



# CSS

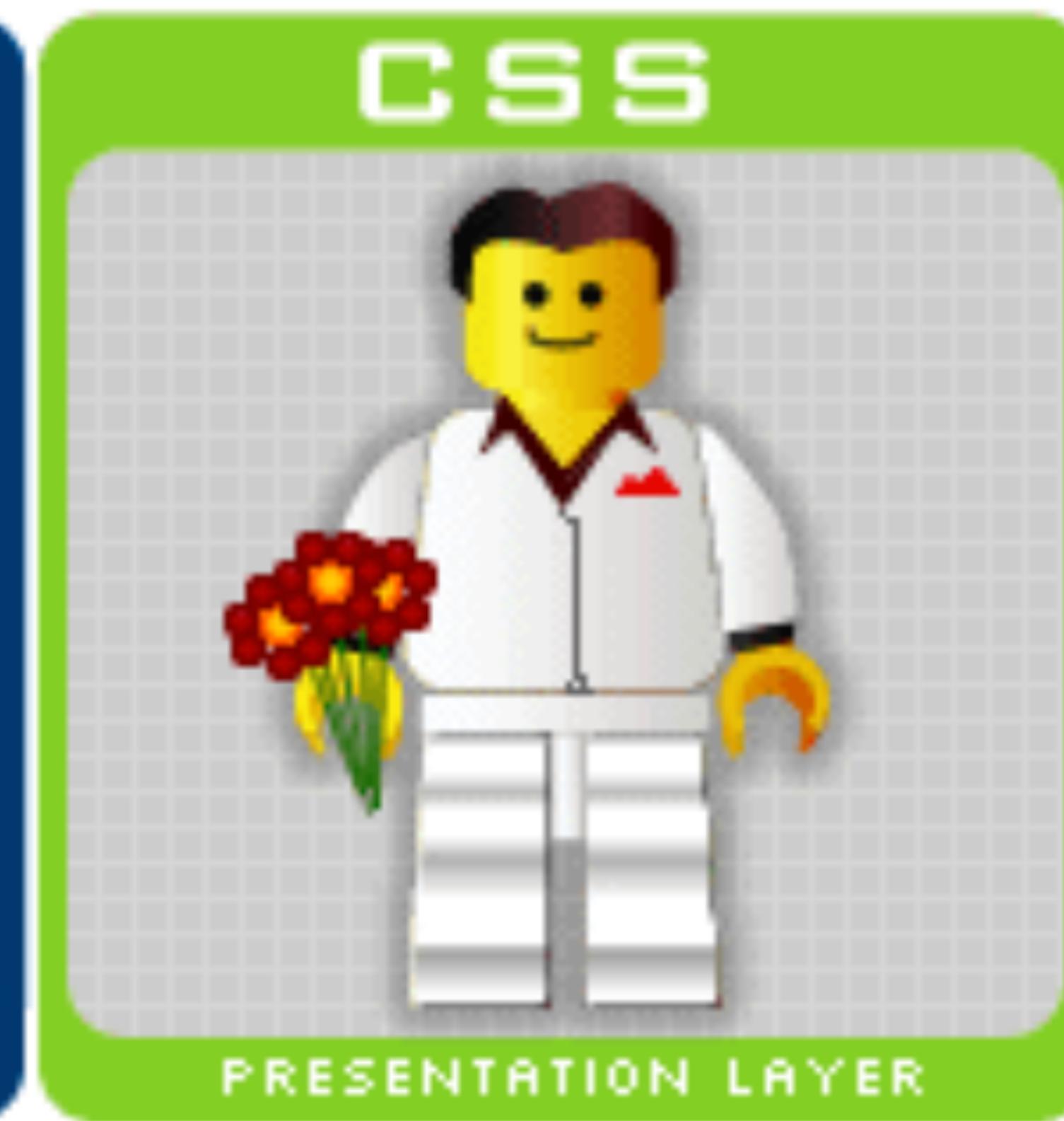
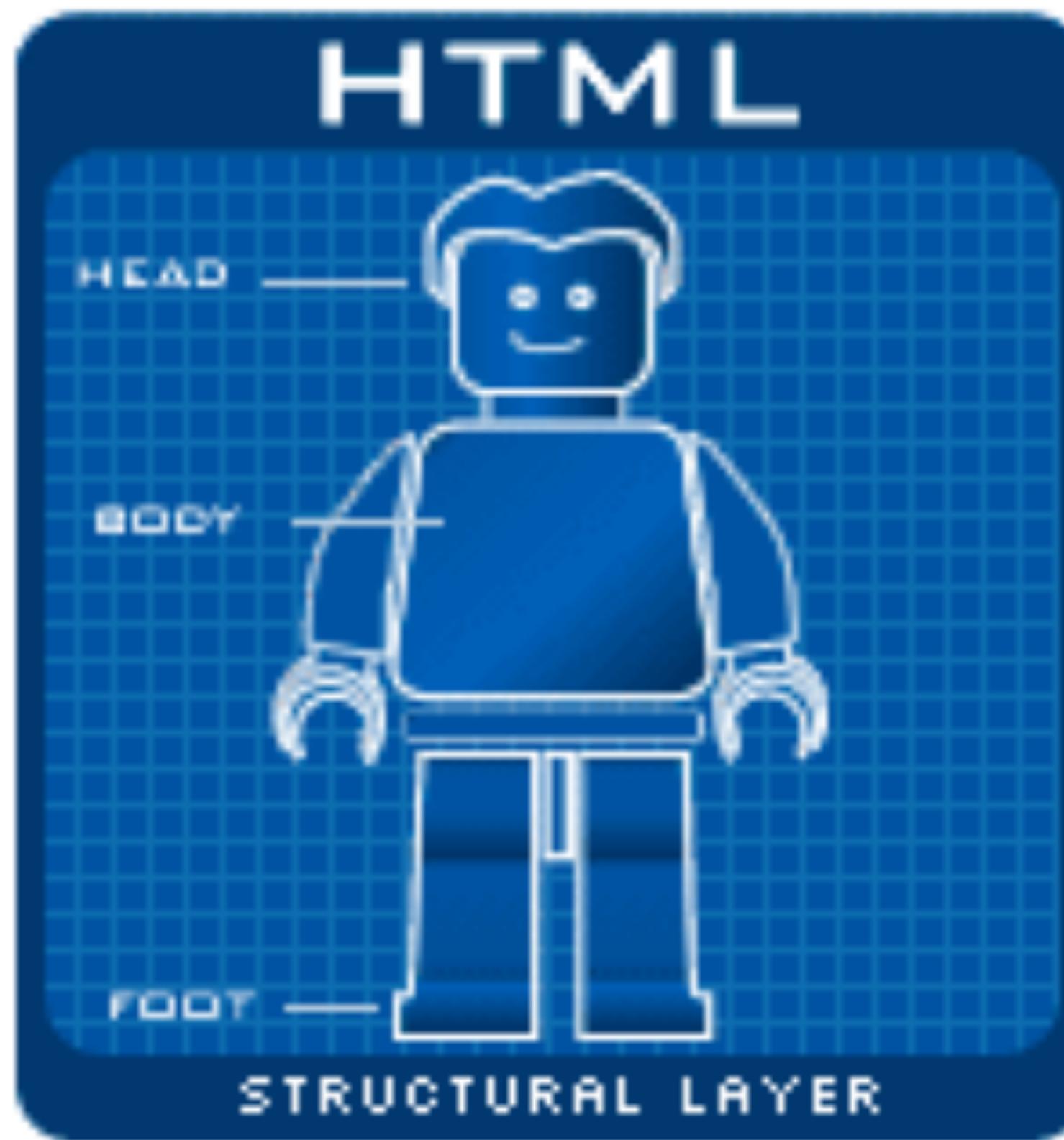
---

## Cascading Style Sheets

# What is CSS?

- CSS is the language we use to style a Web page.
- 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





## CSS Zen Garden

### The Beauty of CSS Design

A demonstration of what can be accomplished through CSS-based design. Select any style sheet from the list to load it into this page.

Download the example [html file](#) and [css file](#)

#### The Road to Enlightenment

Littering a dark and dreary road lay the past relics of browser-specific tags, incompatible DOMs, broken CSS support, and abandoned browsers.

We must clear the mind of the past. Web enlightenment has been achieved thanks to the tireless efforts of folk like the W3C, WaSP, and the major browser creators.

The CSS Zen Garden invites you to relax and meditate on the important lessons of the masters. Begin to see with clarity. Learn to use the time-honored techniques in new and invigorating fashion. Become one with the web.

#### So What is This About?

There is a continuing need to show the power of CSS. The Zen Garden aims to excite, inspire, and encourage participation. To begin, view some of the existing designs list. Clicking on any one will load the style sheet into this very page. The HTML remains the same, the only thing that has changed is the external CSS file. Yes, really.

CSS allows complete and total control over the style of a hypertext document. The only way this can be illustrated in a way that gets people excited is by demonstrating what it can truly be, once the reins are placed in the hands of those able to create beauty from structure. Designers and coders alike have contributed to the beauty of the web; we can always push it further.

#### Participation

Strong visual design has always been our focus. You are modifying this page, so strong CSS skills are necessary too, but the example files are commented well enough that even CSS novices can use them as starting points. Please see the [CSS Resource Guide](#) for advanced tutorials and tips on working with CSS.

You may modify the style sheet in any way you wish, but not the HTML. This may seem daunting at first if you've never worked this way before, but follow the listed links to learn more, and use the sample files as a guide.

**HTML Only**

leted your masterpiece (and please, don't submit half-finished work) upload your CSS associated assets, and if we choose to use it we will download it and place it on our

**HTML + CSS**

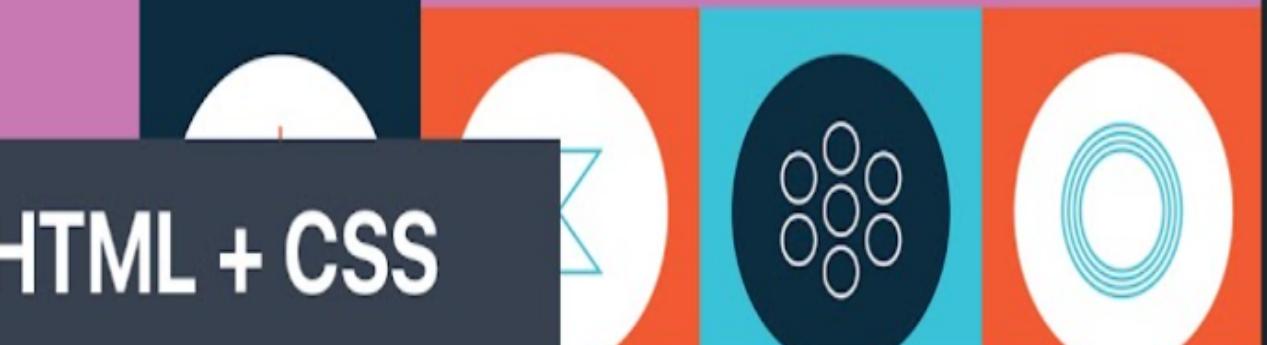


**CSS Zen Garden**

**The Beauty of CSS Design**

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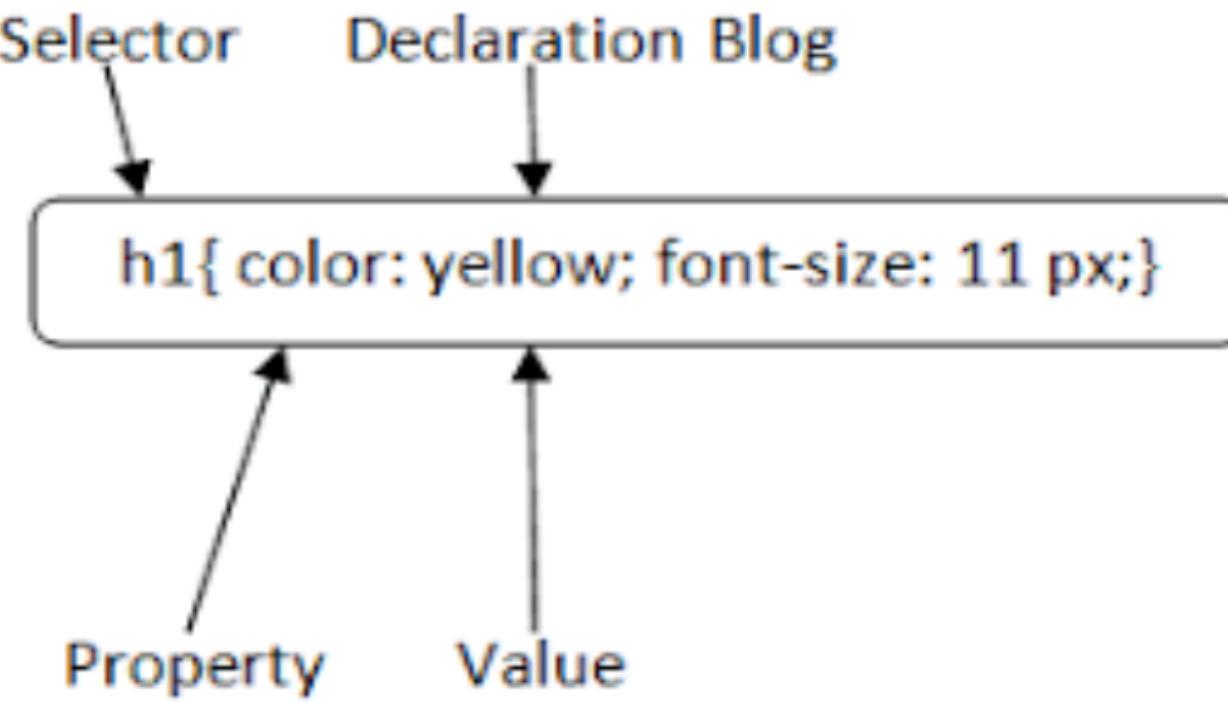
Download the example [html file](#) and [css file](#)



# **CSS Syntax**

## **CSS Syntax**

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# Example

```
<!DOCTYPE>
  <html>
    <head>
      <style>
        h1{
          color:white;
          background-color:red;
          padding:5px;
        }
        p{
          color:blue;
        }
      </style>
    </head>
    <body>
      <h1>Write Your First CSS Example</h1>
      <p>This is Paragraph.</p>
    </body>
  </html>
```

# CSS Selectors

- CSS **selectors** are used *to select the content you want to style.*
- Selectors are the part of CSS rule set.
- CSS selectors select HTML elements according to their id, class, type, attribute, etc.
- There are several different types of selectors in CSS.

1. CSS Element Selector
2. CSS Id Selector
3. CSS Class Selector
4. CSS Universal Selector
5. CSS Group Selector

# Element Selector



- The element selector selects the HTML element by name.

```
<!DOCTYPE html>
  <html>
    <head>
      <style>
        p {
          text-align: center;
          color: red;
        }
      </style>
    </head>
    <body>
      <p>Every paragraph will be affected by the
          style.</p>
      <p>Me too!</p>
      <h2>And me!</h2>
    </body>
  </html>
```

# Id Selector

- The id selector uses the id attribute of an HTML element to select a specific element.
- The id of an element is unique within a page, so the id selector is used to select one unique element!
- An id name cannot start with a number!
- To select an element with a specific id, write a **hash (#)** character, followed by the id of the element.

```
#paral {  
    text-align: center;  
    color: red;  
}
```

# Id Selector

```
<!DOCTYPE html>
<html>
<head>
<style>
#para1 {
text-align: center;
color: blue;
}
</style>
</head>
<body>
<p id="para1">Hello Javatpoint.com</p>
<p>This paragraph will not be affected.</p>
</body>
</html>
```

# Class Selector

- The class selector selects HTML elements with a specific class attribute.
- A class name cannot start with a number!
- To select elements with a specific class, write a period (.) character, followed by the class name.

```
.center {  
    text-align: center;  
    color: red;  
}
```

# Class Selector

- You can also specify that only specific HTML elements should be affected by a class.

```
p.center {  
    text-align: center;  
    color: red;  
}
```

- HTML elements can also refer to more than one class.  
`<p class="center">This paragraph refers to two classes.</p>`

# class Selector



```
<!DOCTYPE html>
<html>
<head>
<style>
.center {
    text-align: center;
    color: blue;
}
</style>
</head>
<body>
<h1 class="center">This heading </h1>
<p class="center">This paragraph </p>
</body>
</html>
```

# **CSS Universal Selector**

- The universal selector (\*) selects all HTML elements on the page.

```
* {  
    text-align: center;  
    color: blue;  
}
```

# Universal Selector



```
<!DOCTYPE html>
  <html>
    <head>
      <style>
        * { color: green;
          font-size: 20px; }
      </style>
    </head>
    <body>
      <h2>This is heading</h2>
      <p>This style will be applied on every
          paragraph.</p>
      <p>Me too!</p>
      <p>And me!</p>
    </body>
  </html>
```

# **CSS Group Selector**

- The grouping selector selects all the HTML elements with the same style definitions.
- To group selectors, separate each selector with a comma.

```
h1, h2, p {  
    text-align: center;  
    color: red;  
}
```

# Group Selector

```
<!DOCTYPE html>
<html>
<head>
<style>
h1, h2, p {
text-align: center;
color: blue; }
</style>
</head>
<body>
<h1>Hello Javatpoint.com</h1>
<h6>Hello Javatpoint.com</h6>
<h2>Hello Javatpoint.com (In smaller font)</h2>
<p>This is a paragraph.</p>
</body>
</html>
```

# HOW TO ADD CSS

---

**INLINE**

**INTERNAL**

**EXTERNAL**

# Inline CSS

- Inline CSS is used to apply CSS on a single line or element.
- To use inline styles, add the style attribute to the relevant element. The style attribute can contain any CSS property.

## Disadvantages of Inline CSS

- These styles cannot be reused anywhere else.
- These styles are tough to be edited because they are not stored in a single place.
- You cannot use quotations within inline CSS.
- Inline CSS does not provide browser cache advantages.

# Inline

```
<!DOCTYPE html>
<html>
<body>

<h1 style="color:blue;text-align:center;">This is
    a heading</h1>
<p style="color:red;">This is a paragraph.</p>
</body>
</html>
```

# Internal css

- Inline CSS is used to apply CSS on a single line or element.
- To use inline styles, add the style attribute to the relevant element. The style attribute can contain any CSS property.

## Disadvantages of Inline CSS

- These styles cannot be reused anywhere else.
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- You cannot use quotations within inline CSS.
- Inline CSS does not provide browser cache advantages.

# Internal

```
<html>
<head>
<style>
body {
background-color: linen;
}
h1 {
color: maroon;
}
</style></head>
<body>
<h1>This is a heading</h1>
<p>This is a paragraph.</p>
</body>
</html>
```

# External css

- The external style sheet is generally used when you want to make changes on multiple pages.
- With an external style sheet, you can change the look of an entire website by changing just one file!
- It uses the <link> tag on every pages and the <link> tag should be put inside the head section.
- The external style sheet may be written in any text editor but must be saved with a .css extension. This file should not contain HTML elements.

# External

"**mystyle.css**"

```
body {  
background-color: lightblue;  
}  
h1 {  
color: navy;  
margin-left: 20px;  
}
```

# External

```
<!DOCTYPE html>
<html>
<head>
<link rel="stylesheet" href="mystyle.css">
</head>
<body>
<h1>This is a heading</h1>
<p>This is a paragraph.</p>
</body>
</html>
```

# CSS Properties

## CSS Colors:

- CSS Background Color

```
<h1 style="background-color:DodgerBlue;">Hello World</h1>
```

```
<p style="background-color:Tomato;">Lorem ipsum...</p>
```

- CSS Text Color

```
<h1 style="color:Tomato;">Hello World</h1>
```

```
<p style="color:DodgerBlue;">Lorem ipsum...</p>
```

- CSS Border Color

```
<h1 style="border:2px solid Tomato;">Hello World</h1>
```

```
<h1 style="border:2px solid DodgerBlue;">Hello World</h1>
```

# CSS Properties

## CSS Background:

CSS background property is used to define the background effects on element. There are 5 CSS background properties that affects the HTML elements:

1. background-color
2. background-image
3. background-repeat
4. background-attachment
5. background-position

# CSS Properties

## 1. CSS background-color:

```
<!DOCTYPE html>
  <html>
    <head>
      <style>
        h2,p{
          background-color: #b0d4de;
        }
      </style>
    </head>
    <body>
      <h2>My first CSS page.</h2>
      <p>Hello Javatpoint.</p>
    </body>
  </html>
```

# CSS Properties

## 2. CSS background-image:

```
<!DOCTYPE html>
  <html>
    <head>
      <style>
        body {
          background-image: url(paper.gif);
        }
      </style>
    </head>
    <body>
      <h1>Hello World!</h1>
      <p>This page has an image as the background!</p>
    </body>
  </html>
```

# CSS Properties

## 3. CSS background-repeat:

```
<html>
  <head>
    <style>
      body {
        background-image: url("gradient_bg.png");
        background-repeat: repeat-x/no-repeat;
      }
    </style>
  </head>
  <body>
    <h1>Hello World!</h1>
<p>Here, a background image is repeated only horizontally!</p>
    </body>
  </html>
```

# CSS Properties

## 4. CSS background-attachment:

```
<html><head>
  <style>
    body {
      background-attachment: fixed; (scroll)
    }
  </style></head>
  <body>

<h1>The background-attachment Property</h1>
<p>The background-attachment property specifies whether the background image should scroll or be fixed (will not scroll with the rest of the page).</p>
  </body>
</html>
```

# CSS Properties

## 5. CSS background-position

- The background-position property is used to define the initial position of the background image. By default, the background image is placed on the top-left of the webpage.

You can set the following positions: center,top,bottom,left,right

Example:

```
<html>
  <head><style>
    body {
      background-position: center;
    }
  </style></head>
```

```
  <body>
```

```
    <p>This is a fixed background-image. Scroll down the page.</p>
```

```
    <p>This is a fixed background-image. Scroll down the page.</p>
```

```
  </body></html>
```

# CSS Properties

- CSS **background-Shorthand** property:
- it is also possible to specify all the background properties in one single property. This is called a shorthand property.
- Example:

```
<html>
  <head><style>
    body {
      background: #ffffff url("img_tree.png") no-repeat right top;
      margin-right: 200px;
    }
  </style></head>
  <body>

<p>The background property is a shorthand property for specifying all the background properties in one declaration.</p>
  </body>
</html>
```

# CSS Border

The following values are allowed:

- dotted - Defines a dotted border
- dashed - Defines a dashed border
- solid - Defines a solid border
- double - Defines a double border
- groove - Defines a 3D grooved border. The effect depends on the border-color value
- ridge - Defines a 3D ridged border. The effect depends on the border-color value
- inset - Defines a 3D inset border. The effect depends on the border-color value
- outset - Defines a 3D outset border. The effect depends on the border-color value
- none - Defines no border
- hidden - Defines a hidden border

1. Create a webpage by using CSS and follow the instructions given below:

- Insert a background image
- Background image should not be repeated
- Background attachment should be fixed
- Text color should be blue
- Font size should be 25px
- Text align should be justify
- Letter spacing should be 3px and word spacing should be 6px
- Add a border style for each side of the paragraph. The top border should be dashed and in red color, the right border should be double and in green color, the bottom border should be dotted and in cyan color, and the left border should be solid and in orange color.

## TASK-1

2. Create an Image gallery of 6 images by considering the following CSS properties:

- Set a 3px, solid and red border around the images.
- Apply top left border radius of 40px, top right border radius of 70px, bottom right border radius of 50px and bottom left border radius of 90px to all the images.
- The height and width of all images should be 300px and 400px respectively.
- Apply a transparency effect of 0.7 to all the images.
- Margin around images should be of 10px.
- Apply horizontal box shadow of 12px, vertical box shadow of 16px, blur effect of 18px and color of box shadow blue.

## TASK-2

# css Margin

- CSS Margin property is used to define the space around elements. It is completely transparent and doesn't have any background color. It clears an area around the element.

# css Padding

- CSS Padding property is used to define the space between the element content and the element border.
- It is different from CSS margin in the way that CSS margin defines the space around elements. CSS padding is affected by the background colors. It clears an area around the content.

# Margin

```
<html>
  <head> <style>
    p.ex {
      margin-top: 50px;
      margin-bottom: 50px;
      margin-right: 100px;
      margin-left: 100px;
    }
  </style> </head>
  <body>
<p>This paragraph is not displayed with specified margin.
</p>
<p class="ex">This paragraph is displayed with specified
margin.</p>
</body>
</html>
```

# Padding

```
<html>
  <head> <style>
    p.padding {
      padding-top: 50px;
      padding-right: 100px;
      padding-bottom: 150px;
      padding-left: 200px;
    }
  </style>
  </head>
  <body>
<p>This is a paragraph with no specified padding.</p>
<p class="padding">This is a paragraph with specified
  paddings.</p>
  </body>
</html>
```

# CSS Font

- CSS Font property is used to control the look of texts. By the use of CSS font property you can change the text size, color, style and more.

Properties;

- CSS Font color: This property is used to change the color of the text. (standalone attribute)
- CSS Font family: This property is used to change the face of the font.
- CSS Font size: This property is used to increase or decrease the size of the font.
- CSS Font style: This property is used to make the font bold, italic or oblique.
- CSS Font variant: This property creates a small-caps effect.
- CSS Font weight: This property is used to increase or decrease the boldness and lightness of the font.

- **CSS Font color:**

There are three different formats to define a color:

- By a color name
- By hexadecimal value
- By RGB

- **CSS font family**

It can be divided in two types:

- Generic family: It includes Serif, Sans-serif, and Monospace.
- Font family: It specifies the font family name like Arial, New Times Roman etc.

eg:

```
h1 { font-family: sans-serif; }
```

- **CSS font size:**

This property is used to change the size of the font.

< p style="font-size:xx-small;"> This font size is extremely small.

</p>

< p style="font-size:x-small;"> This font size is extra small</p>

< p style="font-size:medium;"> This font size is medium. </p>

< p style="font-size:large;"> This font size is large. </p>

< p style="font-size:x-large;"> This font size is extra large. </p>

< p style="font-size:xx-large;"> This font size . </p>

< p style="font-size:smaller;"> This font size is smaller. </p>

< p style="font-size:larger;"> This font size is larger. </p>

< p style="font-size:200%;"> This font size is set on 200%. </p>

< p style="font-size:20px;"> This font size is 20 pixels. </p>

- CSS Font Style

```
h2 { font-style: italic; }
```

```
h3 { font-style: oblique; }
```

```
h4 { font-style: normal; }
```

- CSS Font Variant

```
p { font-variant: small-caps; }
```

```
h3 { font-variant: normal; }
```

- CSS Font Weight

```
<p style="font-weight:bold;">This font is bold.</p>
```

```
<p style="font-weight:bolder;">This font is bolder.</p>
```

# Picture

- The most common use of the `<picture>` element will be for art direction in responsive designs. Instead of having one image that is scaled up or down based on the viewport width, multiple images can be designed to more nicely fill the browser viewport.
- The `<picture>` element contains two tags: one or more `<source>` tags and one `<img>` tag.
- **Example:**

```
<picture>  
<source media="(min-width:650px)" srcset="img_pink_flowers.jpg">  
<source media="(min-width:465px)" srcset="img_white_flower.jpg">  
  
</picture>
```

# Marquee

- The HTML <marquee> tag is used for scrolling piece of text or image displayed either horizontally across or vertically down your web site page depending on the settings.
- Example:

```
<marquee>This is basic a marquee</marquee>
<marquee direction = "up">The direction of text will be
from bottom to top.</marquee>
```

# Media Query

The Media query in CSS is used to create a responsive web design. It means that the view of a web page differs from system to system based on screen or media types. The breakpoint specifies for what device-width size, the content is just starting to break or deform.

## **Media Types in CSS:**

- all: It is used for all media devices
- print: It is used for printer.
- screen: It is used for computer screens, smartphones, etc.
- speech: It is used for screen readers that read the screen aloud.

# Media Query



```
@media screen and (max-width:500px) {
  body {
    text-align: center;
    background-color: blue;
  }
```

# CSS Gradients

- The Gradient in CSS is a special type of image that is made up of progressive & smooth transition between two or more colors.

By using the gradient in CSS, we can create variants styling of images which can help to make an attractive webpage.

Gradients can be categorized into 2 types:

- `linear-gradient()` and `radial-gradient()`

**linear-gradient()**-It includes the smooth color transitions to going up, down, left, right, and diagonally. The minimum two-color required to create a linear gradient. More than two color elements can be possible in linear gradients.

The starting point and the direction are needed for the gradient effect.

- `background-image: linear-gradient(white, green);`

## radial-gradient()

It starts at a single point and emanates outward. By default, the first color starts at the center position of the element and then fades to the end color towards the edge of the element. Fade happens at an equal rate until specified.

syntax:

```
background-image: radial-gradient( shape size at position, start-color, ..., last-color );
```

example:

```
background-image: radial-gradient(circle, green, white, blue);
```

# CSS flex Property

The flex CSS shorthand property is the combination of flex-grow, flex-shrink, and flex-basis properties. It is used to set the length of flexible items. The flex property is much more responsive and mobile-friendly.

# CSS grid Property

The CSS grid layout module is used to create a grid-based layout system, with the help of rows and columns it makes it easier to design any webpage without using floats and positioning.

# CSS box-sizing Property

The box-sizing property in CSS defines how the user should calculate the total width and height of an element i.e padding and borders, are to be included or not.

syntax: `box-sizing: content-box|border-box;`

# TASK-3

Create the following navigation bar by using CSS: and also create a simple webpage like this:



# THANK YOU

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