

## What We Learned Thus Far

Instructions that tell the browser what should be displayed on the screen



HTML

The content and  
structure of the  
displayed page



CSS

The styling of the  
displayed page and its  
content

Optional



JavaScript

Interactivity that might  
be needed on the  
displayed page

Optional

All the code we wrote thus far influenced what is **displayed by the browser** and how the loaded website **behaves in the browser**

For some websites, that's enough.

But other websites need **server-side capabilities** as well!

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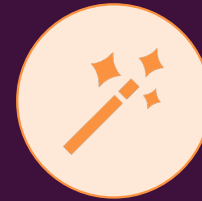
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# Browser Instructions: HTML, CSS & JavaScript



## Option A

Write the instructions (i.e. HTML, CSS & JavaScript code) themselves



## Option B

Write server-side code that generates the browser instructions (HTML, CSS, JavaScript) dynamically

# Frontend, Backend & Fullstack

Fullstack Development

## “The Frontend”

Executes in the browser / on the visitor's machine

The code that controls what the user sees and interacts with

HTML

CSS

JS



## “The Backend”

Executes on the server / a remote machine

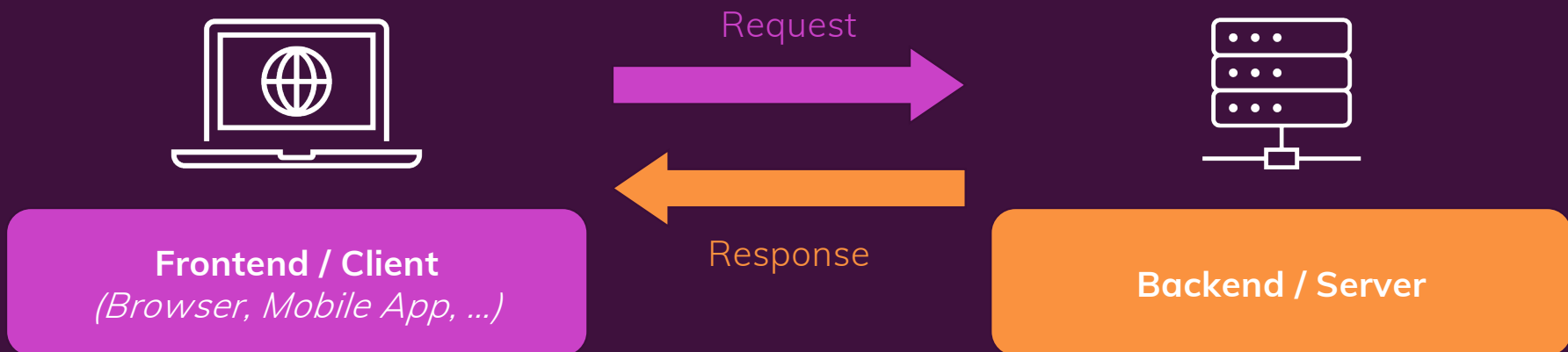
The code that controls what is being served & executes “behind the scenes”

May parse and store incoming data, fetch data, store files ...

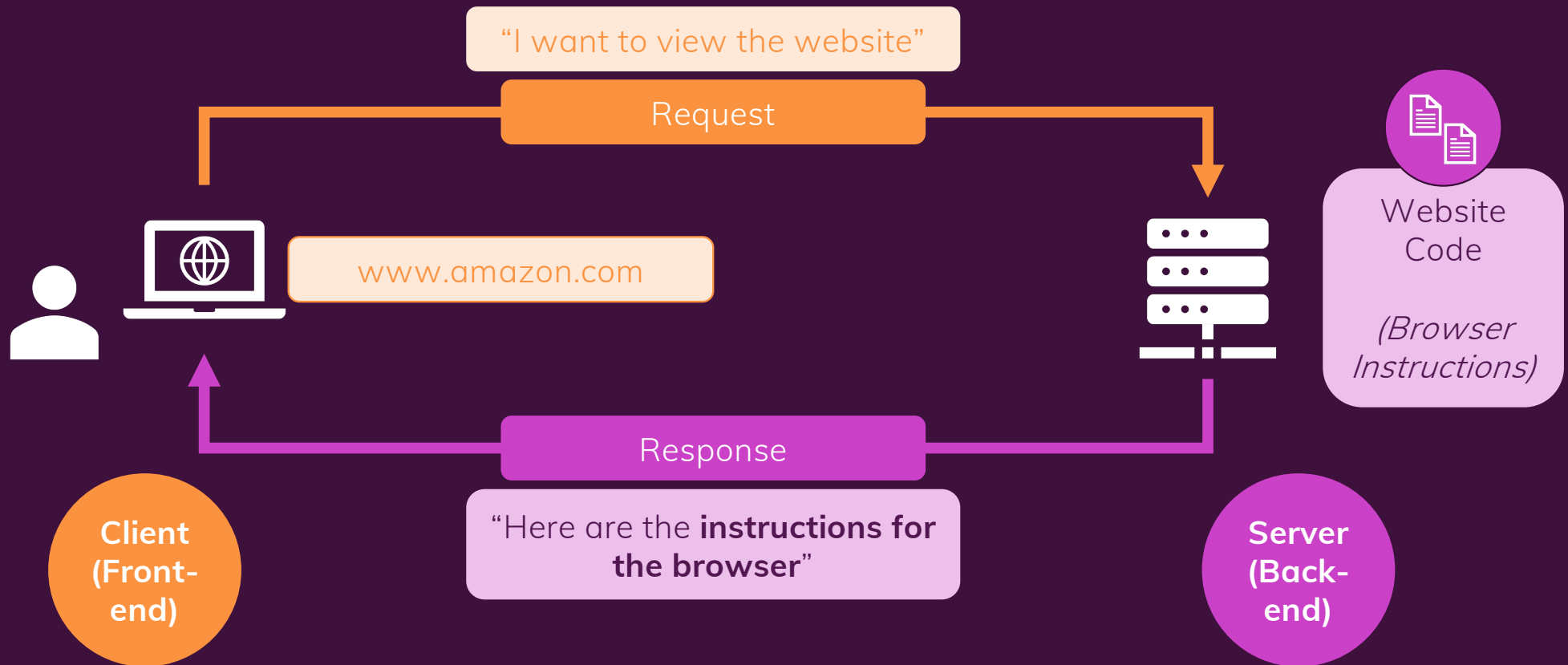
As a web developer, you can specialize on frontend, backend or both. This course teaches both fields in-depth!

## What is “a Backend”?

The backend of a website is the **server-side code** that **prepares the data** (e.g. HTML content) that's **sent to the client** (browser) or **that handles submitted data** (e.g. submitted via a form)

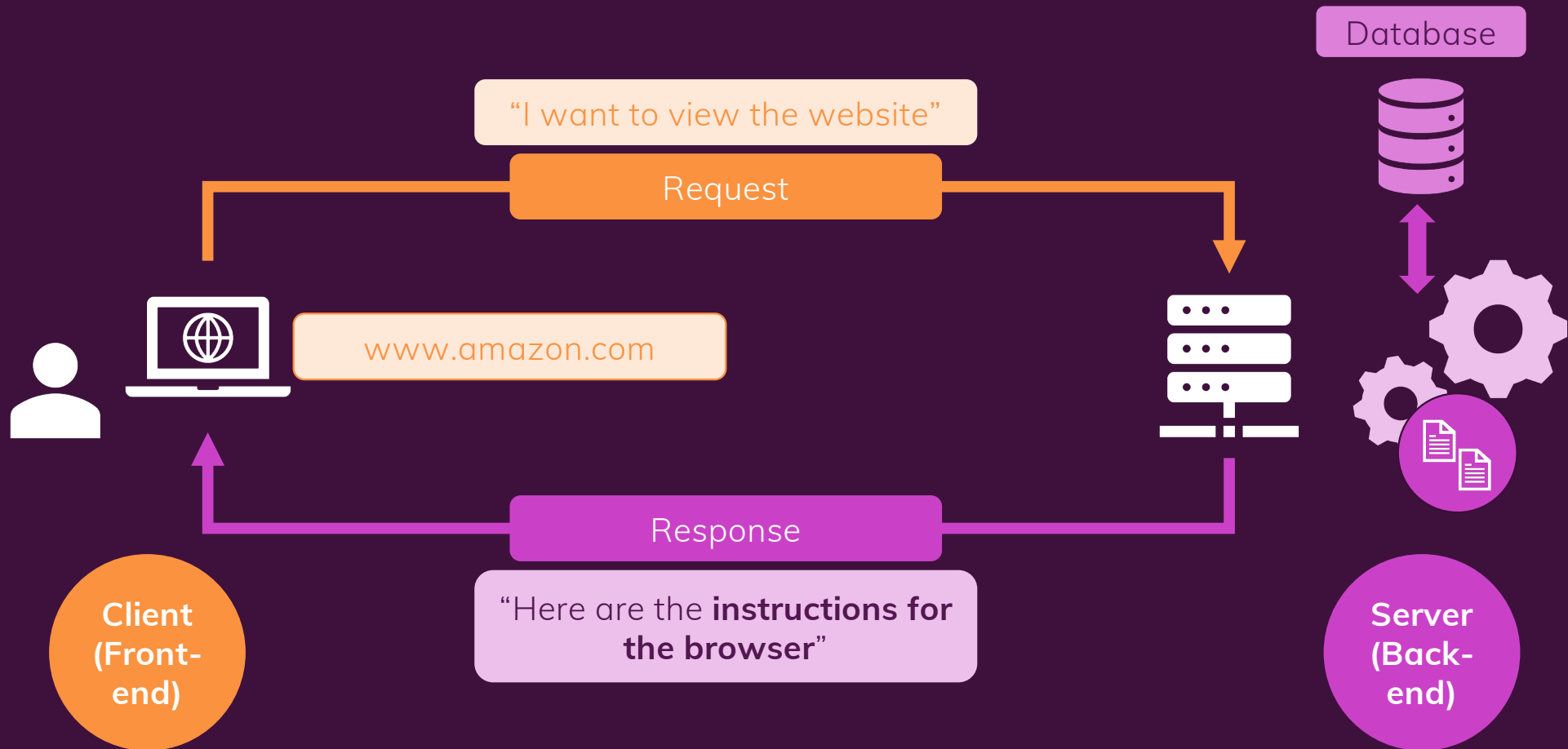


# How The Web Works





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# How Do You Write Server-Side Code?

We need a programming language that can be executed on a server (i.e. NOT in the browser)

What is “a server”?

In the end, just a regular computer

You can basically use ANY programming language on the server!

Python

PHP

C#

NodeJS  
(JavaScript)

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NodeJS is “JavaScript for the server-side”

JavaScript, as you learned it, with **more features** (e.g. read + write files, parse incoming requests, send responses, ...)

# Different Kinds Of “Web Development”

Web development is all about building websites, web apps or web services



Websites



Regular web pages you can load in a browser (e.g. [www.apple.com](http://www.apple.com))



Web Apps



Websites which provide a (desktop or mobile) app like experience (e.g. Google Sheets)



Web Services



“Invisible services” that may be used by other products (e.g. mobile apps using the Google Maps Service)