

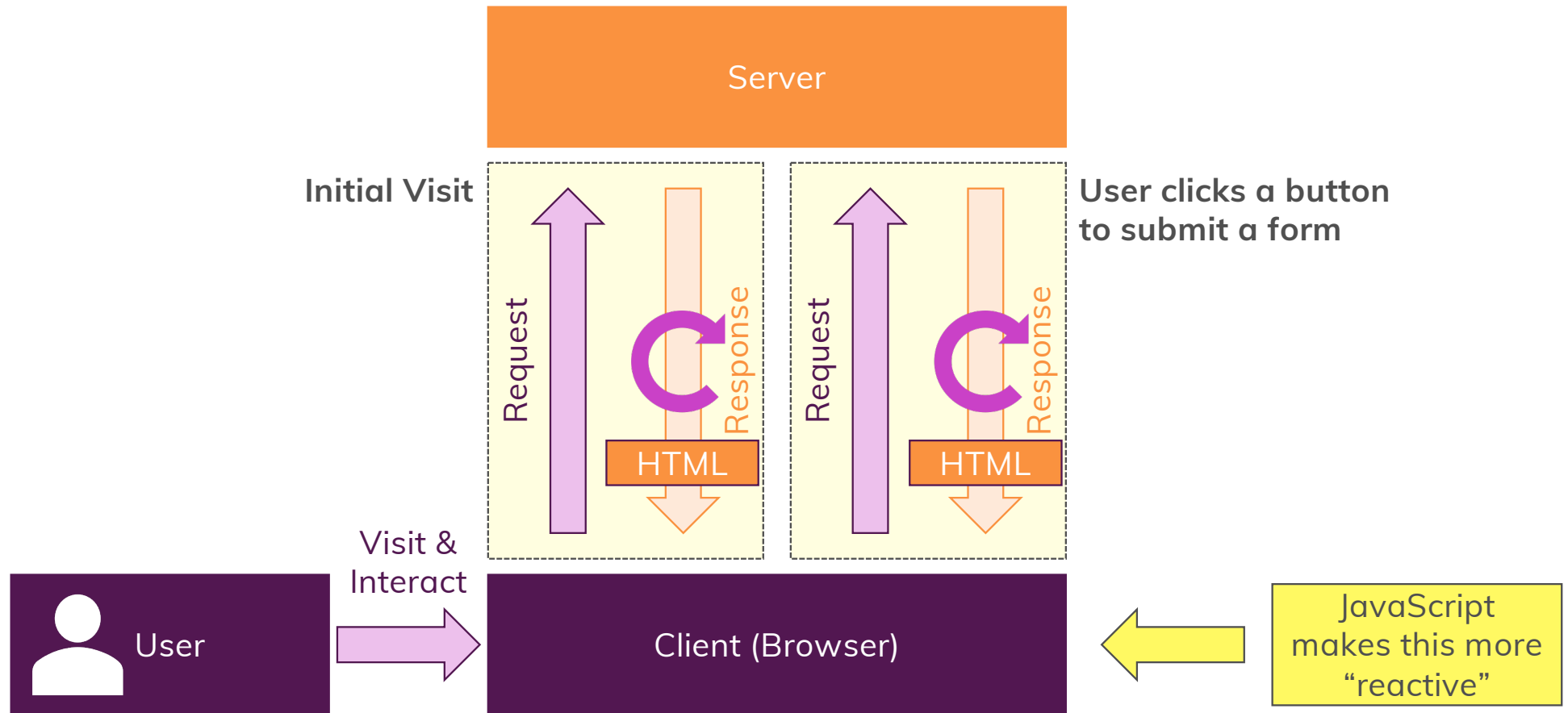
What is JavaScript?

JavaScript is a **dynamic, weakly typed** programming language which is **compiled at runtime**. It can be executed as part of a webpage in a browser or directly on any machine (“**host environment**”).

JavaScript was created **to make webpages more dynamic** (e.g. change content on a page directly from inside the browser). Originally, it was called LiveScript but due to the popularity of Java, it was renamed to JavaScript.

JavaScript is totally **independent** from Java and has **nothing in common with Java!**

How Do Webpages Work?



JavaScript Runs On A Host Environment

Browser-side

JavaScript was invented to create more dynamic websites by executing in the browser!

JavaScript can manipulate the HTML code, CSS, send background Http requests & much more

JavaScript CAN'T access the local filesystem, interact with the operating system etc

"Other" (e.g. Server-side)

Google's JavaScript Engine (V8) was extracted to run JavaScript anywhere (called "Node.js")

Separate Module!

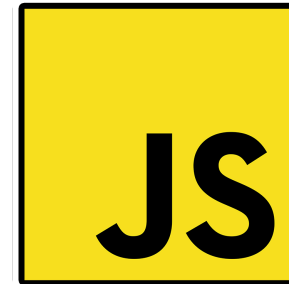
Node.js can be executed on any machine and is therefore often used to build web backends (server-side JavaScript)

Node.js CAN access the local filesystem, interact with the operating system etc. It CAN'T manipulate HTML or CSS

A Brief Overview Of The JavaScript History

1995	Netscape introduces “LiveScript” / “JavaScript”
1996	Microsoft releases its own version for IE
Late 1996	JavaScript submitted to ECMA International to start standardization
1997 - 2005	Standardization efforts, Microsoft didn’t really join and support the standardized JS version though
2006 - 2011	Huge progress in JavaScript ecosystem, Microsoft eventually joined forces

JavaScript and Java



Object-oriented,
strongly types

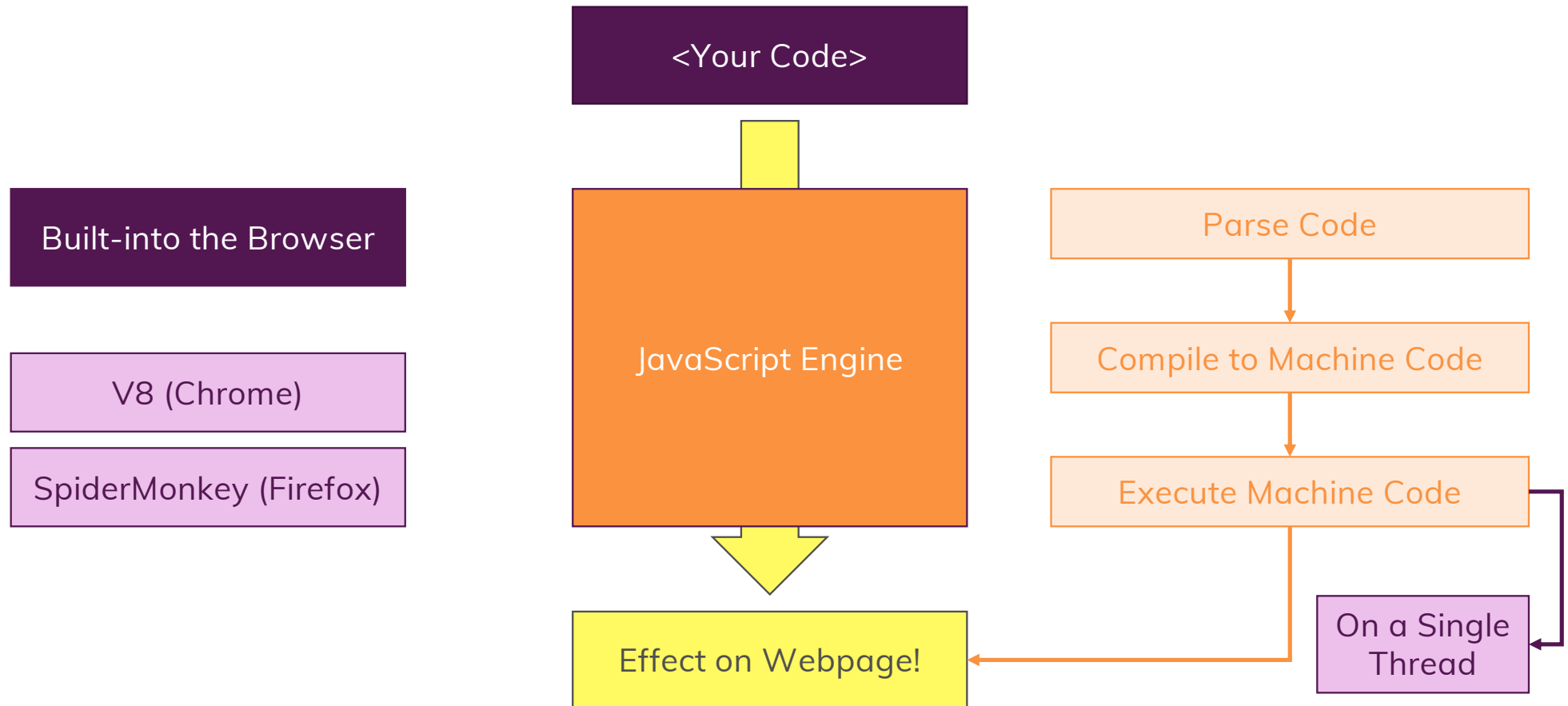
Totally independent programming languages
with different syntax and principles

Flexible, weakly
types

JavaScript was named JavaScript to "sound cool"

Java does NOT run in the browser, JavaScript
does

How Is JavaScript Executed?



Dynamic? Weakly Typed?

Dynamic, interpreted Programming Language



Weakly Typed Programming Language

Not pre-compiled, instead parsed and compiled “on the fly” (e.g. in the browser)

Data types are assumed (e.g. assigned to variables) automatically

Code evaluated and executed at runtime

You don't define that some variable has to hold a certain value (e.g. a number)

Code can change at runtime (e.g. type of a variable)

Data types are not set in stone but can change



What's In This Course?

