HTML List

1. Introduction

Lists are used to group together related pieces of information, so they are clearly associated with each other and easy to read. In modern web development, lists are important elements, frequently used for navigation as well as general content.

Lists are good from a structural point of view as they help create a well-structured and more accessible document. They are also useful because they provide specialized elements to which you can attach CSS styles.

2. Html List Advantages

- **Flexibility:** If you have to change the order of the list items in an ordered list, you simply move around the list item elements; when the browser displays the list, it will be properly ordered.
- **Styling:** Using an HTML list allows you to style the list properly using CSS. The list item tags are different from the other tags; you can specifically target CSS rules to them.
- **Semantics:** HTML lists give the content the proper semantic structure. This has important benefits, such as allowing screen readers to tell users with visual disabling that they are reading a list, rather than just reading out a text and numbers.

Note: Using regular text tags instead of a list makes more work and can create problems to the site's design. So, if the site needs a list, the correct HTML list format should be used.

3. List Types

HTML provides elements for marking up three types of lists:

- Unordered list: used to group a set of related items in no particular order
- Ordered list: used to group a set of related items in a specific order
- Description list: used to display name and value pairs such as terms and definitions

All list elements (the lists themselves and the items that go in them) are displayed as block elements by default, which means that they start on a new line and have some space above and below. Each list type has a specific purpose and meaning in a web page.

4. Unordered Lists

Unordered (bulleted) lists are used when a set of items can be placed in any order such as names, components, thoughts, or options as unordered lists. In fact, most lists fall into this category. An example is a shopping list:

- Milk
- Bread
- Butter
- Coffee beans

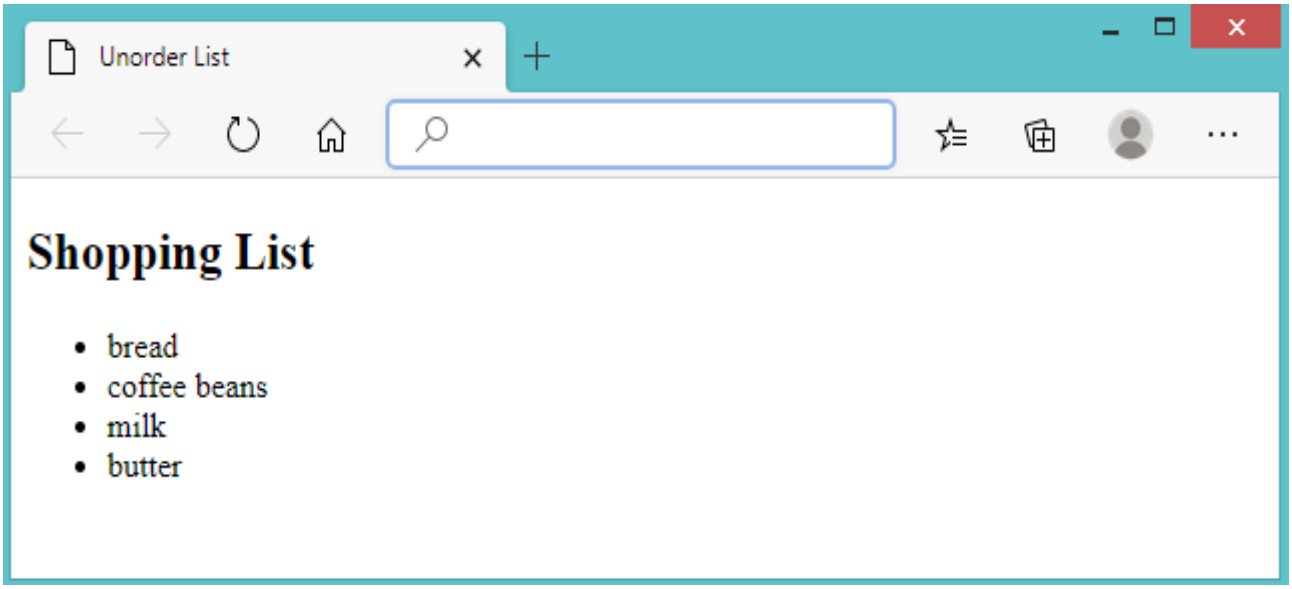
By default, unordered lists display with a bullet before each list item, CSS can be used to change the bullet to one of several default styles. To identify an unordered list, mark it up as a **ul** element. The opening <ul> tag goes before the first list item, and the closing tag goes after the last item. Each item in the list marked up as a list item **li**, the opening tag <li> and enclosing tag , For example:

```
<ul>
  <li>bread</li>
  <li>coffee beans</li>
  <li>milk</li>
  <li>butter</li>
</ul>
```

Note: There are no bullets in the source document. They are added automatically by the browser.

Example 1:

```
<!DOCTYPE html>
<Html>
<Head>
<Title> Unorder List </Title>
</Head>
<Body>
<h2>Shopping List</h2>
<ul>
 <li>bread</li>
 <li>coffee beans</li>
 <li>milk</li>
 <li>butter</li>
</ul>
</Body>
</Html>
</Body>
</Html>
```



5. Ordered Lists

Ordered (numbered) lists are used to display a list of items that should be in a specific order. An example would be cooking instructions:

1. Gather ingredients
2. Mix ingredients together
3. Place ingredients in a baking dish
4. Bake in oven for an hour
5. Remove from oven
6. Allow to stand for ten minutes
7. Serve

If the list items were moved around into a different order, the information would no longer make sense:

1. Gather ingredients
2. Bake in oven for an hour
3. Serve
4. Remove from oven
5. Place ingredients in a baking dish
6. Allow to stand for ten minutes
7. Mix ingredients together

Ordered lists are defined with the **ol** element (<ol> and). The browser automatically inserts numbers before ordered list items, so there is no need to number them in the source document. This makes it easy to rearrange list items without renumbering them. For example:

```
<ol>
 <li>Gather ingredients</li>
 <li>Mix ingredients together</li>
 <li>Place ingredients in a baking dish</li>
 <li>Bake in oven for an hour</li>
 <li>Remove from oven</li>
 <li>Allow to stand for ten minutes</li>
 <li>Serve</li>
</ol>
```

Ordered lists can be displayed with several sequencing options that can be changed by CSS. The default in most browsers is decimal numbers, but there are others available:

Letters

a Lowercase ascii letters (a, b, c…)

A Uppercase ascii letters (A, B, C…).

? Lowercase classical Greek: (έ, ή, ί…)

Numbers

1 Decimal numbers (1, 2, 3…)

o Decimal numbers with leading zeros (01, 02, 03…)

i Lowercase Roman numerals (i, ii, iii…)

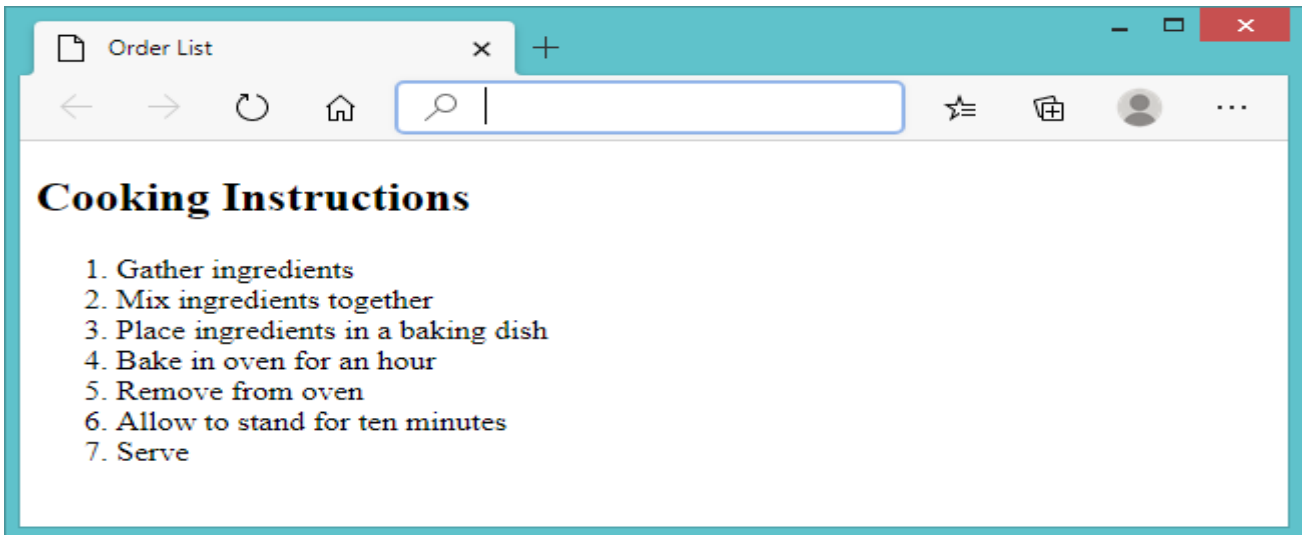
I Uppercase Roman numerals (I, II, III…)

? Traditional Georgian numbering (an, ban, gan…)

? Traditional Armenian numbering (mek, yerku, yerek…)

Example 2:

```
<!DOCTYPE html>
<Html>
<Head>
<Title> Order List </Title>
</Head>
<Body>
<h2>Cooking Instructions</h2>
 <ol>
  <li>Gather ingredients</li>
  <li>Mix ingredients together</li>
  <li>Place ingredients in a baking dish</li>
  <li>Bake in oven for an hour</li>
  <li>Remove from oven</li>
  <li>Allow to stand for ten minutes</li>
  <li>Serve</li>
</ol>
</Body>
</Html>
</Body>
</Html>
```



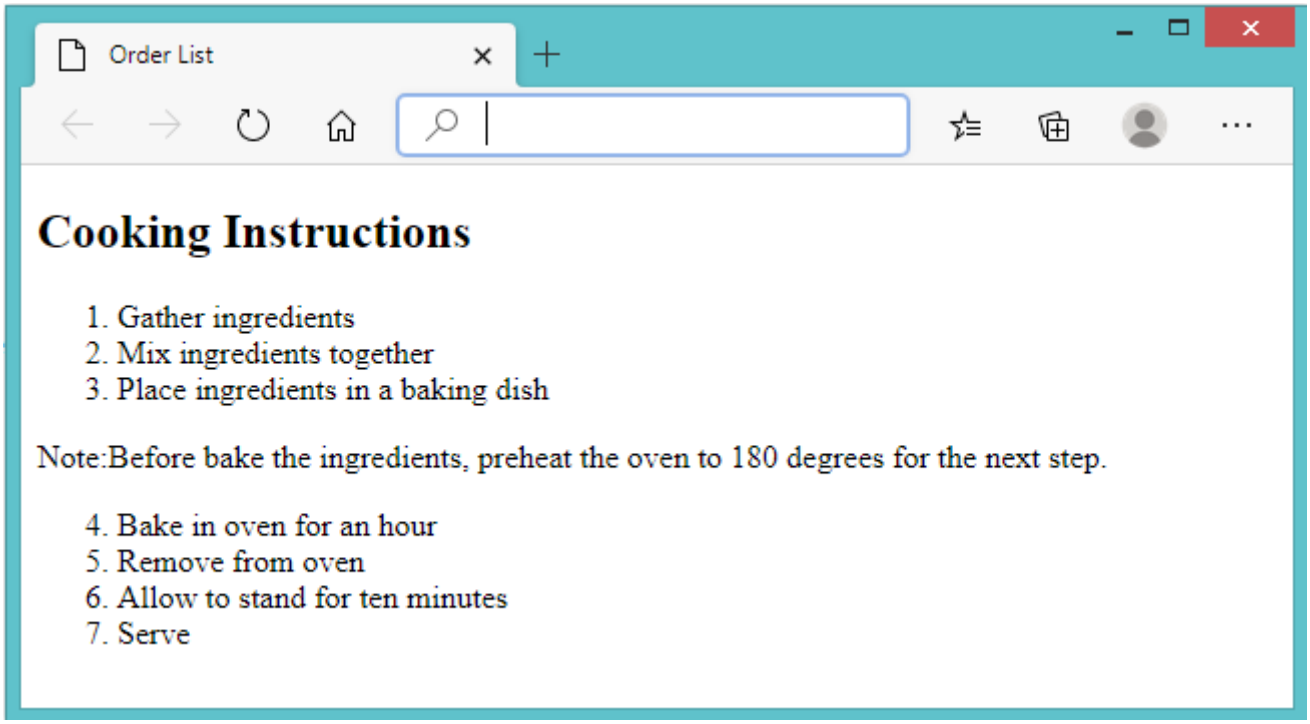
A common requirement in ordered list usage is to get them to start with a number other than 1. This is done using the **start attribute**, which takes a numeric value. This is useful if there is a need to break up a single list of items with a note or other related information.

Example 3:

```
<!DOCTYPE html>
<Html>
<Head>
<Title> Order List </Title>
</Head>
<Body>
<h2>Cooking Instructions</h2>
 <ol>
  <li>Gather ingredients</li>
  <li>Mix ingredients together</li>
  <li>Place ingredients in a baking dish</li>
</ol>
<p>Note:Before bake the ingredients, preheat the oven to 180 degrees for the next step.</p>
<ol start="4">
  <li>Bake in oven for an hour</li>
  <li>Remove from oven</li>
```

```
 <li>Allow to stand for ten minutes</li>
 <li>Serve</li>
</ol>
</Body>
</Html>
```

This gives the following result:



6. Description Lists

Description lists associate specific names and values within a list such as questions and answers, articles and authors, ingredient list and their descriptions, or any other terms and their information. Description lists can associate more than one value with a single name, or vice versa, but there must be at least one name and at least one value in each pair, For example:

```
coffee
  a beverage made from coffee beans
  a cup of coffee
  a medium to dark brown colour
```

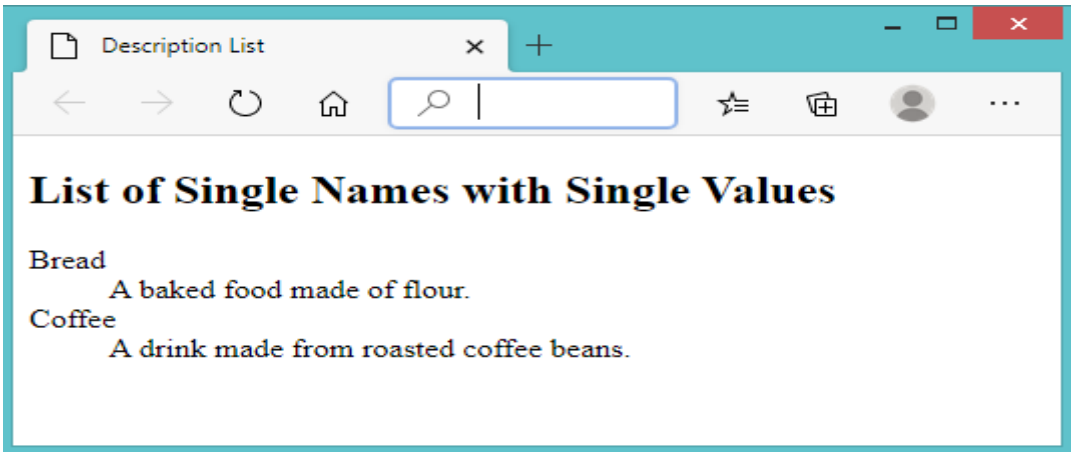
Or, associate more than one name with the same value. This is useful to show variations of a term, all of which have the same meaning:

soda
7-Up
cola
a sweet, carbonated beverage

Description list is defined with the dl element (<dl> and </dl>). The names of a dl marked up as dt elements (<dt> and </dt>). While the dd element (<dd> and </dd>) marked up their respective values. A simple description list of single names with single values would look like as example below:

Example 4:

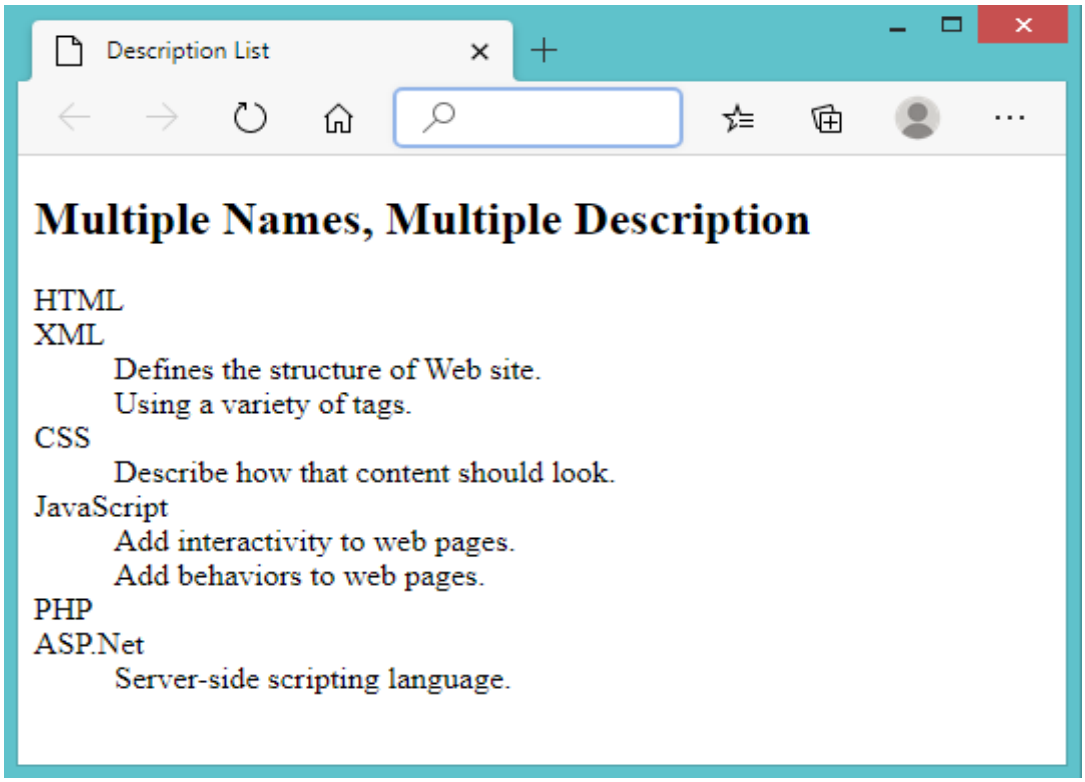
```
<!DOCTYPE html>
<Html>
<Head>
<Title> Description List  </Title>
</Head>
<Body>
<h2> List of Single Names with Single Values </h2>
 <dl>
   <dt>Bread</dt>
   <dd>A baked food made of flour.</dd>
   <dt>Coffee</dt>
   <dd>A drink made from roasted coffee beans.</dd>
</dl>
</Body>
</Html>
</Body>
</Html>
```



In the following example, more than one value is associated with a name, and vice versa.

Example 5:

```
<!DOCTYPE html>
<Html>
<Head>
<Title> Description List  </Title>
</Head>
<Body>
<h2> Multiple Names, Multiple Description </h2>
 <dl>
   <dt>HTML</dt>
   <dt>XML </dt>
   <dd>Defines the structure of Web site.</dd>
   <dd>Using a variety of tags.</dd>
    <dt>CSS </dt>
   <dd>Describe how that content should look.</dd>
   <dt>JavaScript </dt>
   <dd>Add interactivity to web pages.</dd>
   <dd>Add behaviors to web pages.</dd>
   <dt>PHP</dt>
   <dt>ASP.Net</dt>
   <dd>Server-side scripting language.</dd>
</dl>
</Body>
</Html>
</Body>
</Html>
```



The table below provides a summary of HTML list tags and their description:

Tag	Description
	Defines an unordered list
	Defines an ordered list
	Defines a list item
<dl>	Defines a description list
<dt>	Defines a name in a description list
<dd>	Describes the value in a description list

7. List Type Selection

When trying to decide what type of list to use, ask yourself two simple questions:
1. Defining terms or associating other name/value pairs?
- If yes, use a description list.
- If no, don't use a description list.

2. Is the order of the list items important?
- If yes, use an ordered list.
- If no, use an unordered list.

8. Nesting Lists

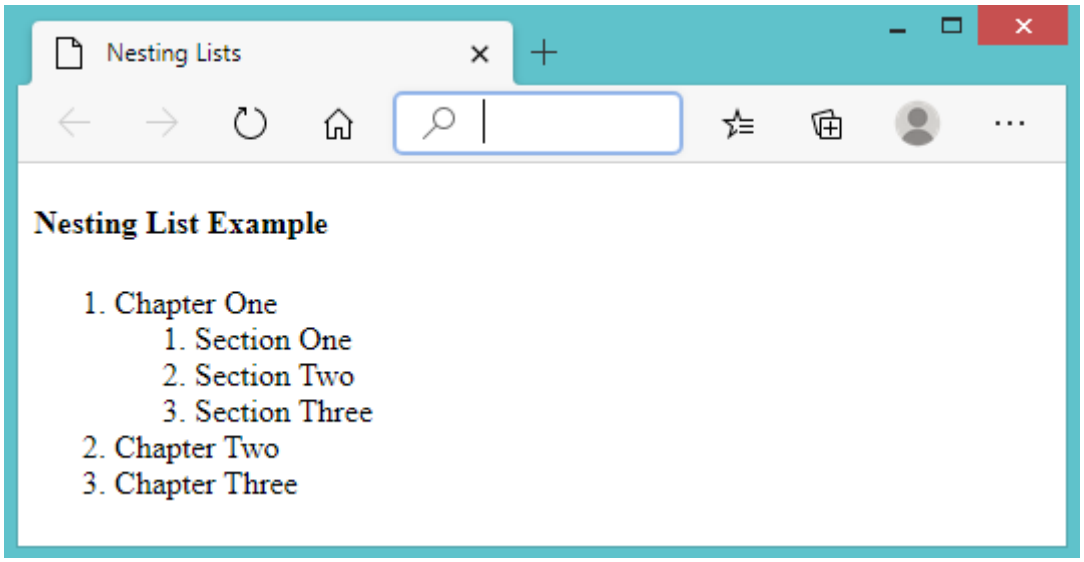
An individual list item can contain another entire list, called a nested list, using ordered, unordered and description lists. It is useful for things like tables of contents that contain sub-sections, such as:

1. Chapter One
   a. Section One
   b. Section Two
   c. Section Three
2. Chapter Two
3. Chapter Three

To reflect that in the code, the entire nested list is contained inside the first list item.

Example 6:

```
<!DOCTYPE html>
<Html>
<Head>
<Title> Nesting Lists  </Title>
</Head>
<Body>
<h4> Nesting List Example </h4>
<ol>
 <li>Chapter One
   <ol >
     <li>Section One</li>
     <li>Section Two </li>
     <li>Section Three </li>
   </ol>
 </li>
 <li>Chapter Two</li>
 <li>Chapter Three </li>
</ol>
</Body>
</Html>
</Body>
</Html>
```



Nested lists are quite useful, and often form the basis for navigation menus, as they are a good way to define the **hierarchical structure of the web site**. They are also very flexible, as either ordered or unordered lists can be nested inside either ordered or unordered list items.

Although theoretically you can nest lists to any level, but in practice it can become confusing to nest lists too deeply. For very large lists, it is better off splitting the content up into several lists with headings instead. **A good rule is, don't nest lists deeper than three levels**.

Q- Writing the markup for the following HTML lists?

A Neasted Lists

- Coffee
  1. black coffee
     - black hot coffee
  2. White coffee
     - White hot coffee
- Tea
  1. black tea
  2. Green Tea
- Milk