

Frontend Design

HTML, CSS & Bootstrap

Web Development

- **Web development** refers to the creating, building, and maintaining of websites.
- It includes aspects such as web design, web publishing, web programming, and database management.
- It is the creation of an application that works over the internet i.e. websites.

Role of Web programmer

- Laying out the design of the website so that it works in browsers.
- Making websites more interactive.
- Developing the logic by which a web application works.
- Testing and improving web applications.
- Building databases and bringing that information to be displayed on the web page or application.
- Making websites safer (cyber security).
- Improving website performance and speed.

Use Case

MINDSPRINT

What we do ▾

About us

Insights ▾

Careers

News

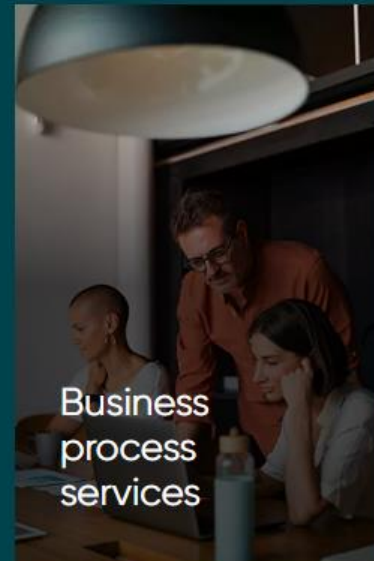
Contact



OUR SERVICES

We pioneer digital transformation

to drive superior customer outcomes with precise solutions.



HTML and HTML5

- HTML is the standard markup language for creating Web pages.
- HTML stands for Hyper Text Markup Language
- HTML describes the structure of Web pages using markup
- HTML elements are represented by tags
- HTML tags label pieces of content such as "heading", "paragraph", "table", and so on
- Browsers do not display the HTML tags, but use them to render the content of the page

HTML Template

<!DOCTYPE>



The diagram illustrates the structure of an HTML document using nested boxes. A red box at the top represents the DOCTYPE declaration. Below it, a green box represents the root HTML element. Inside the green box, a blue box represents the head section, and an orange box represents the body section. The closing tags for each section are placed at the bottom of their respective boxes: </head> for the head, </body> for the body, and </html> for the root HTML element.

<html>

<head>

</head>

<body>

</body>

</html>

HTML Elements and Tags

- HTML tags:

- > <p>, <h1> - <h6>, <a>, , <div>,

- Self-closing tags:

- >
, <hr>,

Attributes in HTML

- Common attributes:
- id, class, src, href, alt, title

Lists and Tables

- ◉ Ordered lists ()
- ◉ Unordered lists ()
- ◉ Definition lists (<dl>)
- ◉ Tables (<table>, <tr>, <th>, <td>)

Types elements

- Block level elements :

- > <div>, <p>, <h1> to <h6>, <form>, <table> etc.

- Inline elements:

- > , <a>, , <input> etc.

Multimedia Elements in HTML5

- ◉ Audio tag
- ◉ Video tag
- ◉ Iframe tag

Forms in HTML

- Form elements: `<form>`, `<input>`, `<textarea>`, `<button>`, `<select>`, `<option>`
- Attributes for form elements: `action`, `method`, `name`, `value`
- Method: `get` vs `Post`

HTML5 Forms Enhancements

- ◉ New input types:
 - > email, url, date, number, range
- ◉ Form validation attributes:
 - > required, pattern, min, max

Create Simple Website

- ◉ Create one simple Website
- ◉ Tourism place for your city
- ◉ Create pages:
 - > Home
 - > About
 - > Contact
 - > Places to Visit

What is CSS?

- ◉ CSS stands for Cascading Style Sheets
- ◉ CSS describes how HTML elements are to be displayed on screen, paper, or in other media
- ◉ CSS saves a lot of work. It can control the layout of multiple web pages all at once
- ◉ External stylesheets are stored in CSS files

Types of CSS

Types



```
graph TD; A[Types] --- B[Internal CSS]; A --- C[External CSS]; A --- D[Inline CSS]
```

Internal
CSS

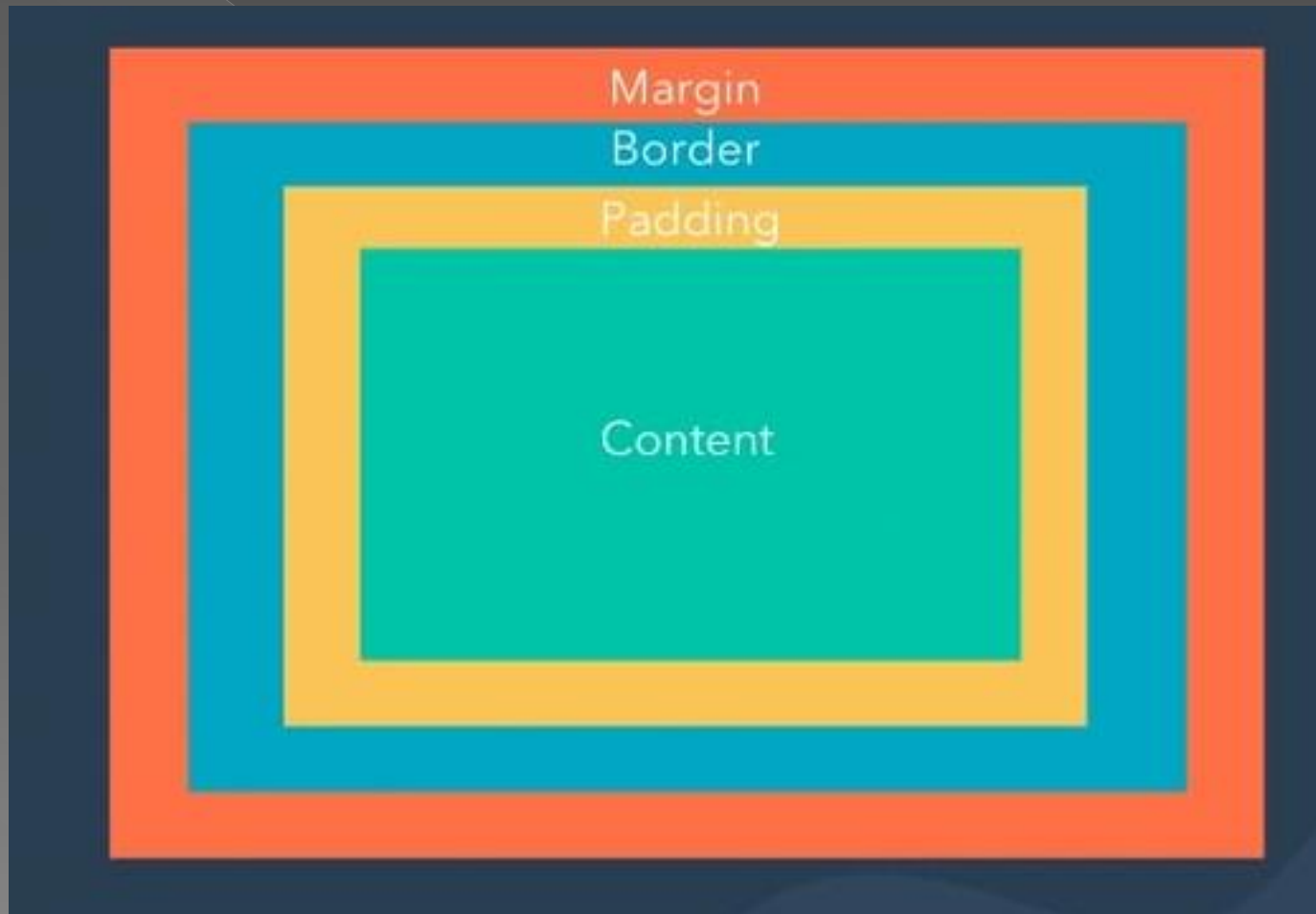
External
CSS

Inline
CSS

CSS Selectors

- ◉ Selectors are something using which we can select the HTML elements.
- ◉ Below are different types of selectors.
 - > Element Selector : `p {color:red;}`
 - > Class Selector : `.c1{color:red;}`
 - > Id Selector : `#id1{color:red;}`
 - > Universal Selector : `# {color:red;}`

CSS Box Model



Font property

- The CSS font properties define the font family, boldness, size, and the style of a text.
 - > font-family: "Times New Roman", Times, serif;
 - > font-style : normal | italic | oblique;
 - > font-size: 10px | 10%;
 - > font-weight: normal | bold | 100-900;
 - > font-variant: normal | small-caps;

Border

- ◉ Used to set border of any element
- ◉ Border: 2px solid red
- ◉ 2px: border size
- ◉ Solid: border style
- ◉ Red: border color

Display

- ◉ Used to set a display of element
- ◉ Inline
- ◉ Block
- ◉ Inline-block
- ◉ Flex
- ◉ grid

Position

- ◉ To set a position of element
- ◉ Static
- ◉ Relative
- ◉ Absolute
- ◉ Fixed
- ◉ sticky

Combinators

- A combinator is something that explains the relationship between the selectors.
- A CSS selector can contain more than one simple selector. Between the simple selectors, we can include a combinator.
- There are four different combinators in CSS:
 - > descendant selector (space) : `div p {}`
 - > child selector (`>`): `div >p { }`
 - > adjacent sibling selector (`+`): `div+p {}`
 - > general sibling selector (`~`): `div~p {}`

UseCase Implemetation

- Create a mindsprint webpage using HTML & CSS

Bootstrap Fundamentals

- ◉ What is Responsive web design:
- ◉ Responsive web design is about creating web sites which automatically adjust themselves to look good on all devices, from small phones to large desktops.
- ◉ Example: www.getbootstrap.com



Why Bootstrap?

Easy to use

Responsive Features

Mobile first approach

Browser compatibility

How to include bootstrap in HTML?

- Use CDN (content delivery links)
- You can download library directly and include the same.

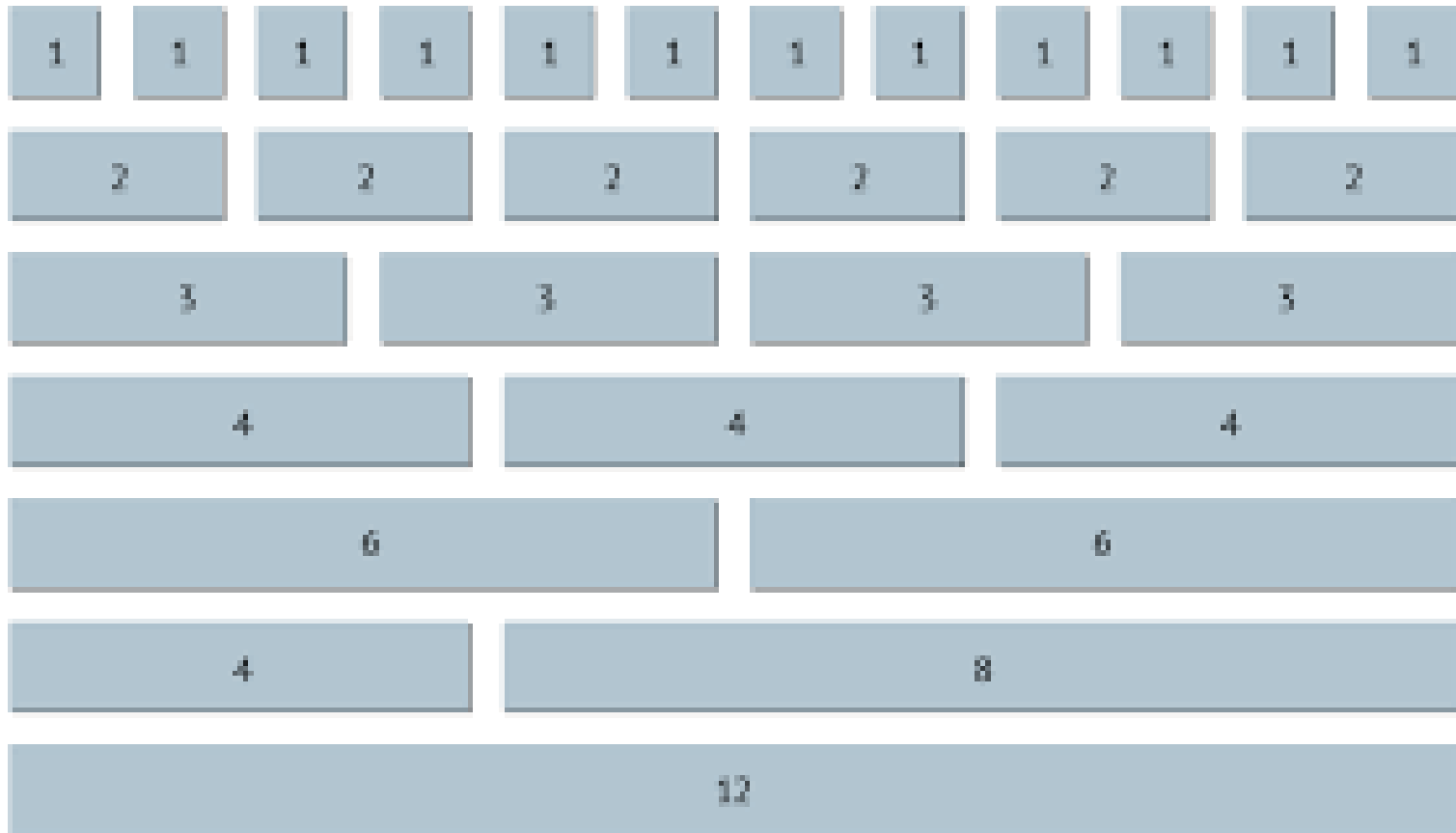
Containers Usage

- Uses of classes
- Container:
 - > Use the default margins and padding
- Container-fluid:
 - > Cover the entire width

Use the utility classes

- ◉ Margins
- ◉ Paddings
- ◉ Height
- ◉ Width

Bootstrap grid system



Use Case

- Implement the same page using bootstrap.