

SIQI (FERMI) FEI

CSC309 Week 1

VSCODE & HTML & CSS

SIQI (FERMI) FEI

Please join the Zoom for polls

Meeting Code:

Password:

Breakdown

Welcome to first tutorial of CSC309!

VSCODE

SET UP
DEBUGGING

INTRO

IN THE REAL WORLD
DNS & HTTP

HTML

STRUCTURE
ELEMENTS

CSS

EXTERNAL CSS
INTERNAL CSS
CSS SELECTORS

VSCODE

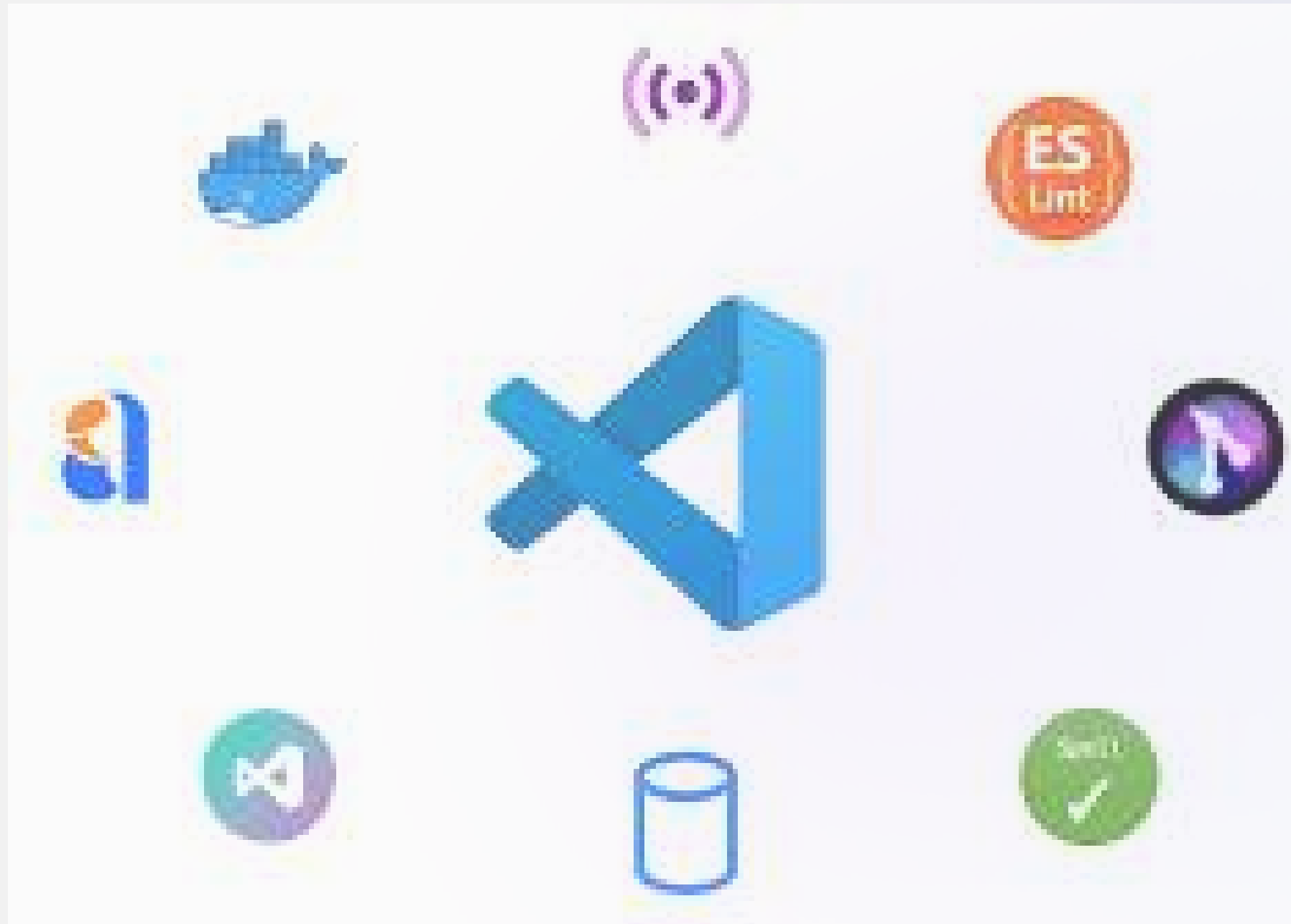
Set Up

DOWNLOAD

<https://code.visualstudio.com/download>



VSCODDE



Extension

A VSCode extension is a package that adds functionality or customizations to Visual Studio Code, enabling developers to enhance their workflows with tools, languages, themes, and integrations.

VSCODE

DEBUGGING TOOLS

JAVASCRIPT DEBUGGER

Integrates debuggers for various languages or platforms directly within VSCode.

VERSION CONTROL INTEGRATION

GIT AUCTIONS

Enhances Git functionality with features like visual diffs, conflict resolution, and GitHub integration.

SYNTAX HIGHLIGHTING AND INTELLISENSE

FORMATTER

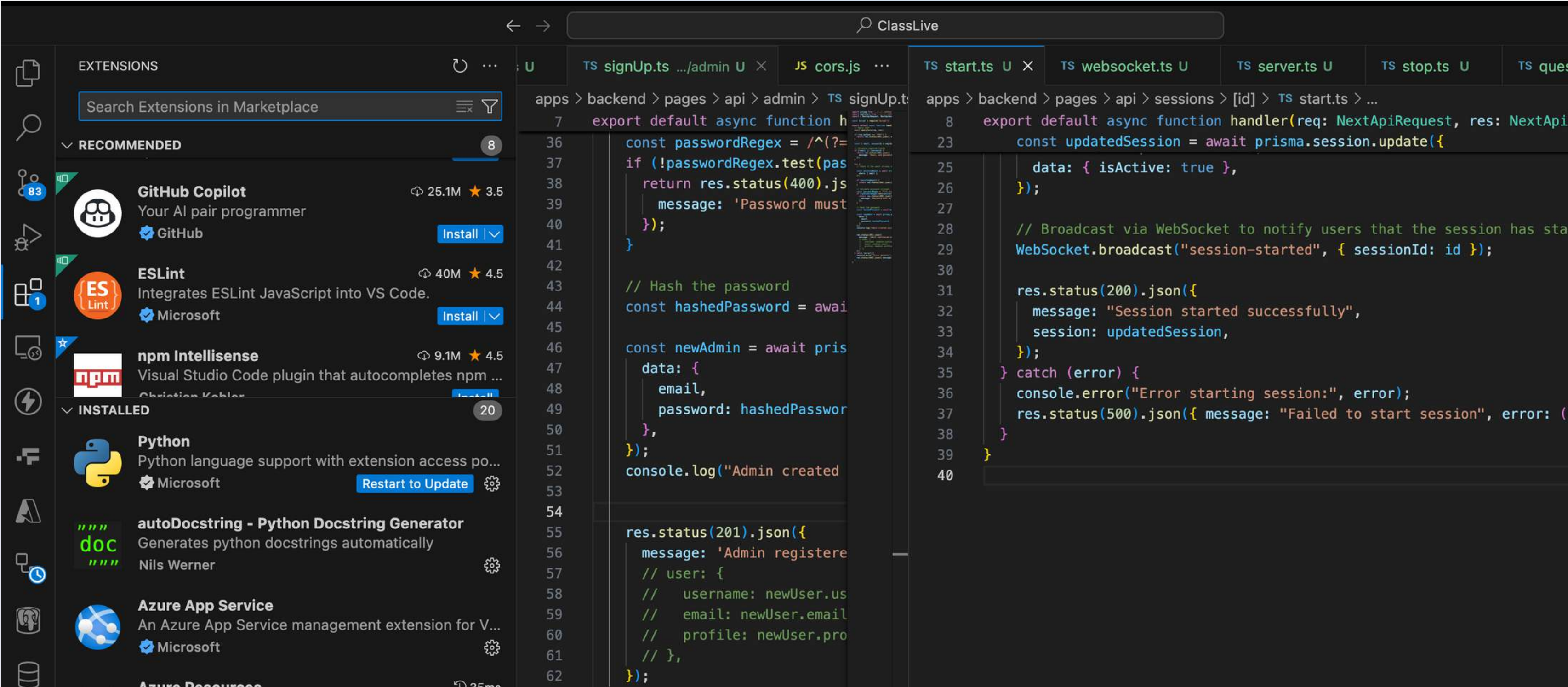
Adds support for specific programming languages with syntax highlighting, code completion, and error detection.

CUSTOM & ENHANCEMENTS

PROJECT MANAGER

Modifies the appearance of the editor with custom themes, icons, and layout adjustments.

VSCODE

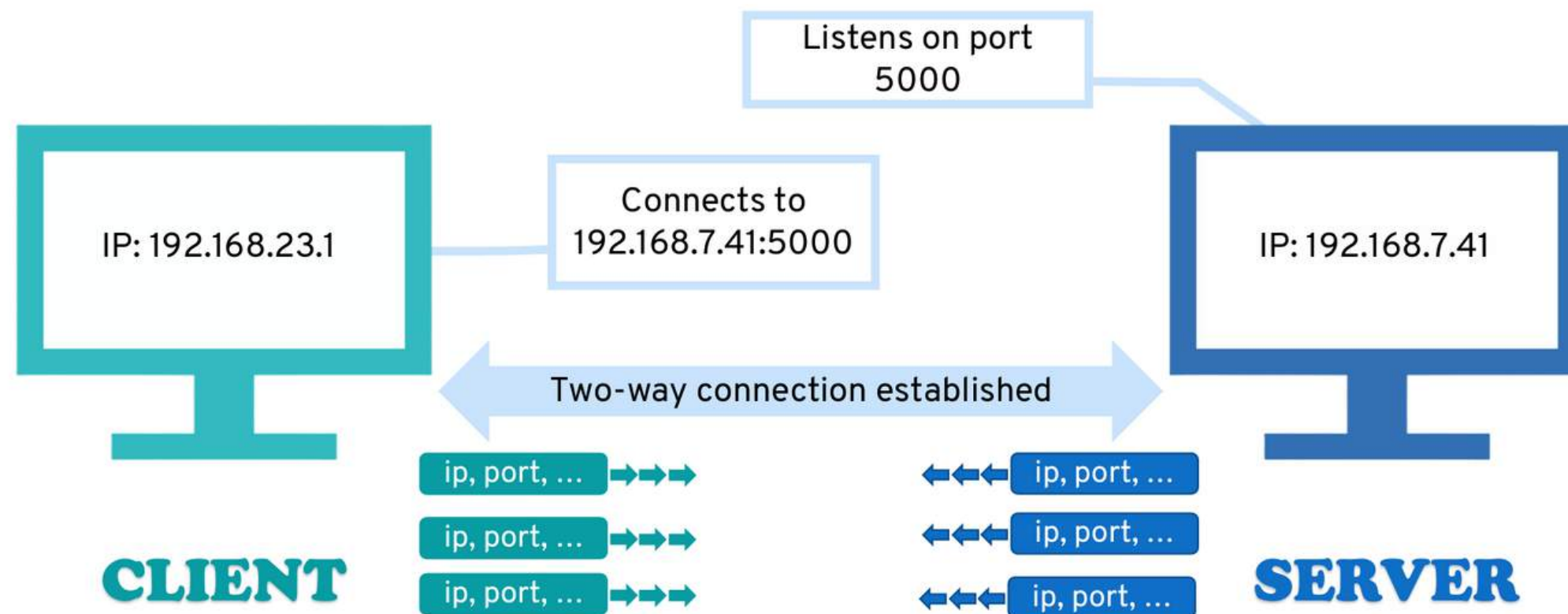


Demo

How the Web Works



INTRO



IN THE REAL WORLD

- How people access the website?
- How the website works?

IP Address

IPv4

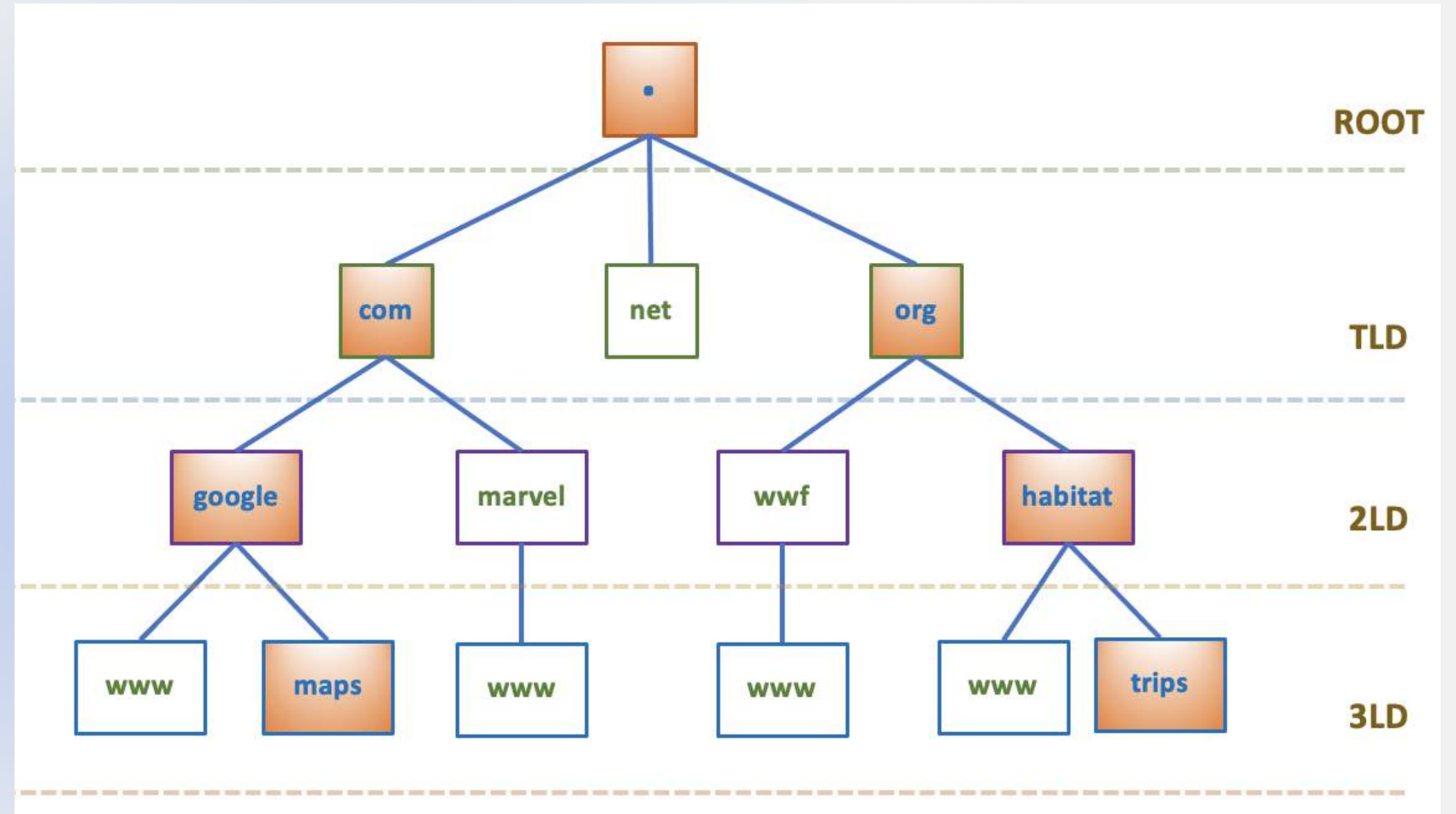
104.17.208.102

IPv6

2606:4700::6811:d166

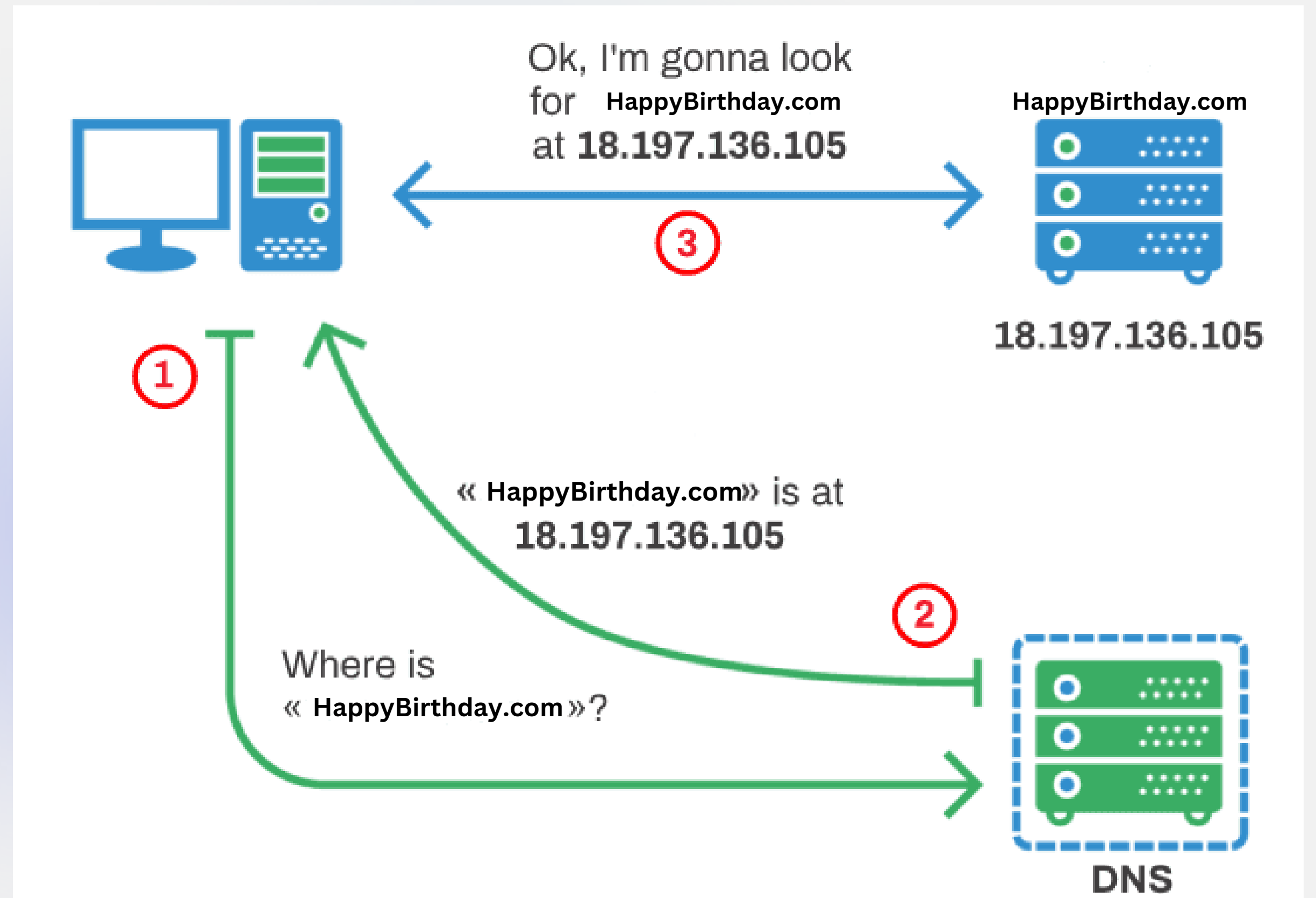
INTRO

Domain



INTRO

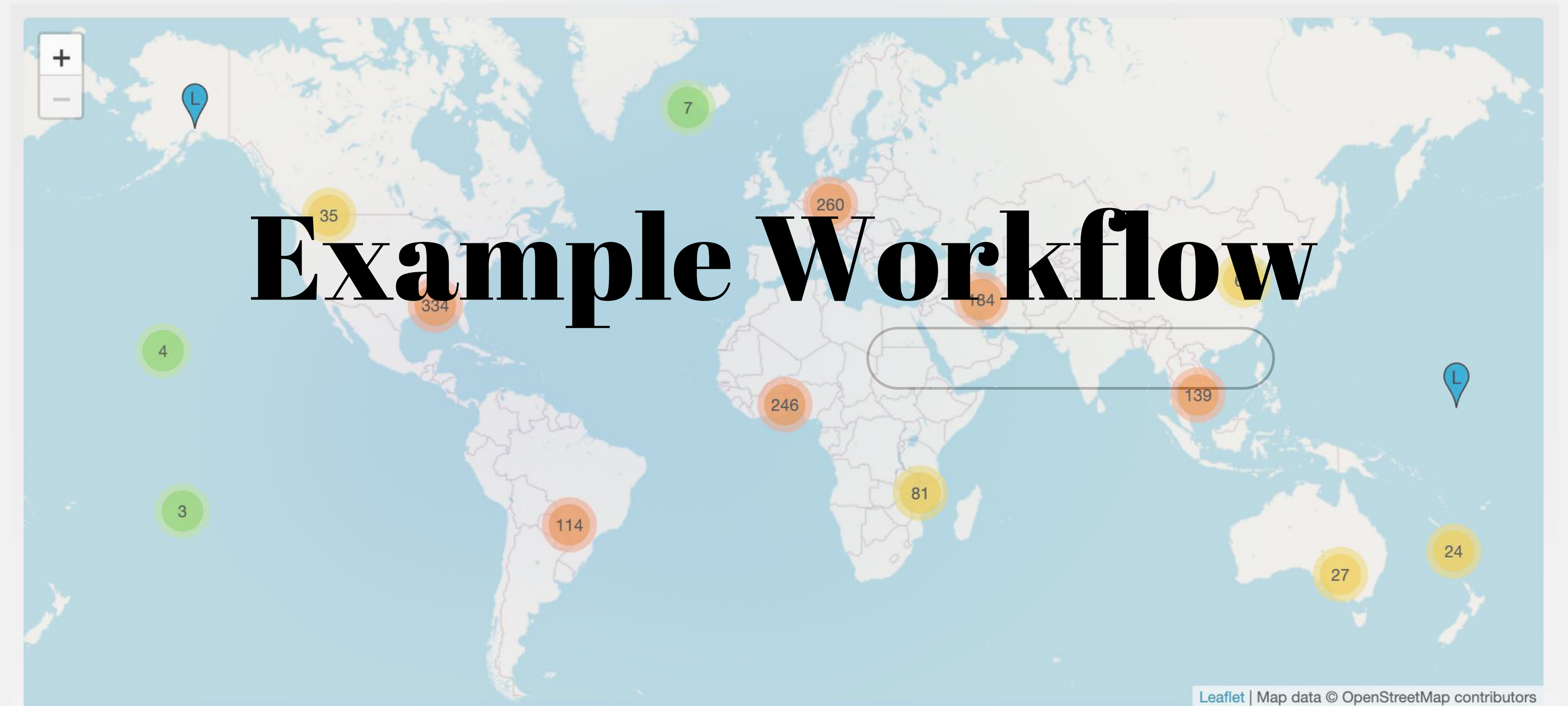
DNS



List of Root Servers

Hostname	IP Addresses	Manager
a.root-servers.net	198.41.0.4, 2001:503:ba3e::2:30	VeriSign, Inc.
b.root-servers.net	192.228.79.201, 2001:500:84::b	University of Southern Cal
c.root-servers.net	192.33.4.12, 2001:500:2::c	Cogent Communications
d.root-servers.net	199.7.91.13, 2001:500:2d::d	University of Maryland
e.root-servers.net	192.203.230.10	NASA (Ames Research Cen
f.root-servers.net	192.5.5.241, 2001:500:2f::f	Internet Systems Consorti
g.root-servers.net	192.112.36.4	US Department of Defense
h.root-servers.net	198.97.190.53, 2001:500:1::53	US Army (Research Lab)
i.root-servers.net	192.36.148.17, 2001:7fe::53	Netnod
j.root-servers.net	192.58.128.30, 2001:503:c27::2:30	VeriSign, Inc.
k.root-servers.net	193.0.14.129, 2001:7fd::1	RIPE NCC
l.root-servers.net	199.7.83.42, 2001:500:9f::42	ICANN
m.root-servers.net	202.12.27.33, 2001:dc3::35	WIDE Project

INTRO



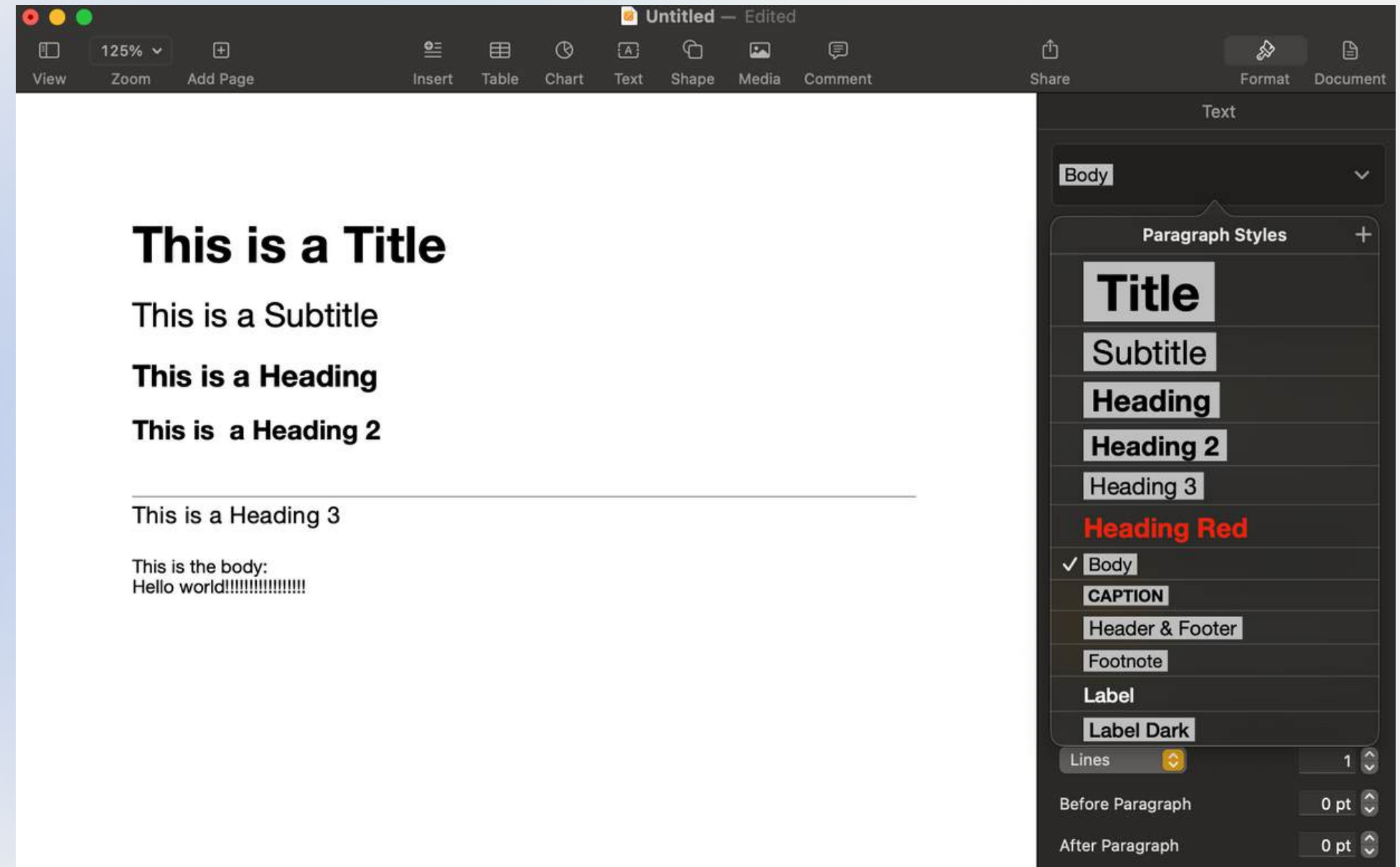
<https://root-servers.org/>

HTML

Structure

DOCUMENTS

We come across all
kinds of documents
everyday of our lives.
Newspapers, insurance
forms, shop
catalogues...

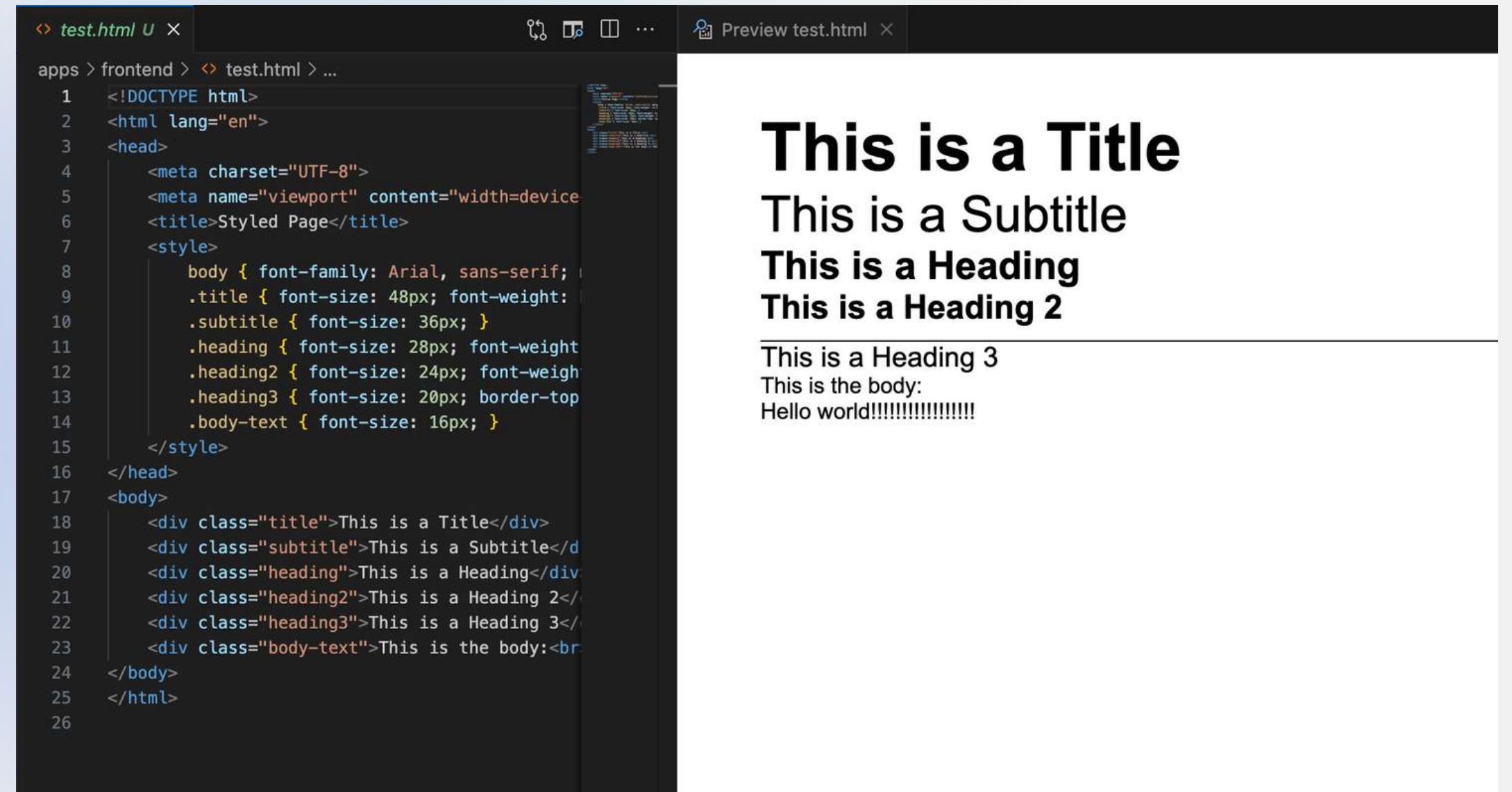


HTML

Structure

WEBSITES

In the browser window
you can see a web page
that features exactaly
the same content as the
Word document.



HTML

Elements

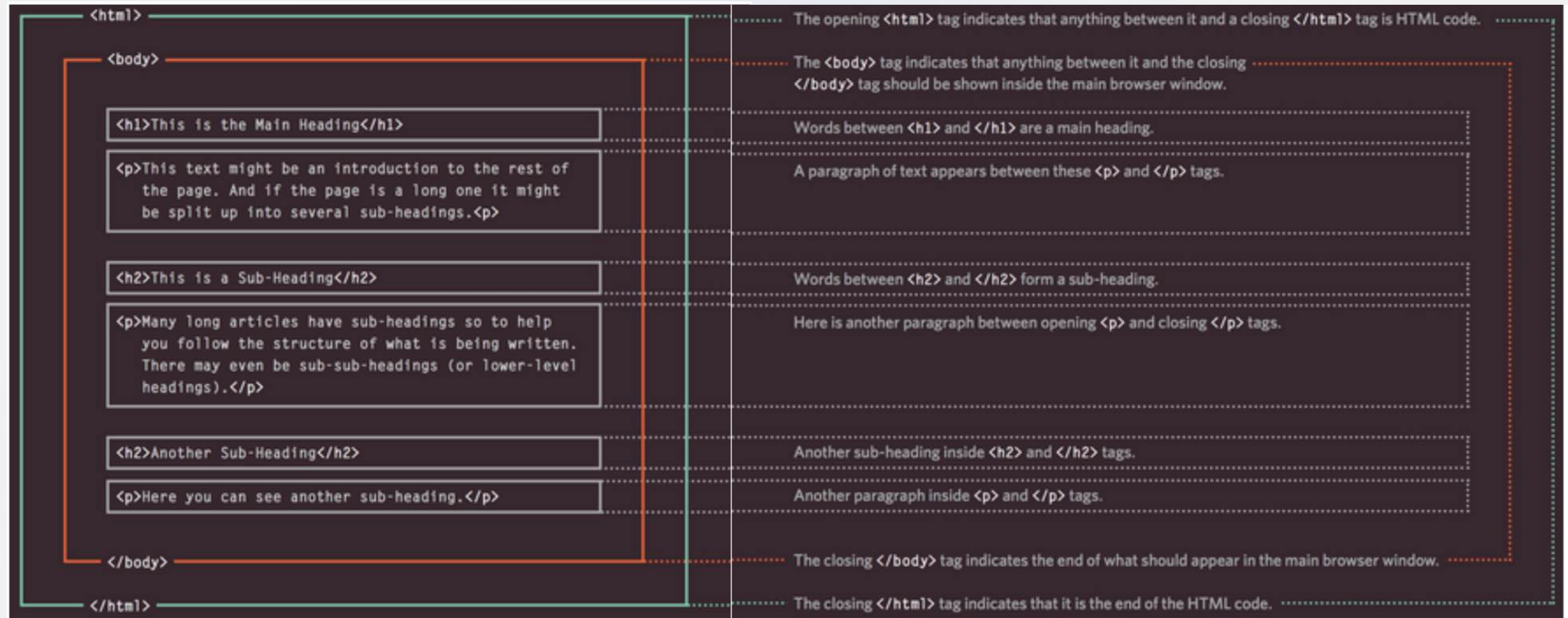
BODY, HEAD & TITLE

Text

List

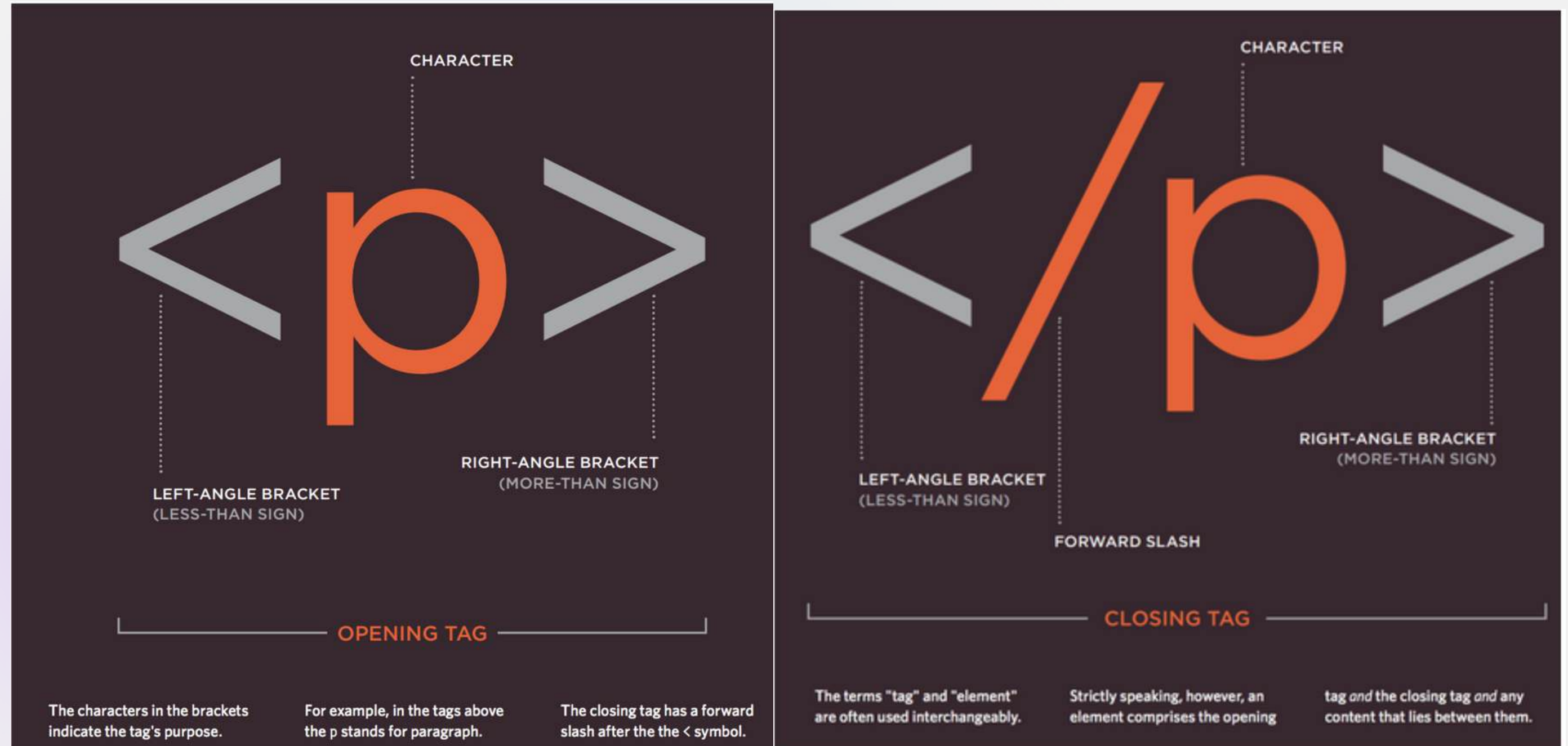
Links & Images & Video

HTML



HTML USES ELEMENTS TO DESCRIBE THE STRUCTURE OF PAGES

Tags



Attributes



The diagram illustrates the structure of an HTML attribute within a tag. It shows the code snippet `<p lang="en-us">Paragraph in English</p>`. Above the code, the text "ATTRIBUTE NAME" is written in green, with a bracket pointing to the `lang` attribute. Below the code, the text "ATTRIBUTE VALUE" is written in orange, with a bracket pointing to the value `"en-us"`.

```
<p lang="en-us">Paragraph in English</p>
```

HTML

DEMO

CSS

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Styled Page - Internal CSS</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      margin: 40px;
    }
    .title { font-size: 48px; font-weight: bold; }
    .subtitle { font-size: 36px; }
    .heading { font-size: 28px; font-weight: bold; }
    .heading2 { font-size: 24px; font-weight: bold; }
    .heading3 { font-size: 20px; border-top: 1px solid black; margin-top: 10px; }
    .body-text { font-size: 16px; }
  </style>
</head>
<body>
  <div class="title">This is a Title</div>
  <div class="subtitle">This is a Subtitle</div>
  <div class="heading">This is a Heading</div>
  <div class="heading2">This is a Heading 2</div>
  <div class="heading3">This is a Heading 3</div>
  <div class="body-text">This is the body:<br>Hello world!!!!!!!!!!!!!!!!!!!!!!</div>
</body>
</html>
```

Use Internal CSS

CSS

Use External CSS

```
<> external.html U X
apps > frontend > <> external.html > ...
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4    <meta charset="UTF-8">
5    <meta name="viewport" content="width=device-width, in
6    <title>Styled Page - External CSS</title>
7    <link rel="stylesheet" href="styles.css">
8  </head>
9  <body>
10   <div class="title">This is a Title</div>
11   <div class="subtitle"># styles.css U X
12   <div class="heading">
13   <div class="heading2">
14   <div class="heading3">
15   <div class="body-text">
16 </body>
17 </html>
18 |

apps > frontend > # styles.css > ...
1  body {
2    font-family: Arial, sans-serif;
3    margin: 40px;
4  }
5  .title { font-size: 48px; font-weight: bold; }
6  .subtitle { font-size: 36px; }
7  .heading { font-size: 28px; font-weight: bold; }
8  .heading2 { font-size: 24px; font-weight: bold; }
9  .heading3 { font-size: 20px; border-top: 1px solid
10 .body-text { font-size: 16px; }
11
```


CSS

CSS Selectors

UNIVERSAL SELECTOR

Type Selector

Class Selector

ID Selector

CHILD SELECTOR

Adjacent Sibling Selector

...

CSS

DEMO

SIQI (FERMI) FEI

TBC

We will introduce:

- more CSS in week 9

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Thank You

CSC309 Week 1

1 JANUARY, 2025