



# UNIT III.

## BUILD A WEBSITE WITH HTML5

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# UNIT TOPICS

01

DESIGN FOR  
MULTIPLATFORM  
DISPLAY WITH  
RESPONSIVE DESIGN

02

INSERTING LISTS

- ORDERED
- UNORDERED LISTS
- DESCRIPTION LISTS

03

SEMANTICS VS  
NON-SEMANTICS  
ELEMENTS

# Intended Learning Outcomes



**1.**

define semantic and non-semantic elements in HTML5 and provide examples of each.



**2.**

use basic responsive design techniques, such as viewport settings and media queries, to create a webpage that adapts to different screen sizes;



**3**

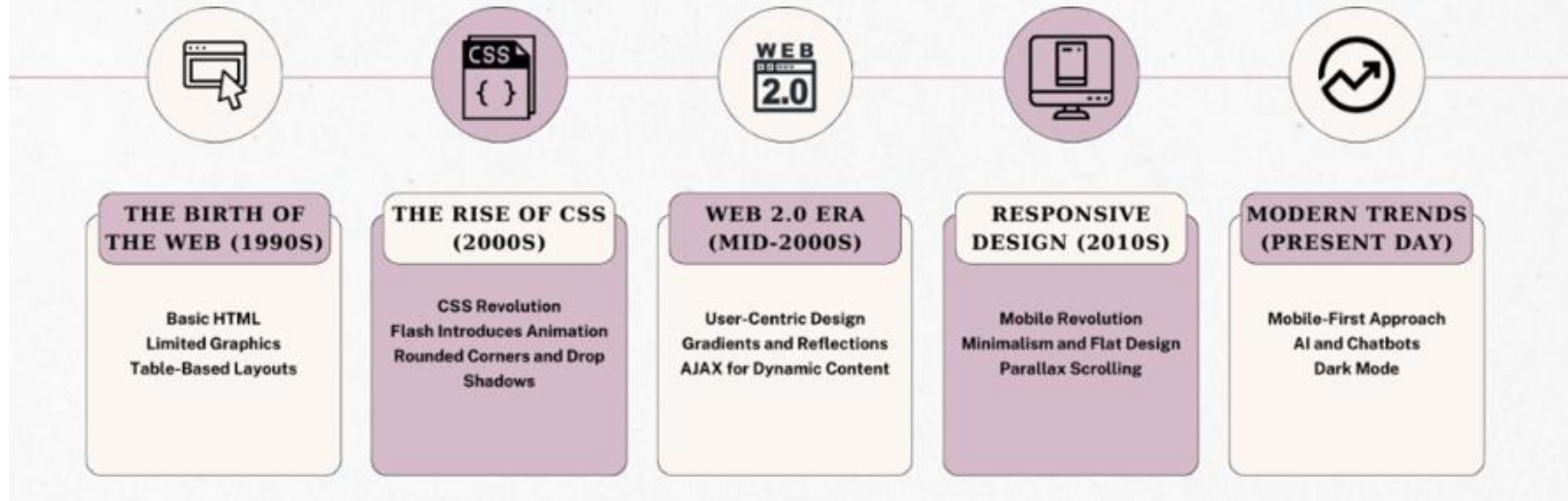
create web pages that utilize ordered, unordered, and description lists to present information effectively; and



# **Design for multiplatform display with responsive design**



# Evolution of Web Design Trends



# What is a Cascading Style Sheet?



**Cascading Style Sheets**, or **CSS**, is a scripting language used to characterize the layout of an HTML document. CSS lets web developers determine how HTML components are to be viewed on various platforms and screen sizes.

# CSS Techniques for Responsive Design

One of the most essential techniques is the use of **media queries**, which allow developers to **apply different styles** based on the characteristics of the device, such as its screen size or resolution.

Another powerful technique in responsive design is the use of **CSS Grid** and **Flexbox**, which help create flexible, fluid layouts.

**CSS Grid** allows developers to define complex grid structures that automatically adjust based on the available space, while **Flexbox** is ideal for aligning items and creating responsive containers that adjust to their content.

# CSS Example:

```
body {  
  background-color: blue;  
}  
h1{  
  color: red  
  text-align: center;  
}
```





# Inserting Lists

# Inserting Lists

- There are 2 kinds of lists in HTML: **unordered** or **bulleted lists** and **ordered** or **numbered** lists.
  - The **<ul>** and **</ul>** tags are used to create unordered or bulleted lists.
  - The **<ol>** and **</ol>** tags are used to create ordered lists or numbered lists.
  - Items in the lists are added by using the **<li>** and **</li>** tags.
- The **<dl>** tag defines a description list.

# Ordered Lists

An **ordered list**, sometimes called a **numbered list**, is useful for presenting a series of steps that the user should perform in order. To create an ordered list, you use the `<ol>` and `</ol>` tag pair. The ordered list that you create will consist of two or more items. To specify each list item, which is an entry within an ordered or unordered list, you use the `<li>` and `</li>` tag pair.

# Ordered Lists

By default, when you create an ordered list, your browser can use the numbers **1, 2, 3**, and so on to precede each of the list items. Depending on the list content, there can be instances when you have to use letters or even Roman numerals for each list item. To control the type of numbering the browser uses within an ordered list, you can use a CSS property ***list-style-type***.



```
<!DOCTYPE html>
<html>
  <head>
    <title> Ordered Lists </title>
  </head>
  <body>
    To create a webpage:
    <ol>
      <li> Draw a mockup of your page design. </li>
      <li> Use photo-editing software to create site images. </li>
      <li> Use an editor to create the HTML tags. </li>
      <li> Test and modify your design </li>
      <li> Upload your files and image files to a web server. </li>
    </ol>
  </body>
</html>
```

# Output

To create a webpage:

1. Draw a mockup of your page design.
2. Use photo-editing software to create site images.
3. Use an editor to create the HTML tags.
4. Test and modify your design
5. Upload your files and image files to a web server.



# The type attribute

- The **type** attribute of the <ol> tag defines the list item marker.
- **type="1"** – The list item will be numbered with **numbers**
- **type="A"** – The list item will be numbered with **upper case letters**
- **type="a"** – The list item will be numbered with lower case letters.
- **type="I"** – The list item will be numbered with **upper case roman numbers.**
- **type="i"** – The list item will be numbered with **lower case roman numbers.**

To create a webpage:

```
<ol type="1" style="color:#ff33cc">  
  <li> Draw a mockup of your page design. </li>  
  <li> Use photo-editing software to create site images. </li>  
  <li> Use an editor to create the HTML tags. </li>  
  <li> Test and modify your design </li>  
  <li> Upload your files and image files to a web server. </li>  
</ol>
```

To create a webpage:

```
<ol type="A" style="color:#00ff00">  
  <li> Draw a mockup of your page design. </li>  
  <li> Use photo-editing software to create site images. </li>  
  <li> Use an editor to create the HTML tags. </li>  
  <li> Test and modify your design </li>  
  <li> Upload your files and image files to a web server. </li>  
</ol>
```



# Output

To create a webpage:

1. Draw a mockup of your page design.
2. Use photo-editing software to create site images.
3. Use an editor to create the HTML tags.
4. Test and modify your design
5. Upload your files and image files to a web server.

To create a webpage:

- A. Draw a mockup of your page design.
- B. Use photo-editing software to create site images.
- C. Use an editor to create the HTML tags.
- D. Test and modify your design
- E. Upload your files and image files to a web server.



To create a webpage:

```
<ol type="a" style="color:slateblue">  
  <li> Draw a mockup of your page design. </li>  
  <li> Use photo-editing software to create site images. </li>  
  <li> Use an editor to create the HTML tags. </li>  
  <li> Test and modify your design </li>  
  <li> Upload your files and image files to a web server. </li>  
</ol>
```

To create a webpage:

```
<ol type="I" style="color:tomato">  
  <li> Draw a mockup of your page design. </li>  
  <li> Use photo-editing software to create site images. </li>  
  <li> Use an editor to create the HTML tags. </li>  
  <li> Test and modify your design </li>  
  <li> Upload your files and image files to a web server. </li>  
</ol>
```



# Output

To create a webpage:

- a. Draw a mockup of your page design.
- b. Use photo-editing software to create site images.
- c. Use an editor to create the HTML tags.
- d. Test and modify your design
- e. Upload your files and image files to a web server.

To create a webpage:

- I. Draw a mockup of your page design.
- II. Use photo-editing software to create site images.
- III. Use an editor to create the HTML tags.
- IV. Test and modify your design
- V. Upload your files and image files to a web server.

To create a webpage:

```
<ol type="i" style="color:violet">
```

```
<li> Draw a mockup of your page design. </li>
```

```
<li> Use photo-editing software to create site images. </li>
```

```
<li> Use an editor to create the HTML tags. </li>
```

```
<li> Test and modify your design </li>
```

```
<li> Upload your files and image files to a web server. </li>
```

```
</ol>
```



# Output

To create a webpage:

- i. Draw a mockup of your page design.
- ii. Use photo-editing software to create site images.
- iii. Use an editor to create the HTML tags.
- iv. Test and modify your design
- v. Upload your files and image files to a web server.

# Creating Unordered List

- An **unordered list**, often called a **bulleted list**, contains a list of items in **no particular order**, such as a grocery list, features for a new product, or browsers that support a particular HTML tag or attribute.
- To create an unordered list within a webpage, you use the **<ul>** and **</ul>** tag pair.
- Again to identify the items within the list, you can use the **<li>** and **</li>** list item tag pair.



```
<!DOCTYPE html>
<html>
  <head>
    <title> Unordered Lists </title>
  </head>
  <body>
    Most Popular Web Browsers
    <ul>
      <li> Mozilla Firefox </li>
      <li> Google Chrome </li>
      <li> Opera Browser </li>
      <li> Microsoft Edge </li>
      <li> Safari Browser </li>
      <li> Maxthon Browser </li>
    </ul>
  </body>
</html>
```

# Most Popular Web Browsers

- Mozilla Firefox
- Google Chrome
- Opera Browser
- Microsoft Edge
- Safari Browser
- Maxthon Browser



# The CSS list-style-type property

- The **list-style-type** property is used to define the style of the list item marker in **unordered lists**.
- The **disc** value sets the list item marker to a bullet.
- The **circle** value sets the list item marker to a circle.
- The **square** value sets the list item marker to a square.
- The **none** value will not display markers on list items.

Most Popular Web Browsers

```
<ul style="list-style-type: disc;color: red">  
  <li> Mozilla Firefox </li>  
  <li> Google Chrome </li>  
  <li> Opera Browser </li>  
  <li> Microsoft Edge </li>  
  <li> Safari Browser </li>  
  <li> Maxthon Browser </li>  
</ul>
```

Most Popular Web Browsers

```
<ul style="list-style-type: circle;color: blue">  
  <li> Mozilla Firefox </li>  
  <li> Google Chrome </li>  
  <li> Opera Browser </li>  
  <li> Microsoft Edge </li>  
  <li> Safari Browser </li>  
  <li> Maxthon Browser </li>  
</ul>
```



# Output

## Most Popular Web Browsers

- Mozilla Firefox
- Google Chrome
- Opera Browser
- Microsoft Edge
- Safari Browser
- Maxthon Browser

## Most Popular Web Browsers

- Mozilla Firefox
- Google Chrome
- Opera Browser
- Microsoft Edge
- Safari Browser
- Maxthon Browser

Most Popular Web Browsers

```
<ul style="list-style-type: square;font-family: tahoma">  
  <li> Mozilla Firefox </li>  
  <li> Google Chrome </li>  
  <li> Opera Browser </li>  
  <li> Microsoft Edge </li>  
  <li> Safari Browser </li>  
  <li> Maxthon Browser </li>  
</ul>
```

Most Popular Web Browsers

```
<ul style="list-style-type: none;font-family: calibri">  
  <li> Mozilla Firefox </li>  
  <li> Google Chrome </li>  
  <li> Opera Browser </li>  
  <li> Microsoft Edge </li>  
  <li> Safari Browser </li>  
  <li> Maxthon Browser </li>  
</ul>
```



# Output

## Most Popular Web Browsers

- Mozilla Firefox
- Google Chrome
- Opera Browser
- Microsoft Edge
- Safari Browser
- Maxthon Browser

## Most Popular Web Browsers

Mozilla Firefox  
Google Chrome  
Opera Browser  
Microsoft Edge  
Safari Browser  
Maxthon Browser

# The CSS list-style-image property

- The **list-style-image** property used to specify an image as the list item marker in unordered lists.

```
<ul style = "list-style-image:url('image.jpg')">  
  <li>item 1</li>  
  <li>item 2</li>  
</ul>
```

# The CSS list-style-position property

- The **list-style-position** property specifies the position of the list item marker in **unordered lists**.
- The **outside** value means that the bullet points will be outside the list item. The start of each line of a list item will be aligned vertically.
- The **inside** value means that the bullet points will be inside the list item. The list item will be part of the text and push the text at the start.



# The CSS list Shorthand Property

- The **list-style** property is a shorthand property. It is use to set all the list properties in one declaration:

**Example:**

```
<ul style = "list-style: square inside url('image.jpg')">
```

# Description Lists

- HTML also supports description lists.
- A **description list** is a list of terms, with a description of each term.
- The **<dl>** and **</dl>** tags define the **description list**.
- The **<dt>** and **</dt>** tags define the **term (name)**.
- The **<dd>** and **</dd>** tags describe **each term**.

```
<!DOCTYPE html>
<html>
  <head>
    <title> Description Lists </title>
  </head>
  <body>
    <h2> Drinks available </h2>
    <dl>
      <dt> <b> Coffee </b> </dt>
      <dd> - freshly brewed coffee </dd>
      <dd> - available in black, brown or white </dd>
      <dt> <b> Milk </b> </dt>
      <dd> - fresh cow's milk </dd>
      <dd> - available in low fat, non-fat or full cream </dd>
      <dt> <b> Milk Tea </b> </dt>
      <dd> - green tea mixed with fresh cow's milk </dd>
      <dd> - available in different flavors </dd>
    </dl>
  </body>
</html>
```



# Output

## Drinks available

### Coffee

- freshly brewed coffee
- available in black, brown or white

### Milk

- fresh cow's milk
- available in low fat, non-fat or full cream

### Milk Tea

- green tea mixed with fresh cow's milk
- available in different flavors



# **Semantics vs Non- semantics Elements**

# Semantics Elements

**Semantic elements** are HTML tags that carry specific meanings about the content they enclose, helping both developers and search engines understand the structure of a web page.

Examples of semantic elements include **<header>**, **<article>**, **<footer>**, **<section>**, and **<nav>**



# Semantic elements in HTML

- <article>
- <main>
- <aside>
- <mark>
- <details>
- <nav>
- <figcaption>
- <section>
- <figure>
- <summary>
- <footer>
- <time>
- <header>

# HTML <section> Element

- The **<section>** element is used to define distinct sections of content within a webpage, often with a specific theme or topic.
- It is commonly used for large portions of content like **chapters**, an **introduction**, or **news items**.

For **example**, a webpage could include sections for the *introduction, main content, and contact information*.

# HTML <section> Element

```
<!DOCTYPE html>
<html>
<head>
  <title>WWF Information</title>
</head>
<body>

  <h1>World Wide Fund for Nature (WWF)</h1>
  <section>
    <h2>Introduction</h2>
    <p>The World Wide Fund for Nature (WWF) is an international organization dedicated to environmental conservation, research, and restoration. Founded in 1961, WWF has played a key role in global efforts to protect nature.</p>
  </section>

  <section>
    <h2>Main Content</h2>
    <p>One of WWF's most recognizable symbols is the panda logo, which was inspired by a panda named Chi Chi. The organization works on various initiatives, including wildlife conservation, climate change mitigation, and sustainable development.</p>
  </section>

  <section>
    <h2>Contact Information</h2>
    <p>For more details, visit the official WWF website at <a href="https://www.worldwildlife.org/" target="_blank">www.worldwildlife.org</a>.</p>
  </section>

  <p>&copy; 2025 WWF Information. All rights reserved.</p>
</body>
</html>
```



# Output

## World Wide Fund for Nature (WWF)

### Introduction

The World Wide Fund for Nature (WWF) is an international organization dedicated to environmental conservation, research, and restoration. Founded in 1961, WWF has played a key role in global efforts to protect nature.

### Main Content

One of WWF's most recognizable symbols is the panda logo, which was inspired by a panda named Chi Chi. The organization works on various initiatives, including wildlife conservation, climate change mitigation, and sustainable development.

### Contact Information

For more details, visit the official WWF website at [www.worldwildlife.org](http://www.worldwildlife.org).

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# HTML `<article>` Element

- The `<article>` element specifies independent, self-contained content that could stand alone and be distributed separately from the rest of the webpage.
- An article should make sense on its own and it should be possible to distribute it independently from the rest of the site.

# HTML `<footer>` Element

- The `<footer>` element defines a footer for a document or section, typically containing important information such as authorship details, copyright information, contact details, a sitemap, or links to related documents.



# HTML <nav> Element

- The <nav> element is designed to contain a **set of navigation links** that guide users through a website's primary sections.
- It is important to note that not all links on a webpage should be placed inside a <nav> element; only **major blocks of** navigation links, such as a *site's menu or table of contents*, belong here.

# HTML `<aside>` Element

- The `<aside>` element is used to define content that is related to the surrounding content but can be considered as secondary or tangential. It is often used for sidebars, pull quotes, advertisements, or other supplementary content that enhances the main topic of the page but doesn't directly contribute to the primary narrative.

# HTML `<figure>` and `<figcaption>` Elements

- The `<figure>` element is used to represent self-contained content, such as illustrations, diagrams, photos, or code listings, that is typically accompanied by a caption.
- The `<figcaption>` element, which provides a description or caption for the content inside the `<figure>` element, can be placed either at the beginning or the end of the `<figure>`.



# Non-Semantic Elements

- The **non-semantic elements** do not provide any intrinsic meaning about the content they contain. These include tags like **<div>** and **<span>**, which are used primarily for layout and styling purposes rather than to convey content structure.

**THANK  
YOU**

