- This is called the ECMAScript standard, after the Ecma International organization that did the standardization.
- In practice, the terms ECMAScript and JavaScript can be used interchangeably—they are two names for the same language.
- European Computer Manufacturers Association (**ECMA**)

# JS: Closing thoughts

- There are those who will say *terrible* things about JavaScript. Many of these things are true.
- When I was required to write something in JavaScript for the first time, I quickly came to despise it.
- This had a lot to do with the fact that I did not have a clue what I was doing, of course, but there is a real issue here: JavaScript is ridiculously liberal in what it allows.
- The idea behind this design was that it would make programming in JavaScript easier for **beginners**.



Source: <https://9gag.com/gag/aqnmVXv>



# Further reading

- <https://javascript.info/intro>
- <https://en.wikipedia.org/wiki/ECMAScript>
- <https://www.youtube.com/watch?v=3-9fnjzmXWA>