

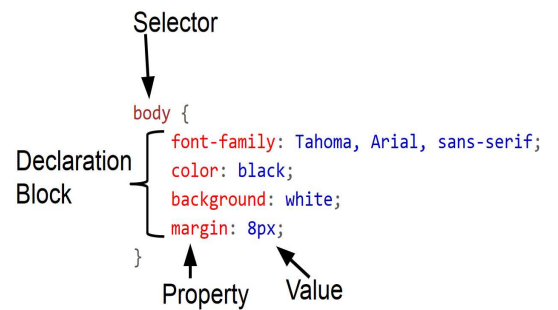
## Introduction of Cascading Style Sheets (CSS):

CSS stands for **Cascading Style Sheets**. They are used to describe all the style that will be applied to the various elements (tags) on the HTML page.

### What is CSS Syntax?

Basic CSS syntax is composed of a selector and a declaration block.

```
selector {  
    property: value;  
}
```



**Selector:** Determines which HTML elements will be styled.

**Declaration Block:** Enclosed in curly braces {...} and contains one or more declarations.

**Declaration:** A combination of a CSS property and a value, separated by a colon ( : ) and terminated by a semicolon ( ; )

### **Example:**

```
<html>  
<head>  
<title>Title of the document</title>  
<style>  
h1 {  
    text-align : center;  
    color : red;  
    font-family : arial  
}  
  
p {  
    color: red;  
}  
</style>  
</head>  
<body>  
    <h1>Syntax of CSS</h1>  
    <p>This is a paragraph</p>  
</body>  
</html>
```

## How to Insert a Style Sheet

When a browser reads a style sheet, it will format the web page according to it. There are three ways of inserting a style sheet:

1. Inline CSS
2. Internal CSS
3. External CSS

**Inline CSS:** It is used to apply CSS on a single line or element.

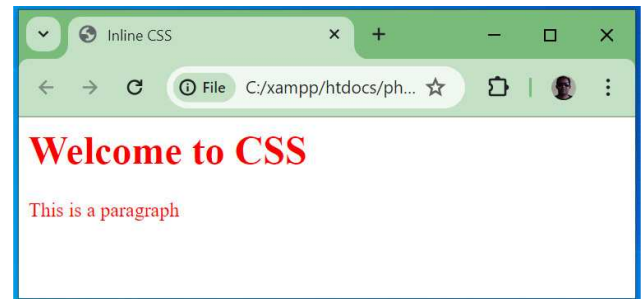
Example:

```
<html>
<head>
<title>Inline CSS</title>

</head>
<body>
    <h1 style="color: red">Welcome to CSS</h1>
    <p style="color: red">This is a paragraph</p>

</body>
</html>
```

Output:

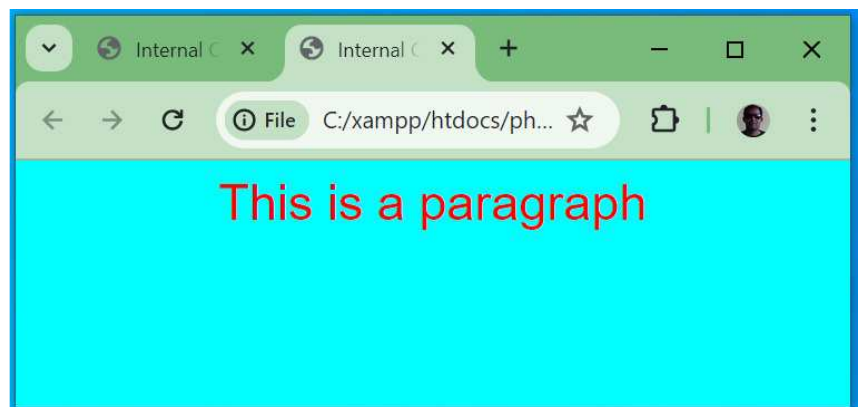


**Internal CSS:** It is used to apply CSS on a single document or page. It can affect all the elements of the page. It is written inside the style tag within head section of html.

Example:

```
<html>
<head>
<title>Internal CSS Example</title>
<style>
p {
    text-align : center;
    color : red;
    font-size: 30px;
    font-family : arial
}
body{
    background-color: aqua;
}
</style>
</head>
<body>
    <p>This is a paragraph</p>
</body>
</html>
```

Output:



**External CSS:** It is used to apply CSS on multiple pages or all pages. It can be written in any text editor. The file should not contain any html tags. The file must be saved with .css extension.

**Example:**

**externalcss.css**

```
body { background-color: skyblue;}

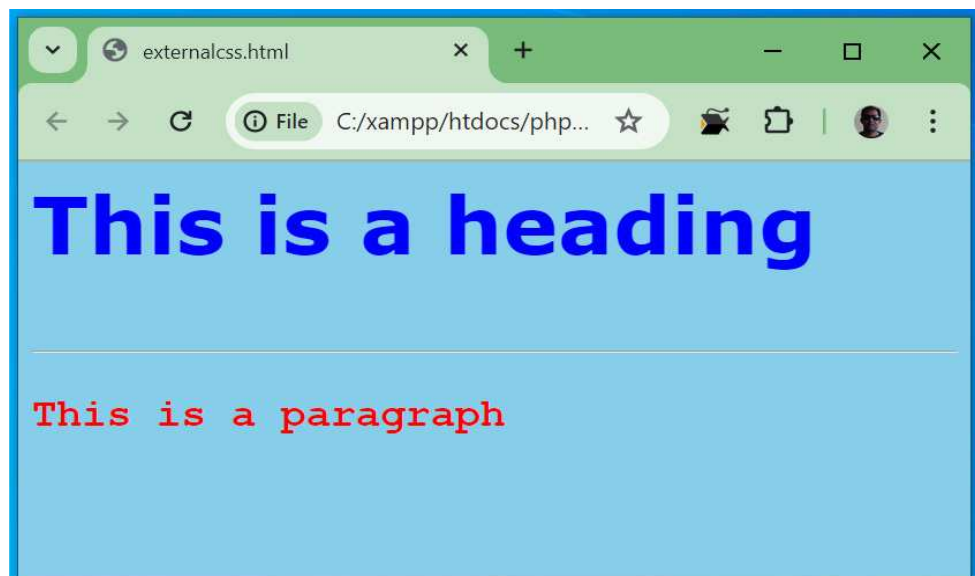
h3 { color: blue; font-family: verdana; font-size: 300% }

p { color: red; font-family: courier; font-size: 150%; }
```

**externalcss.html**

```
<html>
<head>
<link rel="stylesheet" type="text/css" href="externalcss.css"/>
</head>
<body>
<h3><b>This is a heading</b></h3>
<hr>
<p><b>This is a paragraph</b></p>
</body>
</html>
```

**Output:**



## CSS ID and Class Selectors:

In CSS, the selectors are of two types — **class** and **id**. The description about each of them is given below.

### **class selector:**

The class selector selects elements with a specific **class attribute**. To select elements with a specific class, write a period (.) character, followed by the name of the class.

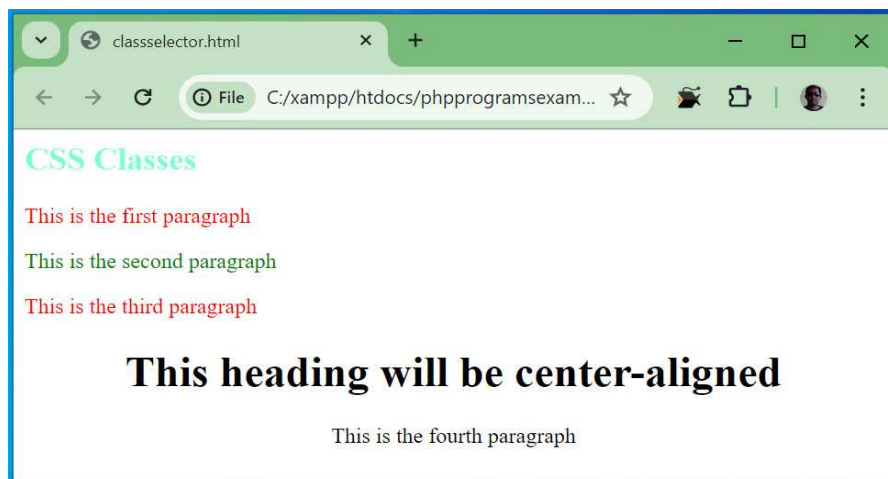
### **Example:**

```
<html>
<head>
<style>
    .firstparagraph { color: red }
    .secondparagraph { color: green }
    .thirdparagraph { color: blue }
    .test { color: aquamarine }
    .center { text-align: center }
</style>
</head>
<body>
<h2 class="test">CSS Classes</h2>
<p class="firstparagraph">This is the first paragraph</p>
<p class="secondparagraph">This is the second paragraph</p>
<p class="firstparagraph">This is the third paragraph</p>

<h1 class="center">This heading will be center-aligned</h1>

<p class="center">This is the fourth paragraph</p>
</body>
</html>
```

### **Output:**



### id selector:

The id selector used the **id attribute** of an HTML element to select a specific element. The id of an element should be unique within a page, so the id selector is used to select one unique element. To select an element with a specific id, write a hash (#) character.

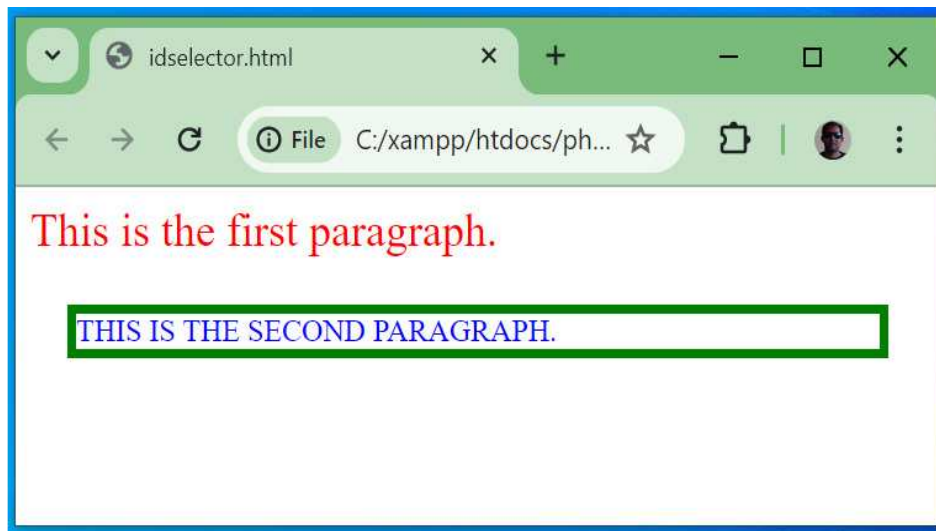
### Example:

```
<html>
<head>
<style>
#id1 {
    color: red;
    font-family: times;
    font-size: 150%;
}

#id2 {
    color: blue;
    margin: 20px;
    border: 5px solid green;
    text-transform: uppercase;
}
</style>
</head>
<body>
    <p id="id1">This is the first paragraph.</p>

    <p id="id2">This is the second paragraph.</p>
</body>
</html>
```

### Output:



## CSS Grouping Selector:

The CSS grouping selector is used to select multiple elements and style them together. This reduces the code and extra effort to declare common styles for each element. To group selectors, each selector is separated by a space.

### Example:

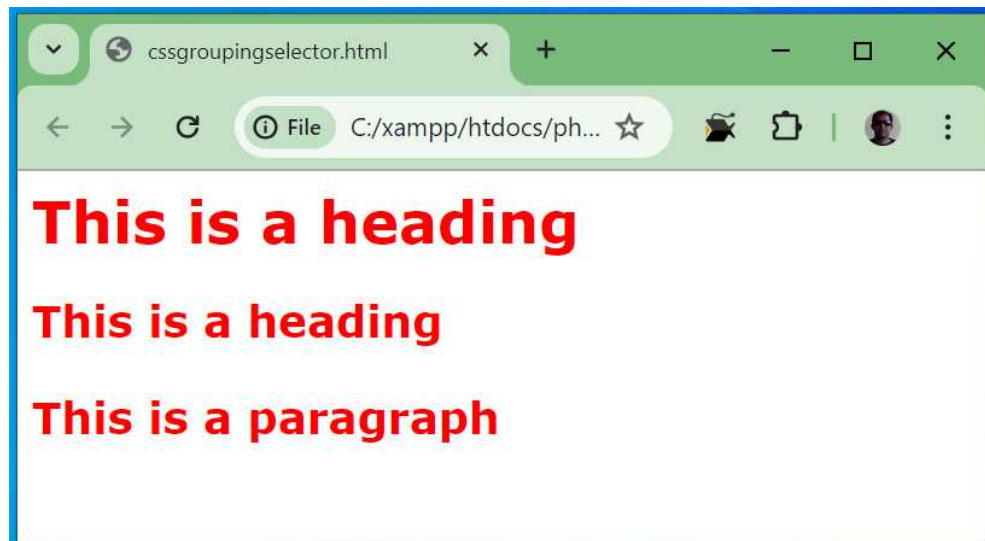
```
<html>
<head>
<style>

  h1,h2,p{
    color: red;
    font-family: Verdana, Geneva, Tahoma, sans-serif;
  }

</style>
</head>
<body>
<h1>This is a heading</h1>
<h2>This is a heading
<p>This is a paragraph</p>
</body>
</html>
```

```
h1{
  color: red;
  font-family: Verdana, Geneva, Tahoma, sans-serif;
}
h2{
  color: blue;
  font-family: Verdana, Geneva, Tahoma, sans-serif;
}
p{
  color: green;
  font-family: Verdana, Geneva, Tahoma, sans-serif;
}
```

### Output:



### Colors; Backgrounds; Borders; Text; Font; List; Table:

## CSS Background

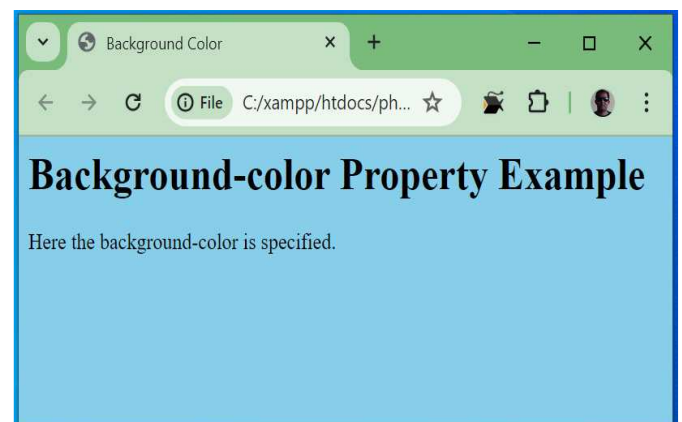
CSS background properties used to define the background effects on element. There are many type of CSS background properties that affects the HTML elements.

- **background-color:** which is used for setting a background color.
- **background-image:** which is used for setting one or multiple background images for an element.
- **background-repeat:** which is used for controlling the repeated position of an element.
- **background-position:** which is used for setting a background image position.
- **background-origin:** which is used for defining the background positioning area which is the position of an image which is placed by using the background-image property.
- **background-clip:** which is used for placing background image or color to underneath its border.
- **background-attachment:** which is used to define if the background image is fixed or it will scroll along with the rest of the page.
- **background-size:** which is used to define the background image size.

**Example of background-color:**

```
<html>
<head>
  <title>Background Color</title>
</style>
  body {
    background-color: skyblue;
  }
</style>
</head>
<body>
  <h1>Background-color Property Example</h1>
  <p>Here the background-color is specified.</p>
</body>
</html>
```

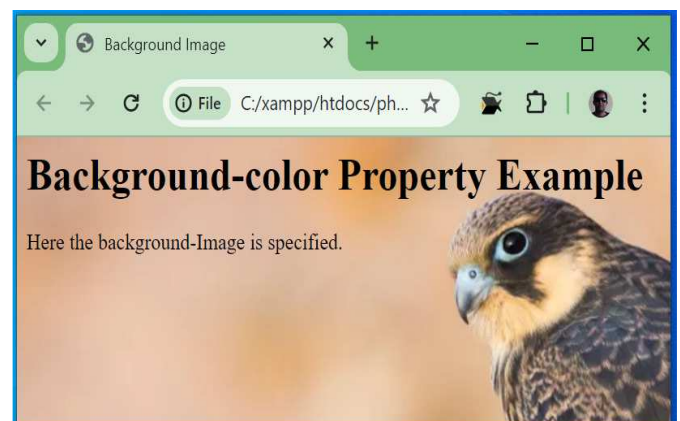
**Output:**



**Example of background- image:**

```
<html>
<head>
  <title>Background Image</title>
</style>
  body {
    background-image: url("bird.webp");
  }
</style>
</head>
<body>
  <h1>Background-color Property Example</h1>
  <p>Here the background-Image is specified.</p>
</body>
</html>
```

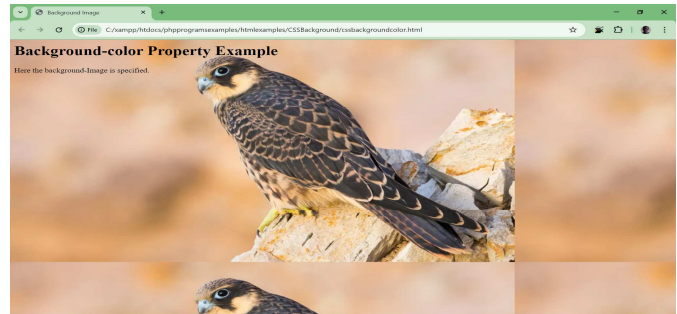
**Output:**



**Example of background repeat:**

```
<html>
<head>
  <title>Background Image</title>
  <style>
    body {
      background-image: url("bird.webp");
      background-repeat: repeat;
    }
  </style>
</head>
<body>
  <h1>Background-color Property Example</h1>
  <p>Here the background-Image is specified.</p>
</body>
</html>
```

**Output:**



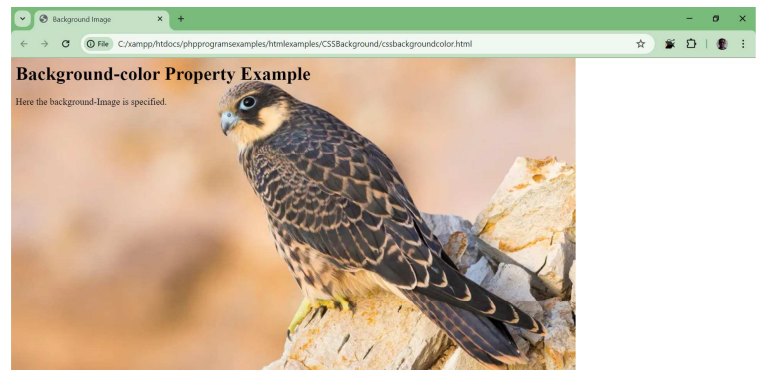
**Example of background position:**

```
<html>
<head>
<title>Background Image</title>
<style>
body {
    background-image: url("bird.webp");
    background-repeat: no-repeat;
    background-attachment: fixed;
    background-position: left top;
}
</style>
</head>
<body>

    <h1>Background-color Property Example</h1>
    <p>Here the background-Image is specified.</p>

</body>
</html>
```

**Output:**

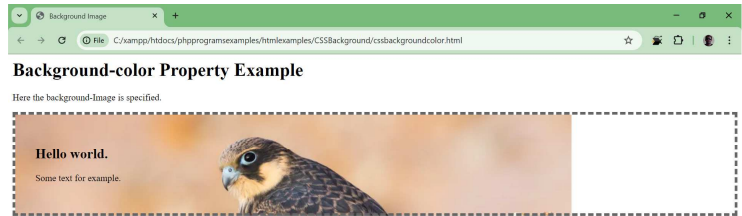




### Example of background origin:

```
<html>
<head>
<title>Background Image</title>
<style>
.example {
    border: 5px dashed #666;
    padding: 35px;
    background-image: url("bird.webp");
    background-repeat: no-repeat;
    background-origin: padding-box;
}
</style>
</head>
<body>
    <h1>Background-color Property Example</h1>
    <p>Here the background-Image is specified.</p>
    <div class="example">
        <h2>Hello world.</h2>
        <p>Some text for example.</p>
    </div>
</body>
</html>
```

### Output:



### Example of background clip:

```
<html>
<head>
<title>Background Image</title>
<style>
#example {
    border: 3px solid #666;
    padding: 15px;
    background: #ccc;
    background-clip: content-box;
}
</style>
</head>
<body>
    <h1>Background-color Property Example</h1>
    <p>Here the background-Image is specified.</p>
    <div id="example">
        <h2>Hello world.</h2>
        <p>Some text for example.</p>
    </div>
</body>
</html>
```

### Output:



**Example of background attachment:**

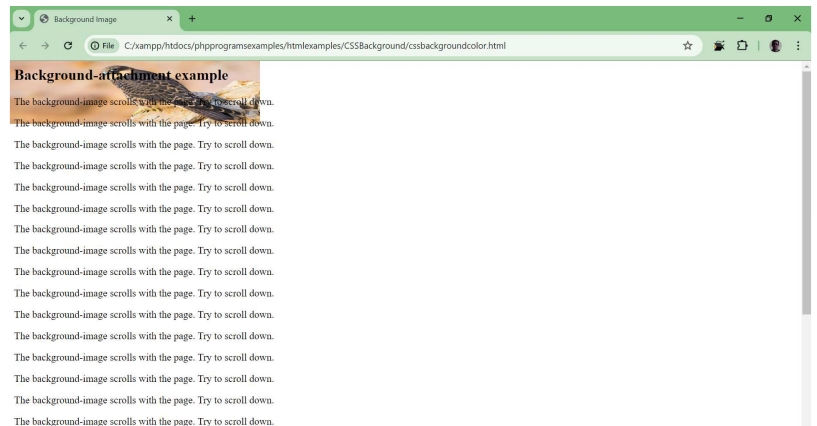
```
<html>
<head>
<title>Background Image</title>
<style>
body {
    background-image: url("bird.webp");
    background-repeat: no-repeat;
    background-attachment: scroll;
    background-size: 400px 100px;
}
</style>
</head>
<body>
```

## Background-attachment example

[illegible]

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

**Output:**



### Example of background size:

```
<html>
<head>
<title>Background Image</title>
<style>
body {
    background-image: url("bird.webp");
    background-size: 300px 200px;
    background-repeat: no-repeat;
}
</style>
</head>
<body>
    <h2>Background size example.</h2>
    <p>Here can be any information.</p>
</body>
</html>
```

### Output:



## CSS Lists:

The lists in CSS are used to specify lists of information. All lists may contain one or more list elements. There are three different types of HTML lists. Lists are categorized into two types.

1. **Unordered List:** By default, the list elements in unordered lists are denoted with bullets, which are tiny black circles.
2. **Ordered List:** The list elements in ordered lists are identified by numbers and letters.

**CSS list properties are available for usage in controlling the CSS lists.**

- **List-style-type:** This property is used to determine the look of the list item marker, such as a disc, character, or custom counter style.
- **List-style-image:** The pictures that will serve as list item markers may be specified using this parameter.
- **List-style-position:** It describes where the marker box should be about the main block box.
- **List-style:** The list style is configured with this attribute.

### **CSS list-style-type Property**

- **disc:** specifies a filled circle
- **circle:** specifies a hollow circle
- **square:** specifies a filled square
- **decimal:** represents decimal numbers starting with 1
- **lower-alpha:** specifies lowercase ASCII letters
- **lower-roman:** specifies lowercase Roman numerals
- **upper-alpha:** specifies uppercase ASCII letters
- **upper-roman:** specifies uppercase Roman numerals

#### **csslist.css**

```
ul.disc {  
    list-style-type: disc;  
}  
  
ul.circle {  
    list-style-type: circle;  
}  
  
ul.square {  
    list-style-type: square;  
}  
  
ul.decimal {  
    list-style-type: decimal;  
}  
  
ul.lower-alpha {  
    list-style-type: lower-alpha;  
}  
  
ul.upper-alpha {  
    list-style-type: upper-alpha;  
}  
  
ul.upper-roman {  
    list-style-type: upper-roman;  
}
```

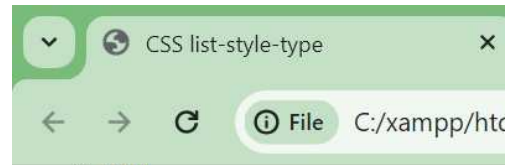
### **Example:**

```
<html>  
<head>  
<title>CSS list-style-type</title>  
<link rel="stylesheet" href="csslist.css" />  
</head>  
<body>  
    <p><b>list-style-type: disc</b></p>  
    <ul class="disc">  
        <li>Sita</li>  
        <li>Rita</li>  
        <li>Abhiraj</li>  
        <li>Ananya</li>  
    </ul>  
    <p><b>list-style-type: circle</b></p>  
    <ul class="circle">  
        <li>Sita</li>  
        <li>Rita</li>  
        <li>Abhiraj</li>  
        <li>Ananya</li>
```

## Output:

```
</ul>
<p><b>list-style-type: square</b></p>
<ul class="square">
  <li>Sita</li>
  <li>Rita</li>
  <li>Abhiraj</li>
  <li>Ananya</li>
</ul>
<p><b>list-style-type: decimal</b></p>
<ul class="decimal">
  <li>Sita</li>
  <li>Rita</li>
  <li>Abhiraj</li>
  <li>Ananya</li>
</ul>
<p><b>list-style-type: lower-alpha</b></p>
<ul class="lower-alpha">
  <li>Sita</li>
  <li>Rita</li>
  <li>Abhiraj</li>
  <li>Ananya</li>
</ul>
<p><b>list-style-type: upper-alpha</b></p>
<ul class="upper-alpha">
  <li>Sita</li>
  <li>Rita</li>
  <li>Abhiraj</li>
  <li>Ananya</li>
</ul>
<p><b>list-style-type: upper-roman</b></p>
<ul class="upper-roman">
  <li>Sita</li>
  <li>Rita</li>
  <li>Abhiraj</li>
  <li>Ananya</li>
</ul>

</body>
</html>
```



### list-style-type: square

- Sita
- Rita
- Abhiraj
- Ananya

### list-style-type: decimal

1. Sita
2. Rita
3. Abhiraj
4. Ananya

### list-style-type: lower-alpha

- a. Sita
- b. Rita
- c. Abhiraj
- d. Ananya

### list-style-type: upper-alpha

- A. Sita
- B. Rita
- C. Abhiraj
- D. Ananya

### list-style-type: upper-roman

- I. Sita
- II. Rita
- III. Abhiraj
- IV. Ananya