

The `<table>` HTML element represents tabular data. That is, information presented in a two-dimensional table comprised of rows and columns of cells containing data. We can say in simple words HTML tables allow web developers to arrange data into rows and columns. HTML Table Tags are following.

Tag	Description
<code><table></code>	Defines a table
<code><th></code>	Defines a header cell in a table
<code><tr></code>	Defines a row in a table
<code><td></code>	Defines a cell/data in a table
<code><thead></code>	It is used to group the header content in a table.
<code><tbody></code>	It is used to group the body content in a table.
<code><tfooter></code>	It is used to group the footer content in a table.

Example

```

<!DOCTYPE html>
<html>
  <head>
    <title> Hyper Links</title>
  </head>
  <body>
    <table border=1 align=center>
      <thead >
        <tr height=35>
          <th width=100 align=center> Roll# </th>
          <th width=250 align=left> Student Name </th>
          <th width=120 align=center> Percentage </th>
        </tr>
      </thead>
      <tbody>
        <tr>
          <td align=center> 34 </td>
          <td align=left> Muhammad Ali </td>
          <td align=center> 89 % </td>
        </tr>
      </tbody>
    </table>
  </body>
</html>

```

```

<tr>
  <td align=center> 19 </td>
  <td align=left> Farhan Ahmed </td>
  <td align=center> 67 % </td>
</tr>
<tbody>
<tfoot>
<tr>
  <td align=center> 12 </td>
  <td align=left> Sania Khan </td>
  <td align=center> 78 % </td>
</tr>
</tfoot>
</table>
</body>
</html>

```

Roll#	Student Name	Percentage
34	Muhammad Ali	89 %
19	Farhan Ahmed	67 %
12	Sania Khan	78 %

Row Span and Column Span

The row and column span mean that table cells that span more than one row or one column. To make a cell span more than one row, we must use the **rowspan** attribute and to make a cell span more than one column, we must use the **colspan** attribute.

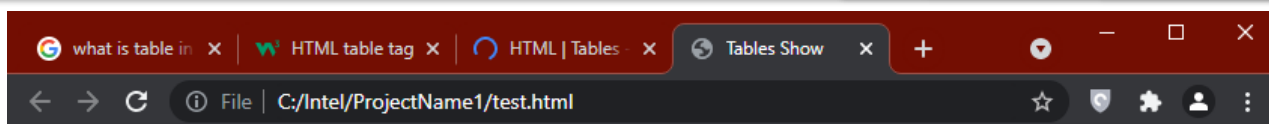
Example

```
<!DOCTYPE html>
<html>
  <head>
    <title> Tables Show</title>
  </head>
  <body>
    <h1 align="center">Colspan and rowspan</h1>

    <h3 align="center">Cell that spans two
    columns:</h3>
    <table border="1" align="center">
      <tr>
        <th>Name</th>
        <th>Email</th>
        <th colspan="2">Phone #</th>
      </tr>
      <tr>
        <td>Muhammad Ali</td>
        <td>mali@gmail.com</td>
        <td>0313-2148720</td>
        <td>0333-2346770</td>
      </tr>
    </table>
```

```
<h3 align="center">Cell that spans two
rows:</h3>
<table border="1" align="center">
  <tr>
    <th>Name:</th>
    <td>Muhammad Ali</td>
  </tr>
  <tr>
    <th>Email:</th>
    <td>mali@gmail.com</td>
  </tr>
  <tr>
    <th rowspan="2">Phone#:</th>
    <td>0313-2148720</td>
  </tr>
  <tr>
    <td>0333-2387232</td>
  </tr>
</table>

</body>
</html>
```



Colspan and rowspan

Cell that spans two columns:

Name	Email	Phone #	
Muhammad Ali	mali@gmail.com	0313-2148720	0333-2346770

Cell that spans two rows:

Name:	Muhammad Ali
Email:	mali@gmail.com
Phone#:	0313-2148720
	0333-2387232

Working with HTML Lists

HTML lists are used to present list of information in well-formed and semantic way. There are three different types of list in HTML and each one has a specific purpose and meaning.

- 1) **Unordered list** — Used to create a list of related items, in no particular order.
- 2) **Ordered list** — Used to create a list of related items, in a specific order.
- 3) **Description list** — Used to create a list of terms and their descriptions.

Inside a list item you can put text, images, links, line breaks, etc. You can also place an entire list inside a list item to create the nested list.

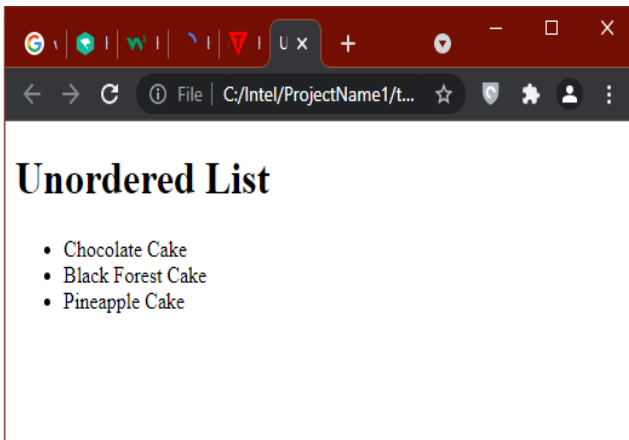
HTML Unordered List

Tag	Description
	An unordered list created using the element and we can also change the bullet type in our unordered list using the type property. the type of bullet it could be disc and square :
	Each list item starts with the element.

Example-1

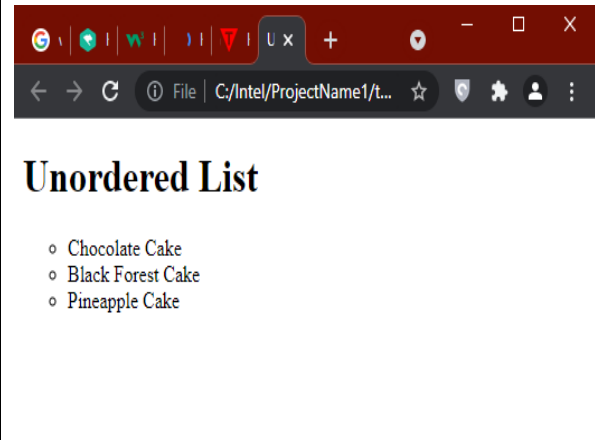
```
<!DOCTYPE html>
<html>
  <head>
    <title> Tables Show</title>
  </head>
  <body>
    <h1>Unordered List</h1>

    <ul>
      <li>Chocolate Cake</li>
      <li>Black Forest Cake</li>
      <li>Pineapple Cake</li>
    </ul>
  </body>
</html>
```

**Example-2**

```
<!DOCTYPE html>
<html>
  <head>
    <title> Unordered List</title>
  </head>
  <body>
    <h1>Unordered List</h1>

    <ul type="circle">
      <li>Chocolate Cake</li>
      <li>Black Forest Cake</li>
      <li>Pineapple Cake</li>
    </ul>
  </body>
</html>
```

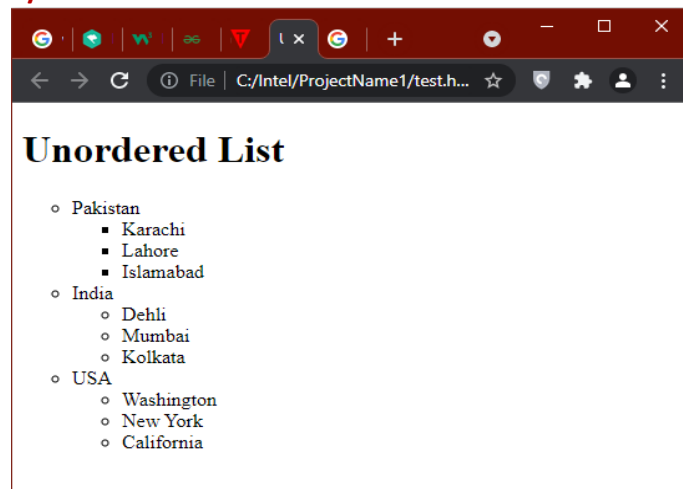


Nested Unordered List

```
<!DOCTYPE html>
<html>
  <head>
    <title> Unordered List</title>
  </head>
  <body>
    <h1>Unordered List</h1>
    <ul type="circle">
      <li>Pakistan</li>
      <ul type="square">
        <li> Karachi</li>
        <li> Lahore</li>
        <li> Islamabad</li>
      </ul>
    <li>India</li>
    <ul>
      <li> Dehli</li>
      <li> Mumbai</li>
      <li> Kolkata</li>
    </ul>
  </ul>
```

```
<li>USA</li>
  <ul>
    <li> Washington</li>
    <li> New York</li>
    <li> California</li>
  </ul>
</ul>

</body>
</html>
```



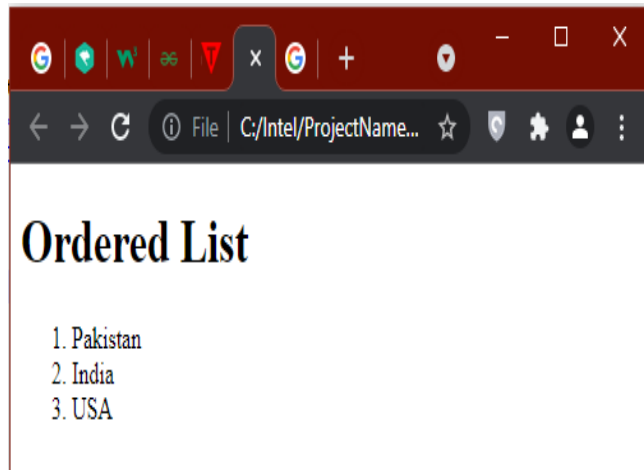
HTML Order List

Tag	Description
	An ordered list created using the element and we can also change the bullet type in our ordered list using the type property. the type of numbering it could be A, a , I and i:
	Each list item starts with the element.

Example-1

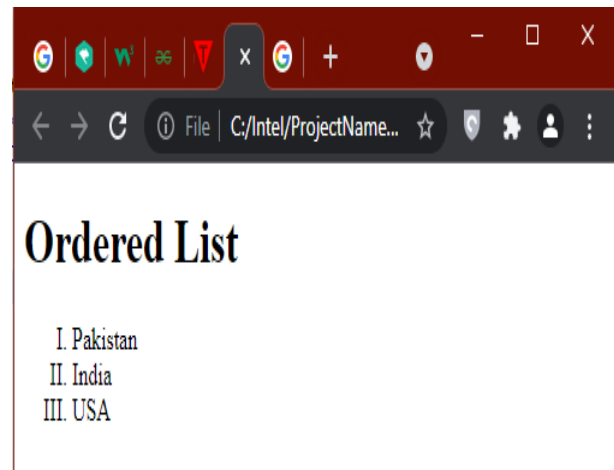
```
<!DOCTYPE html>
<html>
  <head>
    <title> Order List</title>
  </head>
  <body>
    <h1>Ordered List</h1>

    <ol>
      <li>Pakistan</li>
      <li>India</li>
      <li>USA</li>
    </ol>
  </body>
</html>
```

**Example-2**

```
<!DOCTYPE html>
<html>
  <head>
    <title> Order List</title>
  </head>
  <body>
    <h1>Ordered List</h1>

    <ol type="I"> <!-- capital I -->
      <li>Pakistan</li>
      <li>India</li>
      <li>USA</li>
    </ol>
  </body>
</html>
```

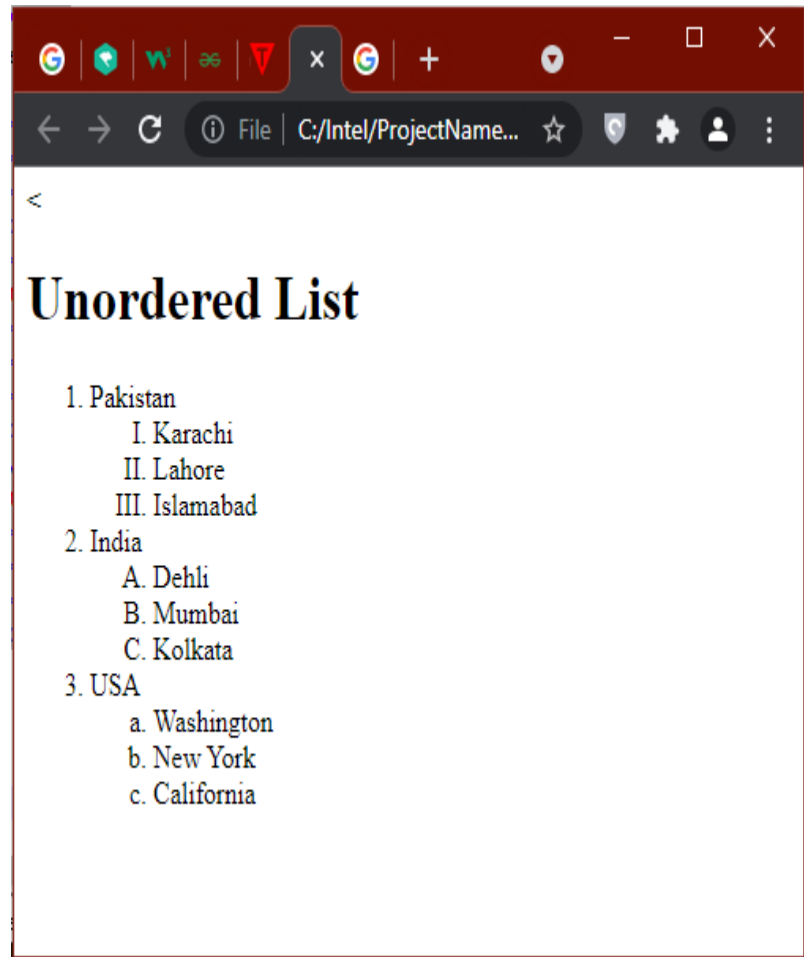


```

<!DOCTYPE html>
<html>
  <head>
    <title> Unordered List</title>
  </head>
  <body>
<h1>Unordered List</h1>
    <ol type="1">
      <li>Pakistan</li>
        <ol type="I">
          <li> Karachi</li>
          <li> Lahore</li>
          <li> Islamabad</li>
        </ol>
      <li>India</li>
        <ol type="A">
          <li> Dehli</li>
          <li> Mumbai</li>
          <li> Kolkata</li>
        </ol>
      <li>USA</li>
        <ol type="a">
          <li> Washington</li>
          <li> New York</li>
          <li> California</li>
        </ol>
    </ol>

  </body>
</html>

```



HTML Description List or Definition List

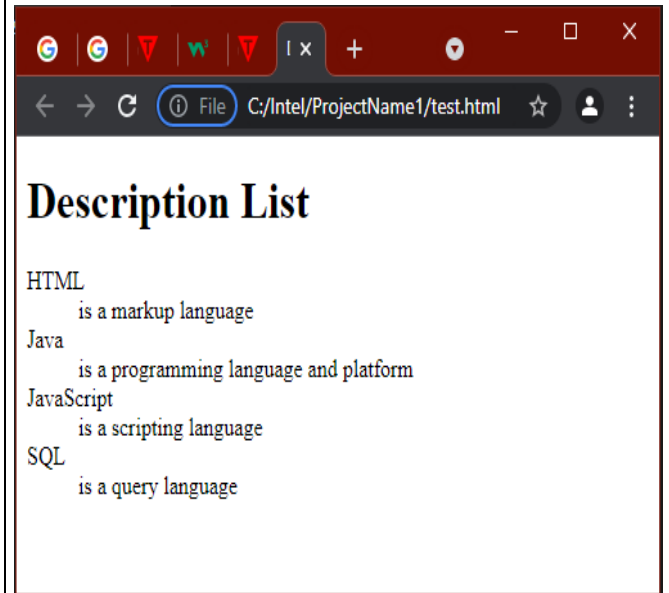
HTML Description list is also a list style which is supported by HTML and XHTML. It is also known as definition list where entries are listed like a dictionary or encyclopedia. The definition list is very appropriate when you want to present glossary, list of terms or other name-value list.

The HTML definition list contains following three tags:

1. **<dl>** tag defines the start of the list.
2. **<dt>** tag defines a term.
3. **<dd>** tag defines the term definition (description).

Example

```
<!DOCTYPE html>
<html>
  <head>
    <title> Description List</title>
  </head>
  <body>
    <h1>Description List</h1>
    <dl>
      <dt>HTML</dt>
      <dd>is a markup language</dd>
      <dt>Java</dt>
      <dd>is a programming language and platform</dd>
      <dt>JavaScript</dt>
      <dd>is a scripting language</dd>
      <dt>SQL</dt>
      <dd>is a Structure query language</dd>
    </dl>
  </body>
</html>
```



Exercise

Theory Question



- 1) What is table in HTML and write list of table tags with description?
- 2) What is List and how many types of list in HTML
- 3) What is difference is between the order and unordered list?

Practical Question

1) Write html code for nested order list same as following output.

1. Pakistan
 - 1.1 Lahore
 - 1.2 Karachi
2. India
 - 2.1 Mombay
 - 2.2 Dehli
3. USA
 - 3.1 Washington
 - 3.2 Newyork

2) Write code of html for table size should be 4x5. Its mean four columns and five rows. Column names are following.

Roll #	Student Name	Contact #		Photo
12	Asif Ahmed	021-9999999	0313-21-48720	
15	Sania Saeed	021-9999999	0333-23-9999	

Objective and MCQ

- 1) Collection of rows and columns that is called _____.
 - a) Ordered list
 - b) Unordered list
 - c) Description list
 - d) table

- 2) Each list item starts with the _____ tag element.
- `<td>`
 - `<th>`
 - ``
 - `<thead>`
- 3) Which tag element is optional in the table?
- `<td>`
 - `<th>`
 - `<tr>`
 - `<table>`
- 4) It is used to group the header content in a table.
- `<head>`
 - `<td>`
 - `<th>`
 - `<thead>`
- 5) An unordered list created using the _____ element.
- ``
 - `<dl>`
 - ``
 - `<dd>`
- 6) It is also known as definition list where entries are listed like a dictionary or encyclopedia.
- Ordered list
 - Unordered list
 - Description list
 - Table
- 7) _____ tag defines a term.
- `<dd>`
 - `<dt>`
 - `<dl>`
 - ``
- 8) A cell span more than one column, we must use the _____ attribute.
- type
 - rowspan
 - width & height
 - colspan