

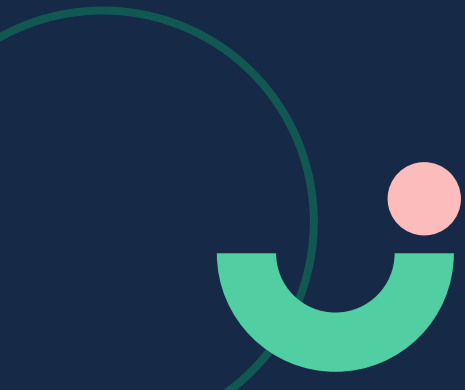
Full Stack Web Development

# Intro to front-end development, HTML & CSS fundamental

Job Connector Program

# Outline

- Intro to Front-end development
- HTML fundamental
- Basic CSS

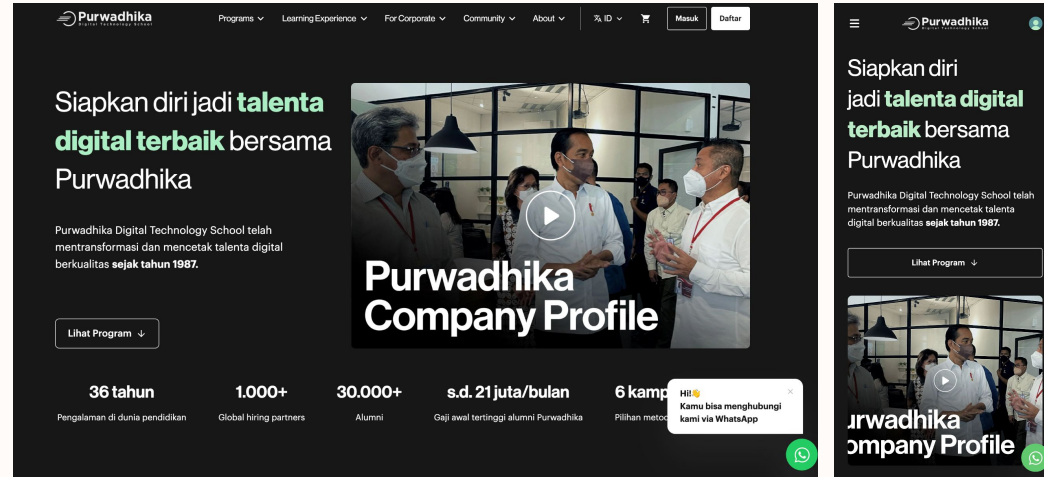


# What a Front End Developer Does

A **front end developer** has one general responsibility:

To ensure that website visitors can easily interact with the page. They do this through the combination of design, technology and programming to code a website's appearance, as well as taking care of debugging.

Every time you visit a website, everything you see, click, or use is the work of front-end developer.



# Intro to Front-end Development

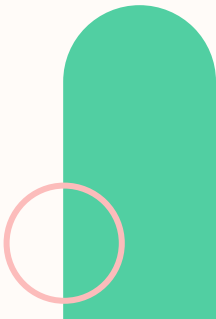
Front end development is the development of code that creates the visual front-end elements of a software, application or website. Front end languages include **HTML**, **CSS**, and **Javascript**



**HTML** defines the content of web pages

**CSS** specifies the layout of web pages

**JS** programs the behaviour of web pages

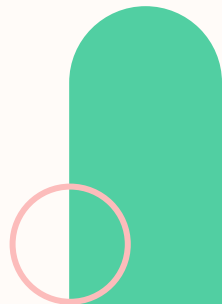


# Intro to Front-end Development

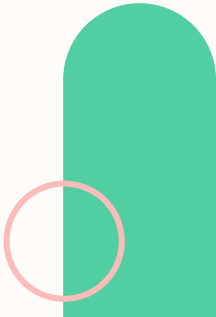
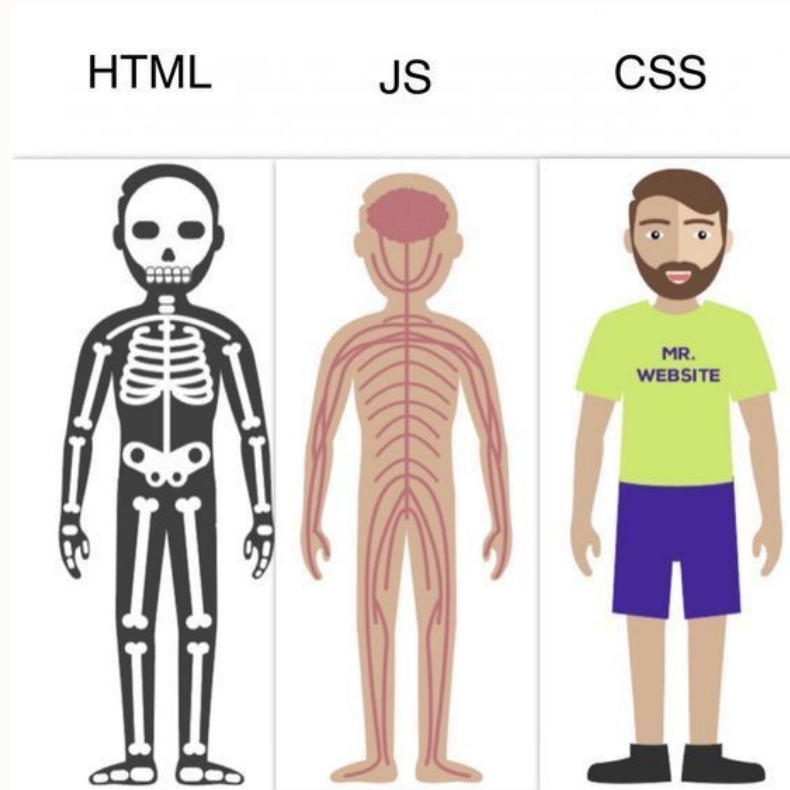
**HTML, CSS, and JavaScript** are the basic languages you need to know to create a website.

To become a Front-End Developer, start with the subjects below, in the following order:

1. **Create the structure with HTML.** The first thing you have to learn is HTML, which is the standard markup language for creating web pages.
2. **Style with CSS.** The next step is to learn CSS, to set the layout of your web page with beautiful colors, fonts, and much more.
3. **Make it interactive with JavaScript.** After studying HTML and CSS, you should learn JavaScript to create dynamic and interactive web pages for your users.



# Intro to Front-end Development



# Basic HTML Document

Make your first web page

<https://www.w3schools.com/html/>



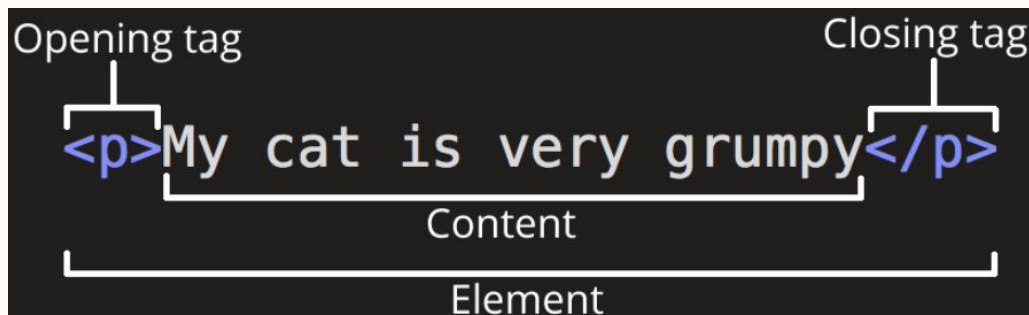
```
<!DOCTYPE html>
<html>
  <head>
    <title>Purwadhika</title>
  </head>
  <body>
    <p>My cat is very grumpy</p>
  </body>
</html>
```

Tag	Description
<!DOCTYPE...>	This tag defines the document type and HTML version.
<html>	This tag encloses the complete HTML document and mainly comprises of document header which is represented by <head>...</head> and document body which is represented by <body>...</body> tags.
<head>	This tag represents the document's header which can keep other HTML tags like <title>, <link> etc.
<title>	The <title> tag is used inside the <head> tag to mention the document title.
<body>	This tag represents the document's body which keeps other HTML tags like <h1>, <div>, <p> etc.

# HTML Fundamental

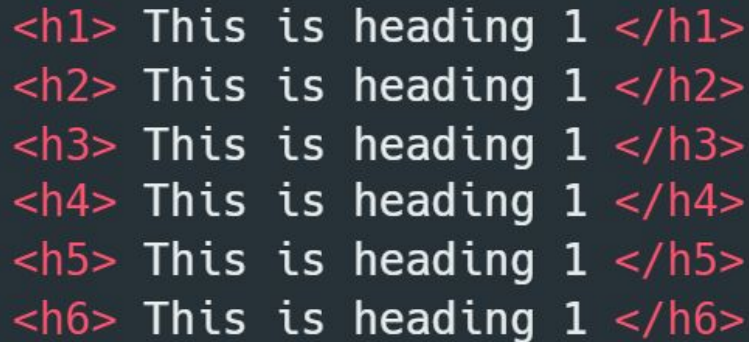
There is **main parts** of the line of code follows:

1. **The opening tag**, define the name of element (in this case, p), wrapped with opening and closing angle brackets.
2. **The closing tag**, similar as the opening tag, this tag includes a forward slash before the element name. This tag places in the end of elements
3. **The content**, content places between the opening and closing tags. In this case, content written as a text.
4. **The element**, the opening tag, the closing tag, and the content together comprise the element.





# Heading Tags



```
<h1> This is heading 1 </h1>  
<h2> This is heading 1 </h2>  
<h3> This is heading 1 </h3>  
<h4> This is heading 1 </h4>  
<h5> This is heading 1 </h5>  
<h6> This is heading 1 </h6>
```

**This is heading 1**

**This is heading 2**

**This is heading 3**

**This is heading 4**

**This is heading 5**

**This is heading 6**

Not only document starts with a heading but HTML also.

There are six levels of headings, which use the elements `<h1>`, `<h2>`, `<h3>`, `<h4>`, `<h5>`, and `<h6>`.

While heading tags called, browser adds one line before and one line after that.

# Paragraph, Break, & Comment Tag

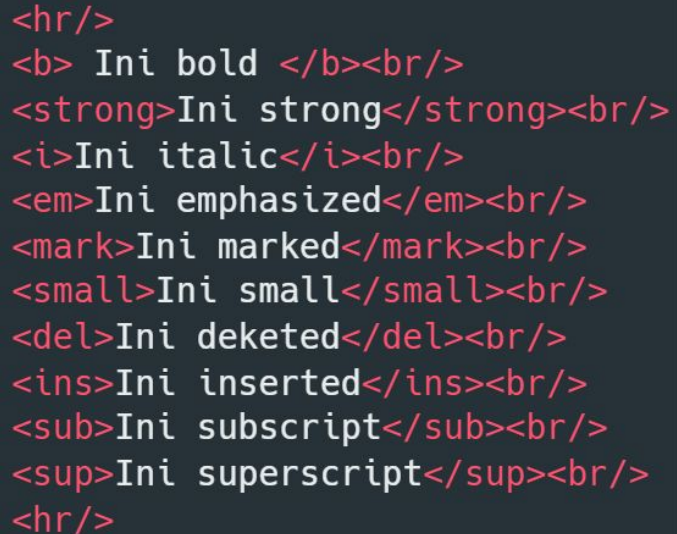


```
<p>Ini paragraf 1.</p>
<p>Ini paragraf 2.</p>
<hr/>
Ini baris 1 <br/>
Ini baris 2
<!-- Ini komentar -->
```

- `<p>` represent for paragraph tag. Text, number or even symbol could be put inside this tags
- `<hr>` used to add a horizontal line
- `<br>` this tags used to break the line.
- `<!-- -->` used as comment. Content could be put inside the tag and won't show in HTML page

[https://www.w3schools.com/html/html\\_paragraphs.asp](https://www.w3schools.com/html/html_paragraphs.asp)

# HTML Text Formatting



```
<hr/>
<b> Ini bold </b><br/>
<strong>Ini strong</strong><br/>
<i>Ini italic</i><br/>
<em>Ini emphasized</em><br/>
<mark>Ini marked</mark><br/>
<small>Ini small</small><br/>
<del>Ini deketed</del><br/>
<ins>Ini inserted</ins><br/>
<sub>Ini subscript</sub><br/>
<sup>Ini superscript</sup><br/>
<hr/>
```

Here is several tags that could be used in order to modify content inside the tag.

[https://www.w3schools.com/html/html\\_formatting.asp](https://www.w3schools.com/html/html_formatting.asp)


# Unordered List Tag

```
<h1>Daftar Belanja:</h1>
<ul>
  <li>Beras</li>
  <li>Minyak Goreng</li>
  <li>Gula</li>
  <li>Santan</li>
</ul>
```

Used to create bullets. Started with <ul> tag to define the unordered list. To define the list, put <li> inside <ul> element.

[https://www.w3schools.com/html/html\\_lists\\_unordered.asp](https://www.w3schools.com/html/html_lists_unordered.asp)

# Ordered List



```
<h1>Ranking kelas Puwadhika:</h1>
<ol>
  <li>Andi</li>
  <li>Budi</li>
  <li>Caca</li>
  <li>Dedi</li>
</ol>
```

Used to create numbering. Ordered list will show a list using a numbers. Similar to unordered list, but in order to use this, put `<ol>` at the beginning of element.

[https://www.w3schools.com/html/html\\_lists\\_ordered.asp](https://www.w3schools.com/html/html_lists_ordered.asp)

# HTML Table

```
<table>
  <tr>
    <th>Nama</th>
    <th>TTL</th>
  </tr>
  <tr>
    <td>Galih</td>
    <td>Jakarta, 25 Jan 1990</td>
  </tr>
</table>
```

HTML table contain of:

1. <table>
2. <tr>
3. <th> or <td>

[https://www.w3schools.com/html/html\\_tables.asp](https://www.w3schools.com/html/html_tables.asp)

# Column Span

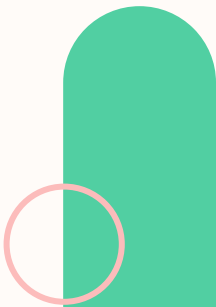


```
<table>
  <tr>
    <th>Nama</th>
    <th>TTL</th>
  </tr>
  <tr>
    <td colspan="2">
      <center>Galih</center>
    </td>
  </tr>
</table>
```

# Row Span



```
<table>
  <tr>
    <th rowspan="2">Jakarta</th>
    <td>A</td>
    <td>B</td>
  </tr>
  <tr>
    <td>C</td>
    <td>D</td>
  </tr>
</table>
```





# Anchor Tags

## Absolute Links

```
<p>
  <a href="https://www.google.com">Google</a>
</p>
<p>
  <a href="https://www.yahoo.com" target="_blank">
    Yahoo
  </a>
</p>
```

## Relative Links

```
<p>
  <a href="satu.html">Halaman satu</a>
</p>
<p>
  <a href="/index.html" target="_blank">
    Halaman Index
  </a>
</p>
```

# Images Tag

```
  
  

```

<img> tag used to insert image into the page. Source must have extension file

[https://www.w3schools.com/tags/tag\\_img.asp](https://www.w3schools.com/tags/tag_img.asp)

# Figures & Caption Tag



```
<figure>
  
  <figcaption>Ini singa</figcaption>
</figure>
```

Used to add a caption into an image assets

[https://www.w3schools.com/tags/tag\\_figure.asp](https://www.w3schools.com/tags/tag_figure.asp)

# Forms HTML

```

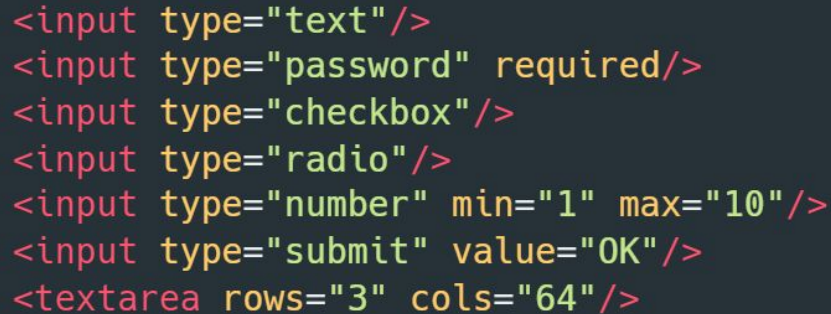
<!DOCTYPE html>
<html>
  <head>
    <title>Forms</title>
  </head>
  <body>
    <form action="" method="post">
      <!-- insert form element -->
    </form>
  </body>
</html>

```

Form could contain several inputs and buttons

[https://www.w3schools.com/html/html\\_forms.asp](https://www.w3schools.com/html/html_forms.asp)

# Input Tag



```
<input type="text"/>
<input type="password" required/>
<input type="checkbox"/>
<input type="radio"/>
<input type="number" min="1" max="10"/>
<input type="submit" value="OK"/>
<textarea rows="3" cols="64"/>
```

`<input>` tags have several attributes that could be used depends on functionality.

[https://www.w3schools.com/tags/tag\\_input.asp](https://www.w3schools.com/tags/tag_input.asp)

# Button Tag



```
<button type="button">Ok</button>  
<button type="button" onclick="doSomething();" >  
  Apply  
</button>
```

<button> tag used to interact between user and web page

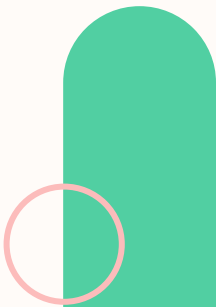
[https://www.w3schools.com/tags/tag\\_button.asp](https://www.w3schools.com/tags/tag_button.asp)

# Select Forms



```
<p>Apa warna favoritmu?</p>
<select>
  <option>Merah</option>
  <option>Biru</option>
  <option>Kuning</option>
</select>
<p>Apa makanan favoritmu?</p>
<select>
  <option>Telur gulung</option>
  <option selected>Cilok</option>
  <option>Bakso</option>
</select>
```

[https://www.w3schools.com/tags/tag\\_select.asp](https://www.w3schools.com/tags/tag_select.asp)



# Label, Fieldset, & Legend Tag

```
<p>
  <label for="user">Username</label>
  <input type="text" name="user" />
</p>

<p>
  <label for="pass">Password</label>
  <input type="password" name="pass" />
</p>
```

```
<fieldset>
  <legend>Data Diri</legend>
  <p>
    <label for="nama">Nama:</label>
    <input type="text" name="nama" />
  </p>

  <p>
    <label for="usia">Usia:</label>
    <input type="number" name="usia" />
  </p>
</fieldset>
```

Usually, <label> tag is used along with input. <legend> tag also could be used like label tag.

[https://www.w3schools.com/tags/tag\\_label.asp](https://www.w3schools.com/tags/tag_label.asp)



# Division Tag



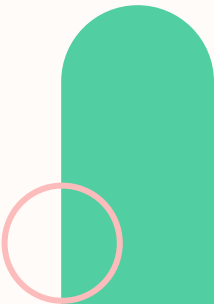
```
<!DOCTYPE html>
<html>
  <head>
    <title>Division</title>
  </head>
  <body>
    <div>Division 1</div>
    <div>Division 2</div>
    <div>Division 3</div>
  </body>
</html>
```

The div tag represents a generic container, because it defaults to a block. As a block, it starts on its own new line, similar to how <p> tags work.

[https://www.w3schools.com/tags/tag\\_div.asp](https://www.w3schools.com/tags/tag_div.asp)

Find out more on,

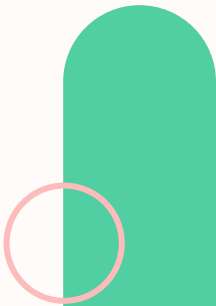
<https://developer.mozilla.org/en-US/docs/Learn/HTML/Cheatsheet>



# What is Cascading Style Sheets?

**CSS (Cascading Style Sheets)** 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 better stored in CSS files separately.

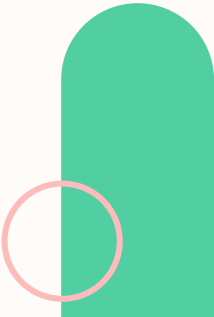


# How to Write CSS?

There are several ways to write down css:

- Inline Styles
- Internal Styles
- External Styles

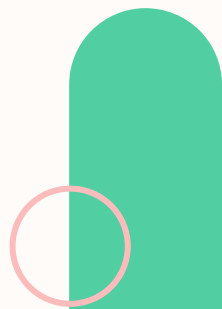
[https://www.w3schools.com/html/html\\_css.asp](https://www.w3schools.com/html/html_css.asp)



# Inline Styles



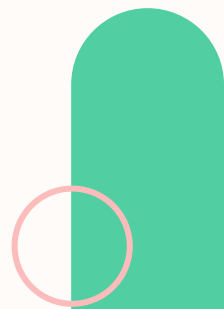
```
<!DOCTYPE html>
<html>
  <head>
    <title>CSS Styles</title>
  </head>
  <body>
    <p style="color: green">Hola 😊</p>
  </body>
</html>
```



# Internal Styles



```
<!DOCTYPE html>
<html>
  <head>
    <title>CSS Styles</title>
    <style>
      h2 { color: green; }
    </style>
  </head>
  <body>
    <p>Hola 😊</p>
  </body>
</html>
```



# External Styles

## index.html



```
<!DOCTYPE html>
<html>
  <head>
    <title>CSS Styles</title>
    <link rel="stylesheet" type="text/css"
href="style.css" />
  </head>
  <body>
    <p>Ini Paragraf.</p>
  </body>
</html>
```

## style.css



```
p { color: blue }
```

# Selector

```
<!DOCTYPE html>
<html>
  <head>
    <style>
      h2 { color: orange; }
      p { color: red; }
      .mobil { color: blue; }
      #avanza { color: greenyellow; }
    </style>
  </head>
  <body>
    <h2>Halo</h2>
    <p>Hai</p>
    <p class="mobil" id="avanza">Ini Avanza</p>
    <p class="mobil" id="alya">Ini Alya</p>
  </body>
</html>
```

Selector used to tell which element would given style through CSS.

[https://www.w3schools.com/css/css\\_selectors.asp](https://www.w3schools.com/css/css_selectors.asp)



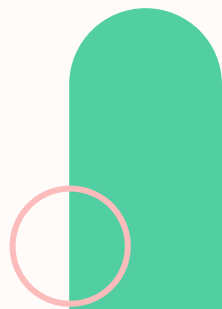
# Selector

`h2`, `p`, `.mobil` & `#avanza` are called *Selectors*.

`{color: orange;}` are *Property* & *Value*.

To select an element to style, simply:

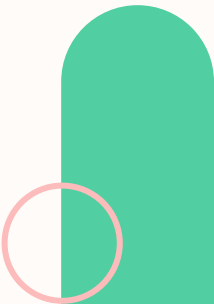
- call its **tag** e.g. `h2 {color: orange;}`
- call its **class** e.g. `.mobil {color: blue;}`
- call its **id** e.g. `#avanza {color: green;}`



# Attribute Selector



```
<!DOCTYPE html>
<html>
  <head>
    <style>
      a[href] {
        color: red;
      }
    </style>
  </head>
  <body>
    <p><a href="#">Jaya jaya jaya !</a></p>
  </body>
</html>
```



# Color

```

<!DOCTYPE html>
<html>
  <head>
    <style>
      body {
        background-color: yellow;
      }

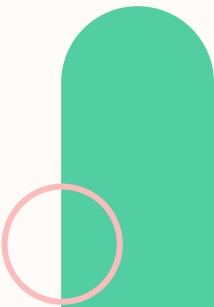
      h1 {
        color: rgb(0, 0, 255);
      }

      h2 {
        color: #00ff00;
      }

      p {
        color: hsl(360, 100%, 75%);
      }
    </style>
  </head>
  <body>
    <h1>Selamat datang 🙋</h1>
    <h2>Purwadhika ⭐</h2>
    <p>Digital Technology School 🖥️</p>
  </body>
</html>

```

Color used to change the color of the text



# Color

*Red, Green, Blue Color Values*

■ {color: **rgb(0, 0, 255);**}

*Hexadecimal Value*

■ {color: **#00FF00;**}

*Hue, Saturation, Lightness Value*

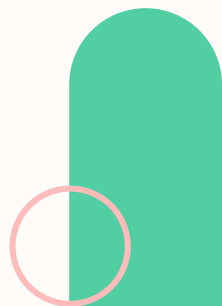
■ {color: **hsl(360, 100%, 75%);**}

*Alpha Transparency*

■ {color: **rgba(0, 0, 255, 0.782);**}

■ {color: **hsla(360, 100%, 75%, 0.5);**}

There are several ways to choose the palette color



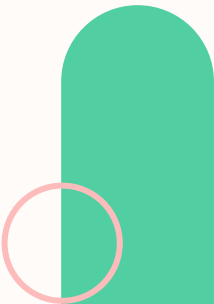
# Background Color

```

<head>
  <style>
    body {
      background-color: blue;
      /* option 1 */
      background: linear-gradient(blue,
yellow);
      /* option 2 */
      background: linear-gradient(90deg,
blue, yellow);
      /* option 3 */
      background: linear-gradient(blue,
yellow);
    }
  </style>
</head>
<body> 🚀 </body>

```

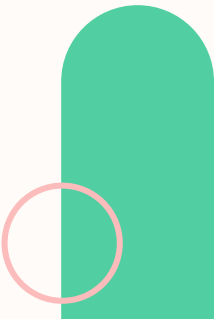
Background color would give a color into the whole content on the tag



# Background Image

```
<!DOCTYPE html>
<html>
  <head>
    <style>
      body {
        background-color: lightgray;
        background: url("lin.jpg");
        background-position: left top;
        background-size: 1280px 720px;
      }
    </style>
  </head>
  <body></body>
</html>
```

Not only color, but also image could be set as a background for content inside the tag



# Font & Text

```
<head>
  <style>
    p {
      font-family: "Impact", Arial;
      font-style: italic;
      text-transform: uppercase;
      text-decoration: line-through;
      text-shadow: -4px 4px 4px red;
      line-height: 50%;
      letter-spacing: 2px;
      word-spacing: 4px;
      text-align: left;
      text-indent: 2rem;
    }
  </style>
</head>

<body>
  <p>Halo kamu ❤️</p>
</body>
```

**font-family** (*web safe fonts*):

Arial, Helvetica, Times New Roman, Times, Courier New, Courier, Verdana, Georgia, Palatino, etc.

**font-style:**

normal, italic, oblique

**text-transform:**

capitalize, uppercase, lowercase, none

**text-decoration:**

underline, overline, line-through, wavy, none

**text-align:**

left, center, right

# Width & Height

```
<head>
  <style>
    .konten {
      background-color: pink;
      width: 900px;
      height: 100px;
    }
  </style>
</head>

<body>
  <div class="konten">Halo Semuanya!</div>
</body>
```

**Width** and **height** used to define the size of class named as **konten**



# Unit Length

## Absolute Lengths

**px**: the unit for pixels

**pt**: the unit for points

**cm**: the unit for centimeters

**mm**: the unit for millimeters

**in**: the unit for inches

**pc**: the unit for picas

## Relative Lengths

**%**: the unit for percentages

**em**: relative to current font size

**rem**: relative to current font size on the element

**vw**: relative to the width of viewport divided by 100

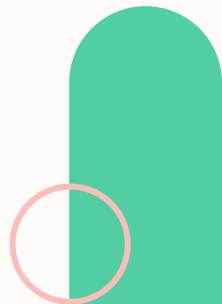
**vh**: relative to the height of viewport/100

**vmin**: relative to the smaller viewport's dimension/100

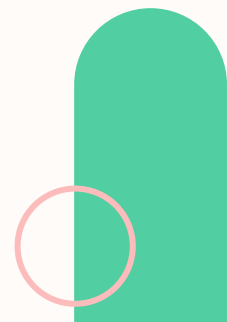
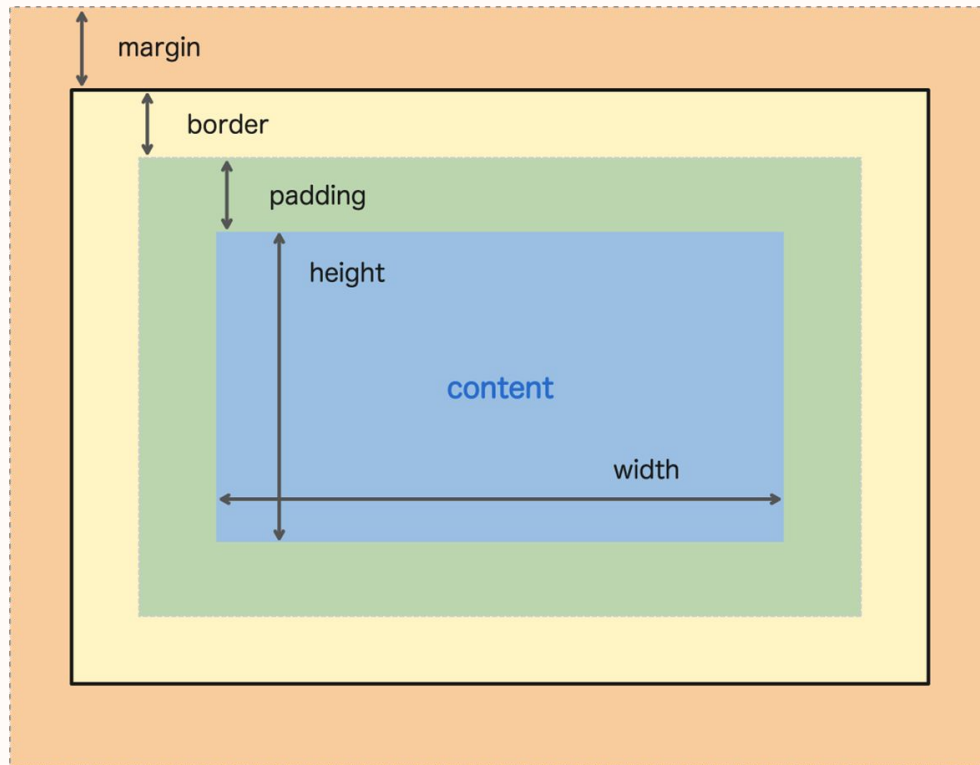
**vmax**: relative to the larger viewport's dimension/100

**ch**: relative to 0

**ex**: relative to the x-height of font



# Margin, Border, & Padding



# Margin

```
<head>
  <style>
    div {
      background-color: lightblue;
      width: 900px;
      height: 500px;
      margin-top: 200px;
      margin-right: 200px;
      margin-bottom: 200px;
      margin-left: 200px;
    }
  </style>
</head>

<body>
  <div>
    <h1>Contoh Margin</h1>
  </div>
</body>
```

Here is shorthand to write down margin

margin: 200px;

\*this can be used if all margin position have same value

margin: 200px 150px;

\*the first value will represent top and bottom, the second one represent left and right

margin: 200px 100px 150px 80px;

\*if every position has different value, use this shorthand. This represent value from top, right, bottom, and left

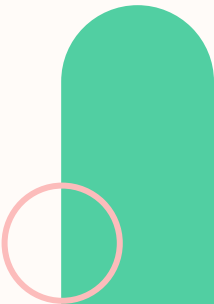
# Border

```
<head>
  <style>
    div {
      background-color: lightblue;
      width: 900px;
      height: 500px;
    }
    h1 {
      color: white;
      background-color: blue;
      padding: 25px;
      border: 20px ridge yellow;
      border-radius: 10px;
      box-shadow: -0.5rem 0.5rem 1rem gray;
    }
  </style>
</head>

<body>
  <div>
    <h1>Contoh Border</h1>
  </div>
</body>
```

## Border style

solid, dotted, dashed, double,  
inset, outset, groove, ridge



# Padding

```
<head>
  <style>
    div {
      background-color : lightblue;
      width : 900px;
      height : 500px;
    }
    h1 {
      color : white;
      background-color : blue;
      padding-top : 10px;
      padding-bottom : 20px;
      padding-left : 25px;
      padding-right : 30px;
    }
  </style>
</head>

<body>
  <div>
    <h1>
      Ini Padding
    </h1>
  </div>
</body>
```

Here is shorthand to write down padding

padding: 200px;

\*this can be used if all padding position have same value

padding: 200px 150px;

\*the first value will represent top and bottom, the second one represent left and right

padding: 200px 100px 150px 80px;

\*if every position has different value, use this shorthand. This represent value from top, right, bottom, and left

# Pseudo-class


A **CSS pseudo-class** is a keyword added to a selector that specifies a special state of the selected element(s). For example, `:hover` can be used to change a button's color when the user's pointer hovers over it.

For example, it can be used to:

Style an element when a user mouses over it

Style visited and unvisited links differently

Style an element when it gets focus



```
selector::pseudo-element {  
  property : value;  
}
```

# Pseudo-class Example



```
/* unvisited link */
```

```
a:link {  
  color: #FF0000;  
}
```



```
/* visited link */
```

```
a:visited {  
  color: #00FF00;  
}
```



```
/* mouse over link */
```

```
a:hover {  
  color: #FF00FF;  
}
```



```
/* selected link */
```

```
a:active {  
  color: #0000FF;  
}
```

# Pseudo-elements


A **CSS pseudo-element** is a keyword added to a selector that lets you style a specific part of the selected element(s). For example, `::first-line` can be used to change the font of the first line of a paragraph.

A CSS pseudo-element is used to style specified parts of an element.

For example, it can be used to:

Style the first letter, or line, of an element

Insert content before, or after, the content of an element

A code editor window with a dark background and a light blue border. It features three colored window control buttons (red, yellow, green) in the top left corner. The code inside is a CSS rule: `selector::pseudo-element {` on the first line, `property : value;` on the second line, and `}` on the third line. The word `property` is highlighted with a pink background.

```
selector::pseudo-element {  
  property : value;  
}
```



# Pseudo-elements Example

```
p::first-line {  
  color: #ff0000;  
  font-variant: small-caps;  
}
```

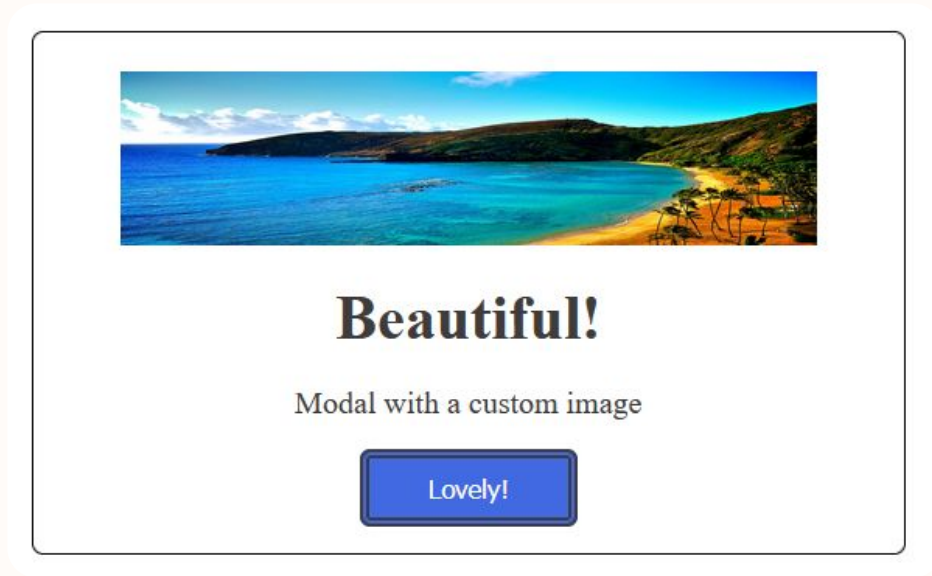
The `::first-line` pseudo-element can only be applied to block-level elements.

The following properties apply to the `::first-line` pseudo-element:

- font properties
- color properties
- background properties
- word-spacing
- letter-spacing
- text-decoration
- vertical-align
- text-transform
- line-height
- clear

# Exercise

Create a component with styling like example output:



# Exercise

Create a table with data and styling like example output:

No.	Image	Name	Food	Group
1		Smiling <sup>Cat</sup>	Healthy <sup>Fish</sup>	<input checked="" type="radio"/> Vertebrate <input type="radio"/> Invertebrate
2		Happy <sup>Dog</sup>	Fresh <sup>Meat</sup>	<input checked="" type="radio"/> Vertebrate <input type="radio"/> Invertebrate
3		Confuse <sup>Simpanse</sup>	Sweet <sup>Banana</sup>	<input checked="" type="radio"/> Vertebrate <input type="radio"/> Invertebrate
4		Frisky <sup>Jellyfish</sup>	Saltwater <sup>plankton</sup>	<input type="radio"/> Vertebrate <input checked="" type="radio"/> Invertebrate
5		Swiming <sup>Squid</sup>	Small <sup>Fish</sup>	<input type="radio"/> Vertebrate <input checked="" type="radio"/> Invertebrate

# Thank You!

