Web APIs

Coding Boot Camp

Module 04
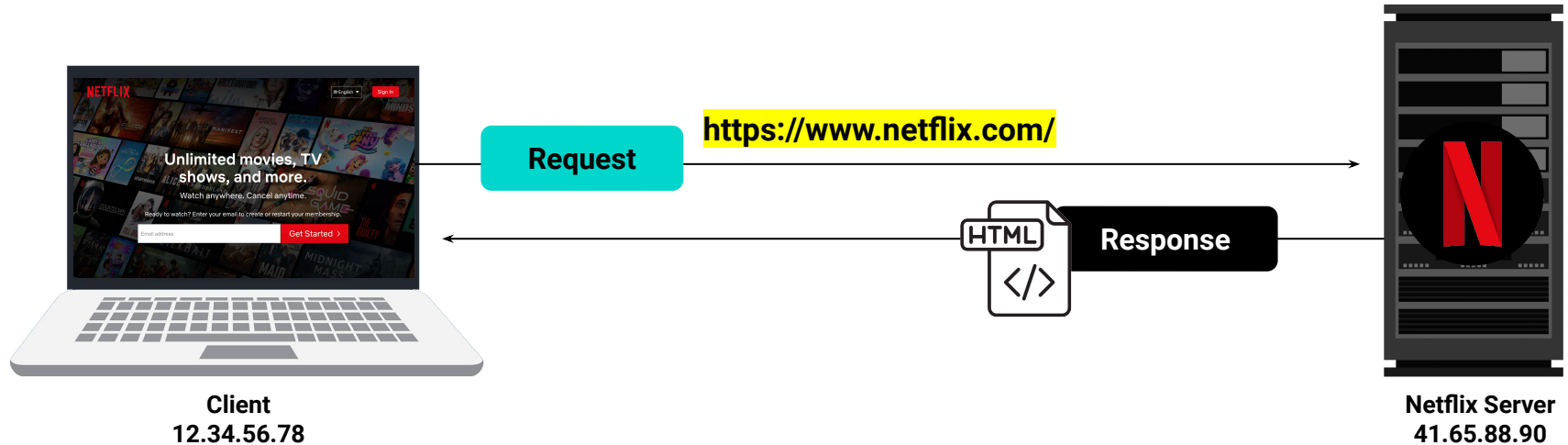
What is the web browser?

A **web browser**, or browser, is a program used to access information on the World Wide Web.
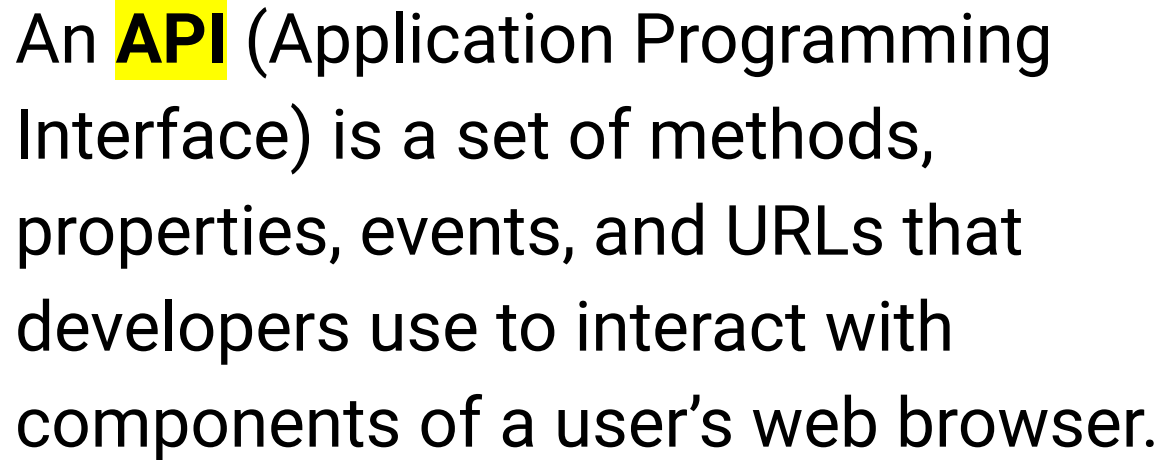
Browsers Access Information on the Web

Every webpage, image, and video on the web can be accessed via a specific **Uniform Resource Locator (URL)**. Browsers use the URL to retrieve resources from a web server and display them on a user's device.

Request

https://www.netflix.com/

Response

HTML

Client
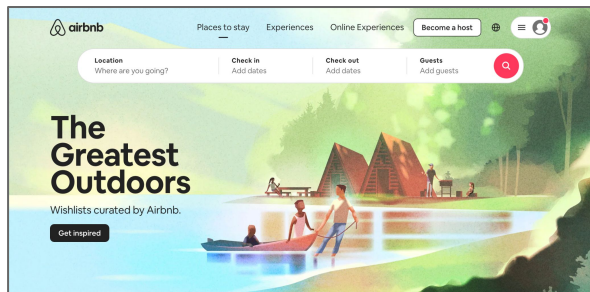**12.34.56.78**

Netflix Server
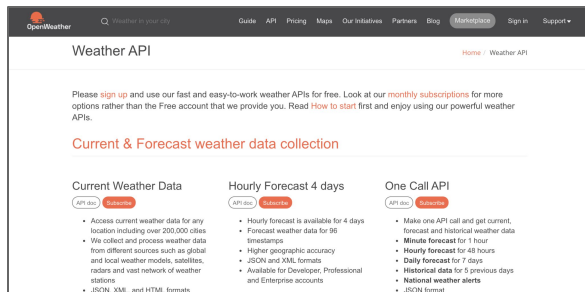**41.65.88.90**

What is an API?

An **API** (Application Programming Interface) is a set of methods, properties, events, and URLs that developers use to interact with components of a user's web browser.

Application Programming Interface
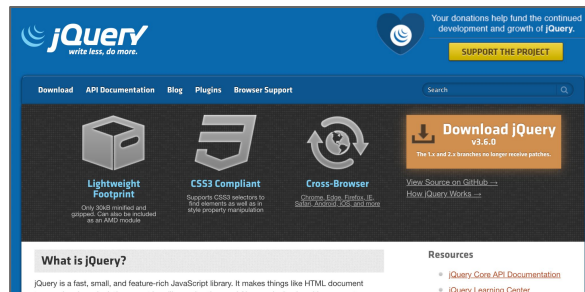
APIs can also interact with data sets, hardware or software on a user's computer, and third-party software and services.

AirBNB uses
Google's API for maps
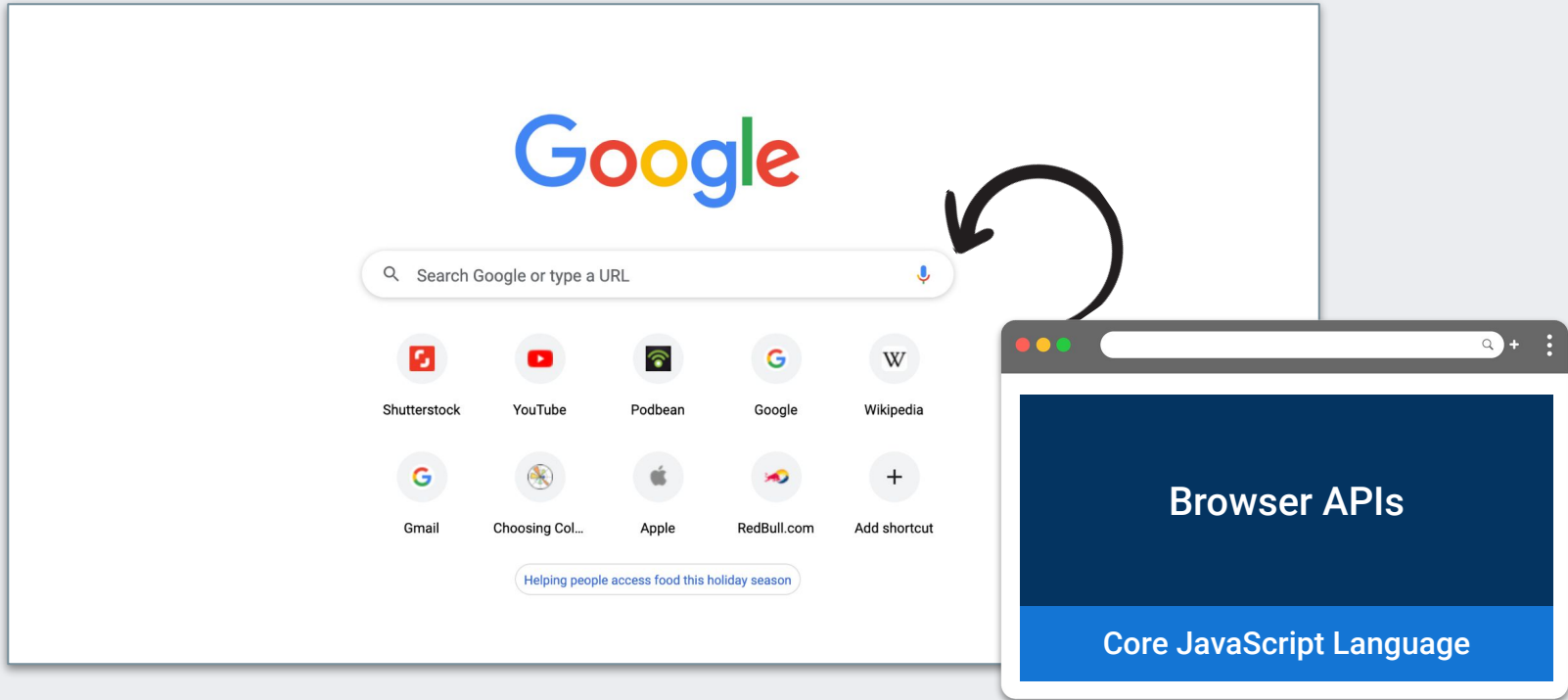
Google Searches for weather
uses the Weather API

Even jQuery is an API

What is a Web API?

Web APIs Use JavaScript to Manipulate Webpages

Web APIs are built into the web browser and contain methods that allow us to manipulate a webpage using JavaScript.
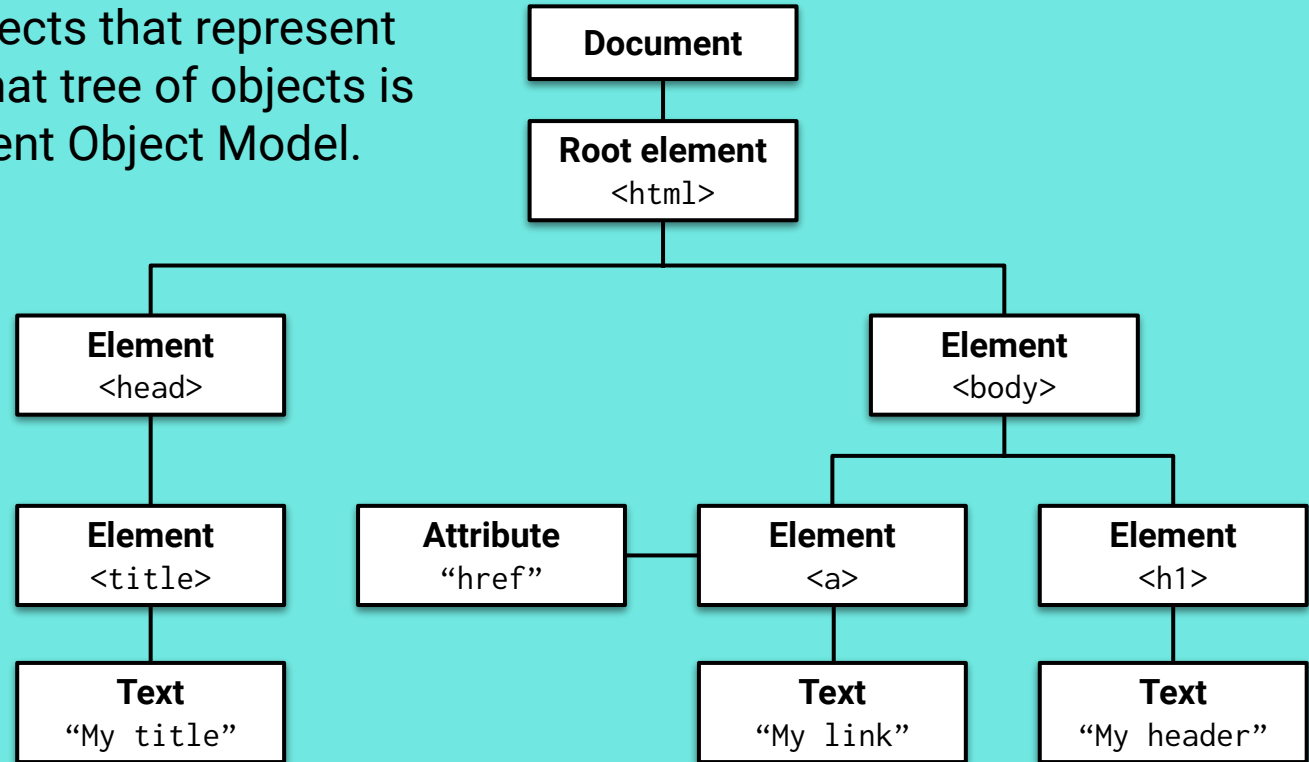
We use Web APIs to create elements and add them to the browser or to add and remove styles and attributes—all via JavaScript.

What is the DOM?

The Document Object Model

When we open a webpage, the browser creates a tree of objects that represent the opened page. That tree of objects is the DOM, or Document Object Model.

```
Document
   │
Root element
<html>
   │
   ├──────────────────────────────┐
Element                        Element
<head>                         <body>
   │                              │
Element          Attribute    Element      Element
<title>          "href"   ──  <a>          <h1>
   │                              │            │
Text                           Text         Text
"My title"                     "My link"    "My header"
```

Using the DOM, we can manipulate the HTML elements on the page via JavaScript.

Instructor Demonstration

Mini Project