

BASICS OF WEB AND HTML5

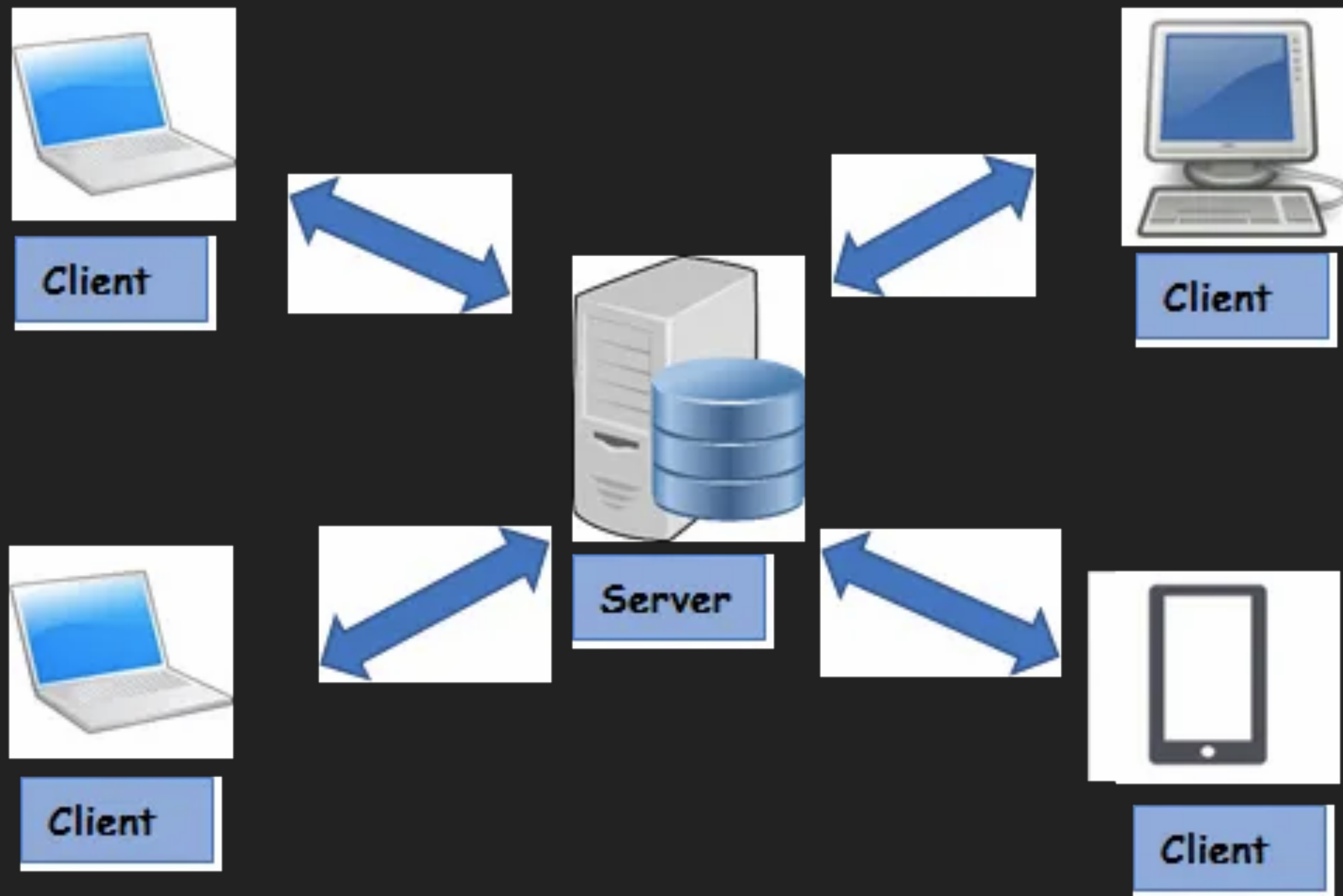
WHAT IS HTML

- ▶ Stands for Hypertext Markup language
- ▶ Markup languages are not the same as programming languages, they use tags to annotate documents.
- ▶ .html file
- ▶ Browser reads this file and knows how to display.
- ▶ Syntax and semantics

THE REQUEST/RESPONSE CYCLE

- ▶ When you type an address into the URL bar, what happens?
- ▶ Networks: LANs and WANs
- ▶ Servers : Machines that hold shared resources
- ▶ Clients: Machines for personal use

THE REQUEST/RESPONSE CYCLE



THE REQUEST/RESPONSE CYCLE



THE REQUEST/RESPONSE CYCLE

- ▶ URL : three parts
 - ▶ Protocol - how to connect
 - ▶ Domain - where to find
 - ▶ Document - what to find

THE REQUEST/RESPONSE CYCLE

- ▶ Protocols

- ▶ HTTP

- ▶ HTTPS

- ▶ FTP

THE REQUEST/RESPONSE CYCLE

- ▶ IP address and DNS
 - ▶ Internet Protocol Version 4 (Ipv4) and Internet Protocol Version 6 (Ipv6)
 - ▶ IPv4 addresses consist of four sets of decimal numbers, each ranging from 0 to 255, separated by periods.
 - ▶ For example, "192.168.1.1" is a common IPv4 address.
 - ▶ DNS(Domain name system) looks up the domain and returns the IP address

THE REQUEST/RESPONSE CYCLE

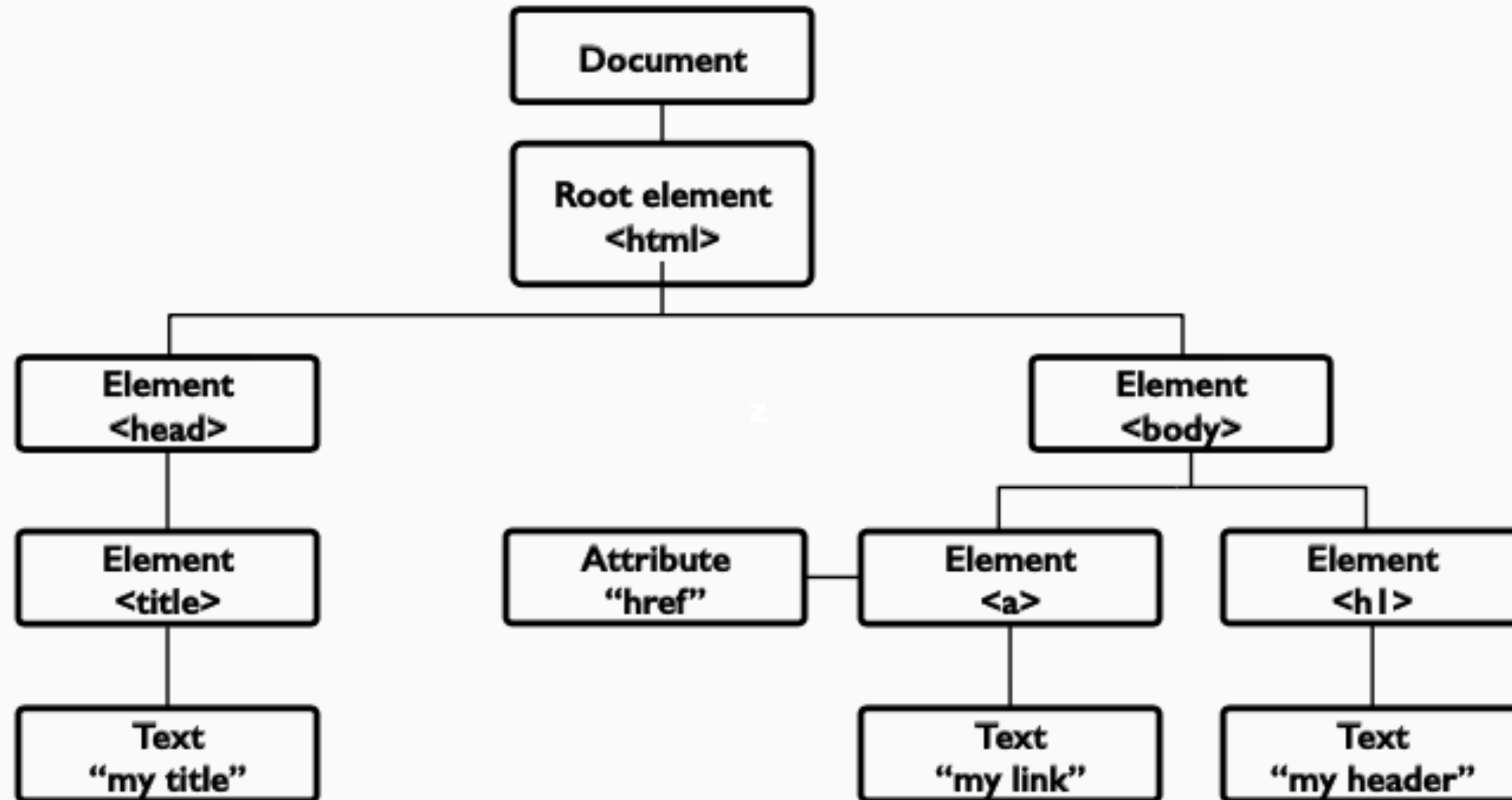
- ▶ Documents
 - ▶ Can specify a specific document we want

REQUEST/RESPONSE CYCLE

- ▶ The DNS returns the IP address
- ▶ The browser sends an HTTP request to the server located at that address.
- ▶ The server finds the requested file and sends it back as a response.
- ▶ The browser takes the response and renders the HTML code as a nice graphical presentation.

DOCUMENT OBJECT MODEL

- ▶ DOM provides common tree-like structure that all pages should follow



PARTS OF A DOCUMENT

- ▶ Doctype
 - ▶ Version of HTML
- ▶ Head
 - ▶ Metadata : language, title
 - ▶ Supporting files : Javascript, Styling , Add ons
- ▶ Body
 - ▶ Displayable content

TAGS

- ▶ Tags have beginning and end and some have attributes
- ▶ Tags are used to define elements and structure the content of a web page

`<h1>Hello World</h1>`
Start tag **Closing tag**

``

Self-closing tag

DISPLAY

- ▶ Block and Inline
- ▶ Block : "Takes up" whole width
- ▶ Inline : Only uses as much space as needed to contain the element.

COMMON TAGS

- ▶ Headings (block)
 - ▶ `<h1>`, `<h2>`, `<h3>`, `<h4>`, `<h5>`, `<h6>`!
- ▶ Paragraphs(block)
 - ▶ `<p> </p>`
- ▶ Divs (block)
 - ▶ `<div></div>`

COMMON TAGS

- ▶ Ordered list (block)
- ▶ Unordered list
 - ▶ ` ... `
 - ▶ Images (inline)
``

COMMON TAGS (SEMANTIC)

- ▶ `<header>`,
- ▶ `<nav>`
- ▶ `<footer>`
- ▶ `<figure>`

ATTRIBUTES

- ▶ Provides additional information about an element
- ▶ Specified in start tag
- ▶ Comes in name-value pairs

SPECIAL ATTRIBUTES

- ▶ class – applies special properties to groups of elements
- ▶ id – specifies a unique id to one element on the page
- ▶ style – specifies a certain visual style

DOM MANIPULATION

- ▶ `Window.document` object
- ▶ `getElementById`
- ▶ `style` – specifies a certain visual style