

EXAM CAPSULE

FOR

O LEVEL NIELIT EXAM

WEB DESIGNING

AND

PUBLISHING

COMPACT. CONCISE. COMPLETE.

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INTRODUCTION TO WEB DESIGN



Building the World Wide Web - One Website at a Time

1 INTRODUCTION OF INTERNET

Internet is a global network of computers connected to each other. It allows sharing of information, communication and access to resources worldwide.

Key Features

- Global Connectivity
- Information Sharing
- Communication
- Access to Services
- 24x7 Availability



2 WWW (WORLD WIDE WEB)

The World Wide Web (WWW) is a system of interlinked hypertext documents accessed via the Internet using a web browser.

Key Points

- Invented by Tim Berners-Lee in 1989.
- Uses HTTP/HTTPS protocol.
- Accessed through web browsers.
- Information is stored in web pages.



3 WEBSITE

A website is a collection of related webpages under a common domain name and hosted on a web server.

Components of a Website

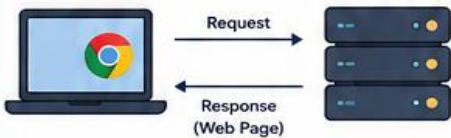
- Domain Name (e.g., www.example.com)
- Web Hosting (space on a server)
- Web Pages (HTML files)
- Content (Text, Images, Videos, etc.)



4 WORKING OF WEBSITES

Client (Browser)

Server (Web Host)



1. User enters a URL in the browser.
2. Browser sends a request to the web server.
3. Server processes the request.
4. Server sends the response (web page) to the browser.
5. Browser displays the web page to the user.

5 WEBPAGES

A webpage is a single document on the web written in HTML (HyperText Markup Language) and displayed in a web browser.

Elements of a Webpage

- Text
- Images
- Links
- Videos
- Tables
- Forms
- CSS (for styling)
- JavaScript (for interactivity)

```

<!DOCTYPE html>
<html>
<head>
<title>My Page</title>
</head>
<body>
<h1>Hello World!</h1>
<p>Welcome to my webpage.</p>

</body>
</html>

```

6 FRONT END AND BACK END

Front End (Client Side)

The part of a website that users see and interact with.

Technologies:



Back End (Server Side)

The part of a website that handles data, logic, and database operations.

Technologies:



7 CLIENT AND SERVER

Client: The device or application that requests information or services.



Server: The computer or program that provides the requested information or services.



8 SCRIPTING LANGUAGES

Client Side Scripting

Runs in the user's browser. Used to make webpages interactive.

Examples:

- JavaScript
- jQuery
- VBScript



Server Side Scripting

Runs on the server. Used to manage data, databases and logic.

Examples:

- PHP
- Python
- Java
- ASP.NET



9 RESPONSIVE WEB DESIGNING

Responsive Web Design makes websites look good and work well on all devices (desktop, tablet, mobile).

Key Benefits

- Better user experience
- Works on all screen sizes
- Improves SEO ranking
- Cost-effective maintenance



10 TYPES OF WEBSITES

STATIC WEBSITES

Static websites have fixed content. Each page is written in HTML and shows the same information to every user.

Features

- Content is fixed
- Faster and easier to develop
- Uses HTML, CSS
- No database required
- Suitable for small websites



Examples

- Personal Portfolio
- Business Brochure
- Informational Websites

DYNAMIC WEBSITES

Dynamic websites show different content to different users. Content is generated using server-side scripting and databases.

Features

- Content changes based on user/data
- Uses databases
- Built using server-side languages
- More interactive and powerful
- Suitable for large/complex websites



Examples

- E-commerce Websites
- Social Media Platforms
- Blogs, News Portals

SUMMARY

Web Design is the process of creating websites that are attractive, functional and user-friendly. It involves understanding technologies like HTML, CSS, JavaScript and server-side languages, along with concepts like responsive design, client-server communication and website types.





EDITORS

Lightweight • Fast • Powerful
Write Code or Text with Ease!



Editors are software applications used to create, edit and save plain text files or code.

Popular Free Editors:



Notepad++



Sublime Text

1 DOWNLOAD FREE EDITORS

NOTEPAD++

1. Open your web browser.
2. Go to: <https://notepad-plus-plus.org>
3. Click on "Download".
4. Choose the latest version.
5. Download the installer and run it.
6. Follow the instructions to install.



SUBLIME TEXT EDITOR

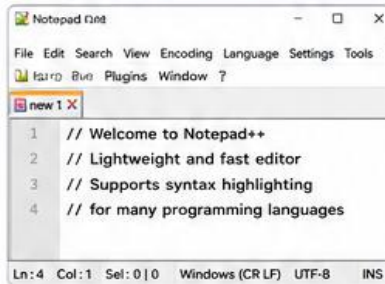
1. Open your web browser.
2. Go to: <https://www.sublimetext.com>
3. Click on "Download for Windows".
4. Download the installer.
5. Run the installer and complete the setup.



Both editors are free to use and widely used by beginners and professionals.

2 MAKING USE OF EDITORS

NOTEPAD++ INTERFACE



- ✓ Supports multiple tabs
- ✓ Syntax highlighting
- ✓ Auto-completion
- ✓ Find & Replace
- ✓ Plugins support

SUBLIME TEXT INTERFACE



- ✓ Distraction-free interface
- ✓ Fast and powerful
- ✓ Multiple selections
- ✓ Command Palette (Ctrl+Shift+P)
- ✓ Highly customizable

3 FILE CREATION AND EDITING

Create a New File

- Notepad++: File → New or press **Ctrl + N**
- Sublime Text: File → New File or press **Ctrl + N**



Editing Text

- Type or paste your text or code.
- Use keyboard to edit.
- Use features like cut, copy, paste, undo, redo, find, replace etc.



Common Editing Features

- Cut selected text **Ctrl + X**
- Copy selected text **Ctrl + C**
- Paste **Ctrl + V**
- Undo last action **Ctrl + Z**
- Redo last undone action **Ctrl + Y**
- Find text **Ctrl + F**
- Find Next **F3**
- Replace text **Ctrl + H**
- Select All **Ctrl + A**
- Go to Line **Ctrl + G**

4 SAVING FILES

Save a File



- Click File → Save or press **Ctrl + S**
- Choose location, give file name and click Save.



Save As

- Click File → Save As or press **Ctrl + Shift + S**
- Choose location and file name.
- Select file type (e.g. .txt, .html, .py, .cpp, .css etc.) and click Save.

5 USEFUL SHORTCUT KEYS

GENERAL SHORTCUTS

Action	Shortcut
New File	Ctrl + N
Open File	Ctrl + O
Save File	Ctrl + S
Save As	Ctrl + Shift + S
Close File	Ctrl + W
Close All Files	Ctrl + Shift + W
Exit/Close Editor	Alt + F4
Print File	Ctrl + P



EDITING SHORTCUTS

Action	Shortcut
Undo	Ctrl + Z
Redo	Ctrl + Y
Cut	Ctrl + X
Copy	Ctrl + C
Paste	Ctrl + V
Delete Line	Ctrl + L
Duplicate Line	Ctrl + D
Move Line Up	Alt + ↑
Move Line Down	Alt + ↓
Comment/Uncomment	Ctrl + /



NAVIGATION SHORTCUTS

Action	Shortcut
Find	Ctrl + F
Find Next	F3
Find Previous	Shift + F3
Replace	Ctrl + H
Go to Line	Ctrl + G
Go to Matching Bracket	Ctrl +] / [
Select All	Ctrl + A
Indent Line	Tab
Unindent Line	Shift + Tab



EXTRA TIPS

- Notepad++ is great for coding with many plugins.
- Sublime Text is fast and ideal for large projects.
- Save your work frequently.
- Use proper file extensions while saving.
- Explore themes and settings to customize your editor.

6 FILE TYPES YOU CAN WORK WITH

Plain Text Files

.txt, .log, .ini, .cfg, .md



Web Files

.html, .css, .js, .php



Programming Files

.py, .java, .cpp, .c, .cs, .rb, .go, .swift etc.



Other Files

.json, .xml, .csv, .yaml, .docx (as text) etc.



BENEFITS OF USING EDITORS



- ✓ Lightweight and fast
- ✓ Supports many programming languages
- ✓ Helps in learning and writing code
- ✓ Improves productivity
- ✓ Free and easy to use



- Download free editors like Notepad++ and Sublime Text.
- Create, edit and save files easily.

- Use shortcut keys to work faster.
- Save your work and choose correct file type.





HTML BASICS & HTML5



• Build the structure. Style the future. •

1 HTML: INTRODUCTION

HTML (HyperText Markup Language) is the standard language used to create web pages.

It describes the structure of a web page using elements (tags).



2 BASIC STRUCTURE OF HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>My Page</title>
</head>
<body>
  <h1>Hello, World!</h1>
  <p>Welcome to HTML.</p>
</body>
</html>
```

3 HEAD SECTION & ELEMENTS

The <head> section contains information about the document.

- <title> : Title of the page
- <meta> : Metadata (charset, description)
- <link> : Link external resources (CSS)
- <style> : Internal CSS
- <script> : Client-side scripts
- <base> : Base URL for links

4 FORMATTING TAGS

- Bold Text
- <i> Italic Text
- <u> Underline Text
- <s> or <strike> Strikethrough Text
- <div> Division or section
- <pre> Preformatted text

```
Example:
<p><b>Bold</b> <i>Italic</i>
  <u>Underlined</u> <s>Strike</s></p>
<pre> Preformatted
Text</pre>
```

5 ANCHOR LINKS & NAMED ANCHORS

Anchor Link:

```
<a href="https://www.example.com">
  Visit Example</a>
```

Named Anchor:

```
<a name="top"></a>
...
<a href="#top">Go to Top</a>
```

6 IMAGE TAG

```

```



Attributes:

- src : Image source
- alt : Alternate text
- width : Width in pixels
- height : Height in pixels

7 PARAGRAPHS

The <p> tag defines a paragraph.

```
<p>This is a paragraph.
It contains multiple
lines of text.</p>
```

Attributes:

- align : left | right | center | justify

8 COMMENTS

HTML comments are not displayed in the browser.

```
<!-- This is a comment -->
```

9 TABLES

Table Attributes

- border : Adds border to the table
- cellpadding : Space inside the cell
- cellspacing : Space between cells
- width : Width of the table
- height : Height of the table

Example:

```
<table border="1" cellpadding="5" cellspacing="0" width="400">
<tr>
  <th>Roll No</th>
  <th>Name</th>
  <th>Subject</th>
</tr>
<tr>
  <td>1</td>
  <td>Amit</td>
  <td>HTML</td>
</tr>
<tr>
  <td rowspan="2">2</td>
  <td>Riya</td>
  <td>CSS</td>
</tr>
<tr>
  <td>Riya</td>
  <td>JavaScript</td>
</tr>
</table>
```

Table Elements

- <table> : Defines a table
- <tr> : Table row
- <th> : Table header cell
- <td> : Table data cell
- rowspan : Number of rows to span
- colspan : Number of columns to span

Rendered Output

Roll No	Name	Subject
1	Amit	HTML
2	Riya	CSS
	Riya	JavaScript

10 LISTS

Ordered List

```
<ol>
  <li>First</li>
  <li>Second</li>
  <li>Third</li>
</ol>
```

Unordered List

```
<ul>
  <li>Apple</li>
  <li>Banana</li>
  <li>Orange</li>
</ul>
```

Definition List

```
<dl>
  <dt>HTML</dt>
  <dd>HyperText
  Markup Language</dd>
  <dt>CSS</dt>
  <dd>Cascading
  Style Sheets</dd>
</dl>
```

11 FORMS & FORM ELEMENTS

The <form> tag is used to create an HTML form.

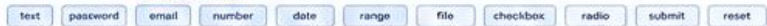
Common Form Elements

- <form>
- <label>
- <input>
- <textarea>
- <select>
- <option>
- <button>
- <fieldset> & <legend>

Example Form

```
<form action="#" method="post">
  Name: <input type="text" name="name"><br>
  Email: <input type="email" name="email"><br>
  Gender:
  <input type="radio" name="gender" value="M"> Male
  <input type="radio" name="gender" value="F"> Female<br>
  Hobbies:
  <input type="checkbox" name="hobby" value="music"> Music
  <input type="checkbox" name="hobby" value="sports"> Sports<br>
  City:
  <select name="city">
    <option value="delhi">Delhi</option>
    <option value="mumbai">Mumbai</option>
    <option value="kolkata">Kolkata</option>
  </select><br><br>
  <input type="submit" value="Submit">
  <input type="reset" value="Reset">
</form>
```

Input Types



12 INPUT ATTRIBUTES

Attribute	Description
name	Specifies the name of the input field
value	Specifies the initial value
placeholder	Provides a short hint
required	Makes the field mandatory
readonly	Makes the field read-only
disabled	Disables the input field
maxlength	Sets the maximum number of characters
min / max	Specifies the minimum / maximum value
pattern	Specifies a regular expression pattern
autofocus	Automatically focuses the input field

13 TEXT INPUT & TEXT AREA

Text Input:

```
<input type="text" name="username"
placeholder="Enter name">
```

Text Area:

```
<textarea name="message" rows="4"
cols="30" placeholder="Your message">
</textarea>
```

14 DROPDOWN, RADIO & CHECKBOX

Dropdown (Select Box)

```
<select name="options">
  <option value="1">Option 1</option>
  <option value="2">Option 2</option>
</select>
```

Radio Buttons

```
<input type="radio" name="choice" value="1"> Yes
<input type="radio" name="choice" value="0"> No
```

Checkboxes

```
<input type="checkbox" name="check" value="A"> A
<input type="checkbox" name="check" value="B"> B
```

15 SUBMIT & RESET BUTTONS

```
<input type="submit" value="Submit">
<input type="reset" value="Reset">
```

OR

```
<button type="submit">Submit</button>
<button type="reset">Reset</button>
```

16 FRAMES: FRAMESET & NESTED FRAMES

Frameset Example

```
<frameset rows="20%,80%">
  <frame src="top.html">
  <frameset cols="25%,75%">
    <frame src="menu.html">
    <frame src="content.html">
  </frameset>
</frameset>
```



Note: Frames are deprecated in HTML5, use CSS or Iframe instead.

17 HTML5 INTRODUCTION



HTML5 is the latest version of HTML. It provides new elements, multimedia support, form validations and more. It is designed for modern web applications.

18 HTML5 NEW ELEMENTS

Structural Elements

- <header> : Header of a section/page
- <nav> : Navigation links
- <section> : Defines a section
- <article> : Independent content
- <aside> : Sidebar or related content
- <footer> : Footer of a section/page

Multimedia Elements

- <audio> : Embed audio
- <video> : Embed video

19 HTML5 FORM VALIDATIONS

New Attributes

- required : Field is mandatory
- pattern : Validates using regex
- autofocus : Focuses on page load

New Input Types

- email : For email addresses
- number : For numbers
- date : For dates
- range : For range of values



20 HTML EMBED MULTIMEDIA

Audio

```
<audio controls>
<source src="song.mp3" type="audio/mp3">
  Your browser does not support audio.
</audio>
```

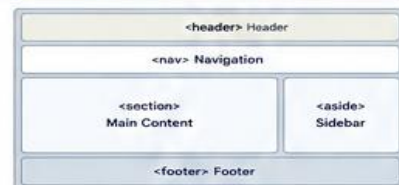


Video

```
<video width="320" height="240" controls>
<source src="movie.mp4" type="video/mp4">
  Your browser does not support video.
</video>
```



21 HTML LAYOUT (HTML5 SEMANTIC)



22 HTML IFRAME

Iframe Example

```
<iframe src="https://www.example.com"
width="600" height="400"
title="Example Website"></iframe>
```

The <iframe> tag is used to display another web page within the current page.



QUICK REFERENCE

- HTML gives structure to web pages.
- Use semantic elements in HTML5.
- Forms collect user input.
- Tables organize data.
- Use valid attributes for better control.
- Practice makes perfect!



CSS – Cascading Style Sheets

Style your web pages. Control layout, colors, fonts and much more!



1 INTRODUCTION TO CSS

CSS (Cascading Style Sheets) is used to design and style HTML elements on web pages.

- Separates content (HTML) from presentation (design).
- Controls layout, colors, fonts, spacing, borders and more.
- Makes websites consistent and responsive.



2 TYPES OF CSS

1. Inline CSS

Applied using the style attribute inside an HTML element.

```
<p style="color: red; font-size: 18px;">
  This is a paragraph.
</p>
```

2. Internal (Embedded) CSS

Defined inside <style> tag in <head>.

```
<head>
  <style>
    p { color: blue; }
  </style>
</head>
```

3. External CSS

Written in a separate .css file and linked.

```
<link rel="stylesheet" href="style.css">
```

3 CSS SELECTORS

Selector	Syntax	Example	Selects
Universal Selector	*	* { margin: 0; }	All elements
ID Selector	#id	#header { color: red; }	Element with specific id
Tag Selector	element	p { text-align: center; }	All <p> elements
Class Selector	.class	.box { padding: 10px; }	All elements with class="box"
Sub Selector (Descendant)	A B	div p { color: green; }	<p> inside <div>
Child Selector	A > B	ul > li { list-style: none; }	Direct child of
Attribute Selector	A[attribute]	input[type="text"]{ border: 1px solid #ccc; }	<input> with type="text"
Group Selector	A, B	h1, h2, p { color: navy; }	All h1, h2 and p elements

4 BACKGROUND PROPERTIES

Property	Description	Example
background-color	Sets background color	background-color: #f0f0f0;
background-image	Sets background image	background-image: url(img.jpg);
background-repeat	Repeats background	background-repeat: no-repeat;
background-position	Sets position	background-position: center;
background-size	Sets size	background-size: cover;
background-attachment	Sets attachment	background-attachment: fixed;
Background	Shorthand property	background: #fff url(img.jpg) no-repeat center/cover fixed;



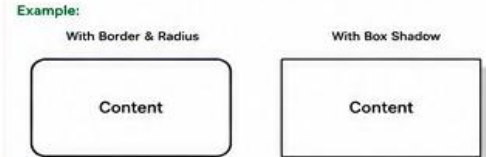
5 BLOCK PROPERTIES

Property	Description	Example
display	Sets element display type	display: block;
width	Sets width	width: 300px;
height	Sets height	height: 150px;
margin	Space outside element	margin: 10px;
padding	Space inside element	padding: 15px;
float	Floats element	float: left;
clear	Clears floated elements	clear: both;
overflow	Controls overflow	overflow: hidden;
visibility	Shows or hides element	visibility: hidden;



6 BOX PROPERTIES

Property	Description	Example
border	Sets all borders	border: 1px solid #000;
border-width	Sets border width	border-width: 2px;
border-style	Sets border style	border-style: dashed;
border-color	Sets border color	border-color: #333;
border-radius	Rounds corners	border-radius: 8px;
box-shadow	Adds shadow	box-shadow: 2px 2px 8px #aaa;
outline	Outline outside border	outline: 2px solid blue;



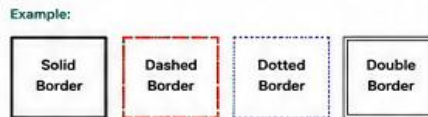
7 LIST PROPERTIES & CSS LISTS

Property	Description	Example
list-style-type	Sets bullet/number type	list-style-type: square;
list-style-position	Seels or outside	list-style-position: inside;
list-style-image	Custom bullet image	list-style-image: url(bullet.png);
list-style	Shorthand property	list-style: circle inside;

Unordered List	Ordered List	Definition List
<ul style="list-style-type: none"> • Apple • Banana • Orange 	<ol style="list-style-type: none"> 1. First 2. Second 3. Third 	<p>HTML : Hyper Text Markup Language</p> <p>CSS : Cascading Style Sheets</p>

8 BORDER PROPERTIES

Property	Description	Example
border-width	Width of border	border-width: 3px;
border-style	Style of border	border-style: solid;
border-color	Color of border	border-color: #e91e63;
border-top	Top border	border-top: 2px dotted red;
border-right	Right border	border-right: 2px dashed green;
border-bottom	Bottom border	border-bottom: 2px solid blue;
border-left	Left border	border-left: 2px groove orange;



9 POSITIONING PROPERTIES

Property	Description	Example
position	Sets positioning type	position: relative;
static	Default position	position: static;
relative	Relative to normal position	position: relative; top: 10px;
absolute	Relative to nearest positioned ancestor	position: absolute; top: 20px; left: 30px;
fixed	Fixed relative to viewport	position: fixed; bottom: 0;
sticky	Sticky within scroll area	position: sticky; top: 0;
z-index	Stacking order	z-index: 1;



10 CSS TABLES

Table Style Properties

Property	Description	Example
border-collapse	Merges table borders	border-collapse: collapse;
width	Sets table width	width: 100%;
text-align	Align text	text-align: center;
padding	Cell padding	padding: 8px;
border	Table border	border: 1px solid #333;
caption-side	Caption position	caption-side: top;
background-color	Table background	background-color: #f9f9f9;

Example Table

Name	Age	City
Amit	23	Delhi
Riya	25	Mumbai
John	21	Pune

11 CSS MENU DESIGN



Example Code

```
ul.menu {
  list-style: none; margin: 0; padding: 0;
  background-color: #333; overflow: hidden;
}
ul.menu li { float: left; position: relative; }
ul.menu li a {
  display: block; color: #fff; padding: 14px 20px;
  text-decoration: none;
}
ul.menu li a:hover, .menu li: hover > a {
  background-color: #e91e65;
}
ul.menu li ul {
  display: none; position: absolute; background: #444;
}
ul.menu li: hover ul { display: block; }
```

12 CSS IMAGE GALLERY



Example Code

```
.gallery { display: flex; flex-wrap: wrap; gap: 10px; }
.gallery img { width: 30%; height: auto; border: 2px solid #ddd;
padding: 4px; transition: transform 0.3s ease; }
.gallery img: hover { transform: scale(1.05); border-color: #2196f3; }
```

QUICK BENEFITS OF CSS



BEST PRACTICES

- ✓ Use external CSS for better performance.
- ✓ Keep your CSS organized and commented.
- ✓ Use meaningful class and id names.
- ✓ Avoid !important unless necessary.



W3.CSS is a modern CSS framework from w3schools. It is smaller and faster than other CSS frameworks. You can use it by including a single CSS file in your HTML page.

```
<link rel="stylesheet" href="https://www.w3schools.com/w3css/4/w3.css">
```

1 W3.CSS INTRO

W3.CSS is a CSS framework that makes it easy to design responsive and mobile-first websites.

Features

- ✓ Easy to use
- ✓ No jQuery dependency
- ✓ Responsive by default
- ✓ Modern design
- ✓ Customizable



4 W3.CSS PANELS

Panels are containers with a border and padding. Use **w3-panel** with color classes.

Example:

```
<div class="w3-panel w3-pale-blue w3-border w3-border-blue">
  This is a panel.
</div>
```

This is a panel.

7 W3.CSS TEXT

Style text using W3.CSS text classes.

w3-left	Left align text	w3-text-color	Set text color
w3-right	Right align text	w3-text-white	White text
w3-center	Center align text	w3-text-black	Black text
w3-justify	Justify text	w3-text-grey	Grey text
w3-nowrap	Prevent line wrapping	w3-text-shadow	Text shadow
w3-truncate	Truncate text with ...	w3-uppercase	Uppercase text

Example:

```
<p class="w3-center w3-text-blue w3-large">Centered Blue Text</p>
<p class="w3-right w3-text-red">Right Red Text</p>
```

10 W3.CSS IMAGES

W3.CSS provides responsive image classes.

Image Classes:

w3-round	Rounded corners
w3-round-small	Small rounded corners
w3-round-large	Large rounded corners
w3-circle	Circular image
w3-border	Adds a border
w3-image	Responsive image (max-width:100%)

Example:

```

```



2 W3.CSS COLORS

W3.CSS provides a set of color classes.

Syntax: w3-color-name

w3-red	w3-pink	w3-purple	w3-deep-purple
w3-indigo	w3-blue	w3-light-blue	w3-cyan
w3-teal	w3-green	w3-light-green	w3-lime
w3-yellow	w3-amber	w3-orange	w3-deep-orange
w3-brown	w3-blue-grey	w3-grey	w3-dark-grey
w3-black	w3-white	w3-light-grey	w3-sand

Example:

```
<div class="w3-container w3-blue w3-white">Blue Container</div>
```

5 W3.CSS BORDERS

W3.CSS provides border utilities.

Common Border Classes:

w3-border	Adds a border
w3-border-top	Border on top
w3-border-bottom	Border on bottom
w3-border-left	Border on left
w3-border-right	Border on right
w3-border-0	Remove border
w3-border-color	Set border color

Example:

```
<div class="w3-border w3-border-green w3-padding">
  Green Border
</div>
```

Green Border

8 W3.CSS TABLES

Create responsive and styled tables easily.

Example Table:

Name	Age	City
Amit	23	Delhi
Riya	25	Mumbai
John	21	Pune

Example Code:

```
<table class="w3-table w3-striped w3-bordered">
  <tr class="w3-teal">
    <th>Name</th><th>Age</th><th>City</th>
  </tr>
  <tr>
    <td>Amit</td><td>23</td><td>Delhi</td>
  </tr>
  <tr>
    <td>Riya</td><td>25</td><td>Mumbai</td>
  </tr>
  <tr>
    <td>John</td><td>21</td><td>Pune</td>
  </tr>
</table>
```

3 W3.CSS CONTAINERS

Use containers to create a centered page layout.

Common Container Classes:

w3-container	Default container with 16px padding
w3-panel	Adds 16px padding and a bottom margin
w3-card	Adds a card effect with shadow
w3-center	Centers the container
w3-content	Sets a max-width and centers the container
w3-auto	Sets width to auto

Example:

```
<div class="w3-container w3-teal w3-center">
  <h2>Centered Container</h2>
</div>
```

6 W3.CSS FONTS

W3.CSS provides font size and weight classes.

Font Size Classes:

w3-tiny	w3-small	w3-medium	w3-large
w3-xlarge	w3-xxlarge	w3-xxxlarge	w3-jumbo

Font Weight Classes:

w3-thin	w3-light	w3-regular	w3-bold	w3-bolder
---------	----------	------------	---------	-----------

Example:

```
<h1 class="w3-jumbo">Jumbo Heading</h1>
<p class="w3-large">Large paragraph text.</p>
<p class="w3-small">Small text.</p>
```

9 W3.CSS LIST

Style lists using W3.CSS list classes.

Unordered List

- Coffee
- Tea
- Milk

```
<ul class="w3-ul">
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ul>
```

List Item with Borders

- Apple
- Banana
- Orange

```
<ul class="w3-ul w3-border">
  <li class="w3-border-bottom">Apple</li>
  <li class="w3-border-bottom">Banana</li>
  <li>Orange</li>
</ul>
```

11 W3.CSS GRID

W3.CSS Grid is a responsive 12-column layout.

Grid Classes:

w3-row	Creates a row
w3-col s1-s12	Small screens (phones)
w3-col m1-m12	Medium screens (tablets)
w3-col l1-l12	Large screens (desktops)

Example Grid:

w3-col s12	w3-col m6	w3-col m3	w3-col l4
100%	50%	25%	33.33%

Example Code:

```
<div class="w3-row">
  <div class="w3-col s12 m6 l4 w3-blue">Column 1</div>
  <div class="w3-col s12 m6 l4 w3-green">Column 2</div>
  <div class="w3-col s12 l4 w3-orange">Column 3</div>
</div>
```

12 W3.CSS MENU DESIGN

Create a responsive navigation menu.

Example Menu:

- Home
- About
- Services
- Gallery
- Contact

Example Code:

```
<ul class="w3-bar w3-black">
  <li><a href="#" class="w3-bar-item w3-button">Home</a></li>
  <li><a href="#" class="w3-bar-item w3-button">About</a></li>
  <li><a href="#" class="w3-bar-item w3-button">Services</a></li>
  <li><a href="#" class="w3-bar-item w3-button">Gallery</a></li>
  <li><a href="#" class="w3-bar-item w3-button">Contact</a></li>
</ul>
```

Responsive (Hamburger Menu for Small Screens):

```
<div class="w3-bar w3-black w3-hide-large w3-hide-medium">
  <button class="w3-bar-item w3-button w3-right"
    onclick="myFunction()">☰</button>
  <a href="#" class="w3-bar-item w3-button">Menu</a>
</div>
```



Why Use W3.CSS?

- ✓ Easy to learn and use
- ✓ No JavaScript or jQuery needed
- ✓ Responsive and mobile-first
- ✓ Lightweight and fast
- ✓ Free and open source

Learn more: <https://www.w3schools.com/w3css/>

1 INTRODUCTION TO CLIENT SIDE SCRIPTING LANGUAGE

Client Side Scripting languages are executed in the user's browser.

- ✓ Makes web pages interactive and dynamic
- ✓ Validates data before sending to server
- ✓ Provides immediate feedback to users
- ✓ JavaScript is the most popular client-side scripting language



2 VARIABLES IN JAVASCRIPT

Variables are used to store data values.

Declaration:

```
var x = 10;
let name = "John";
const PI = 3.14;
```



Keyword	Scope	Example
var	Function scoped	var a = 5;
let	Block scoped	let b = 10;
const	Block scoped (constant)	const PI = 3.14;

3 OPERATORS IN JS

Operators are used to perform operations.

Type	Operators	Example
Arithmetic	+ - * / % ++ --	x + y, a % b
Assignment	= += -= *= /=	x += 5
Comparison	== === != !== > < >= <=	x == y
Logical	&& !	x > 5 && y < 10
Bitwise	& ^ ~ << >>	x & y
Ternary	?:	x > y ? 'Yes' : 'No'

4 CONDITION STATEMENTS

Used to execute code based on conditions.

if Statement

```
if (age >= 18) {
  console.log("Adult");
}
```

if...else Statement

```
if (age >= 18) {
  console.log("Adult");
} else {
  console.log("Minor");
}
```

if...else if...else Statement

```
if (marks >= 90) {
  grade = 'A';
} else if (marks >= 75) {
  grade = 'B';
} else {
  grade = 'C';
}
```

5 JS POPUP BOXES

Used to display messages or get input.

Box	Method	Description	Example
Alert Box	alert()	Displays an alert message	alert("Hello!");
Confirm Box	confirm()	Displays OK / Cancel	confirm("Are you sure?");
Prompt Box	prompt()	Takes input from user	prompt("Enter your name:");



6 JS EVENTS

Events are actions triggered by the user.

Event	Description	Example
onclick	Occurs when user clicks	<button onclick="myFunc()">Click</button>
onchange	Occurs when value changes	<input onchange="myFunc()">
onmouseover	Mouse over an element	<div onmouseover="myFunc()">Hover</div>
onmouseout	Mouse out of an element	<div onmouseout="myFunc()">Move out</div>
onsubmit	Occurs on form submit	<form onsubmit="return validate()">
onload	Page or image finished loading	<body onload="myFunc()">

7 BASIC FORM VALIDATIONS IN JAVASCRIPT

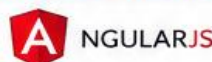
Validate form data before submitting to server.

- ✓ Check for empty fields
- ✓ Check minimum / maximum length
- ✓ Validate email format
- ✓ Validate number range
- ✓ Confirm password match

Example: Validate Email

```
function validateEmail() {
  var email = document.getElementById("email").value;
  var pattern = /^[^\s@]+@[^\s@]+\.[^\s@]+$/;
  if (!pattern.test(email)) {
    alert("Enter a valid email address!");
    return false;
  }
  return true;
}
```

8 INTRODUCTION TO ANGULAR JS



AngularJS is a JavaScript framework for building dynamic web applications.

- ✓ Extends HTML with new attributes
- ✓ Provides data binding
- ✓ Modular and maintainable
- ✓ Reduces code and improves productivity



9 EXPRESSIONS

Expressions are written inside {{ }} (double curly braces).

Example:

```
<div ng-app="myApp" ng-controller="MyCtrl">
  <p>Name: {{ name }}</p>
  <p>Sum: {{ a + b }}</p>
</div>
```

Output:

Name: John
Sum: 15

Controller Code:

```
var app = angular.module('myApp', []);
app.controller('MyCtrl', function($scope) {
  $scope.name = "John";
  $scope.a = 10;
  $scope.b = 5;
});
```

10 MODULES

Modules are containers for different parts of an application.

Syntax:

```
var app = angular.module('myApp', []);
```



Organizes the application



Helps in code reusability



Supports dependency injection

11 DIRECTIVES

Directives are special attributes with the prefix ng-.

Common Directives:

Directive	Description	Example
ng-app	Defines the root of AngularJS app	<div ng-app="myApp">
ng-controller	Defines a controller	<div ng-controller="Ctrl">
ng-model	Binds the value of input to data	<input ng-model="name">
ng-bind	Binds data to HTML content	<p ng-bind="name"></p>
ng-repeat	Repeats HTML elements	<li ng-repeat="x in names">{{x}}
ng-show	Shows element	<p ng-show="flag">Hello</p>
ng-hide	Hides element	<p ng-hide="flag">Hello</p>
ng-click	Executes when element is clicked	<button ng-click="fun()">Click</button>

Example: ng-repeat

```
<ul ng-app="myApp" ng-controller="ListCtrl">
  <li ng-repeat="item in items">{{ item }}</li>
</ul>
```

Controller Code:

```
var app = angular.module('myApp', []);
app.controller('ListCtrl', function($scope) {
  $scope.items = ['Apple', 'Banana', 'Orange'];
});
```

12 SIMPLE ANGULARJS APPLICATION EXAMPLE

Example: Two-way Data Binding with ng-model

```
<!DOCTYPE html>
<html ng-app="myApp">
<body ng-controller="MyCtrl">
  <h3>Enter Your Name:</h3>
  <input type="text" ng-model="name" placeholder="Your name">
  <p>Hello, {{ name }}</p>
</body>
<script>
  var app = angular.module('myApp', []);
  app.controller('MyCtrl', function($scope) {
    $scope.name = "Guest";
  });
</script>
</html>
```

How it works:

- 1 You type in the input box
- 2 ng-model updates the 'name' data
- 3 The view updates dynamically

Features of AngularJS



Fast Development



Two-way Data Binding



Modular Structure



Reusability



Easy Testing



JavaScript

- Makes web pages interactive
- Handles user actions
- Validates data on client side



AngularJS

- Framework for building web applications
- Uses directives, modules, and expressions
- Improves productivity and maintainability



Learn Once, Use Everywhere!



PHOTO EDITOR (PHOTOSHOP)

Edit. Enhance. Create.

ADOBE PHOTOSHOP

Photoshop is a powerful photo editing software used to edit, enhance and manipulate images and create stunning graphics for print, web and more.



KEY FEATURES OVERVIEW



Powerful Editing Tools



Layers for Non-destructive Editing



Enhance Colors and Tone



Creative Filters



Text and Typography



Transform and Adjust



High Quality Output

1 TOOLS IN PHOTOSHOP

A. SELECTION TOOLS

- Rectangular Marquee Tool (M)**
Makes rectangular selections.
- Elliptical Marquee Tool (M)**
Makes elliptical or circular selections.
- Lasso Tool (L)**
Makes freehand selections.
- Polygonal Lasso Tool (L)**
Makes selections with straight lines.
- Magnetic Lasso Tool (L)**
Makes selections by detecting edges.
- Quick Selection Tool (W)**
Automatically detects and selects similar areas.
- Magic Wand Tool (W)**
Selects areas of similar color.

B. PAINT TOOLS

- Brush Tool (B)**
Paints soft or hard strokes.
- Pencil Tool (B)**
Draws hard-edged strokes.
- Eraser Tool (E)**
Erases pixels and parts of images.
- Gradient Tool (G)**
Creates gradual blend between colors.
- Paint Bucket Tool (G)**
Fills areas with solid color.
- Blur Tool**
Softens areas in the image.
- Dodge Tool (O)**
Lightens areas.
- Burn Tool (O)**
Darkens areas.
- Sponge Tool (O)**
Changes color saturation.

C. TRANSFORM TOOLS

- Move Tool (V)**
Moves layers, selections and guides.
- Crop Tool (C)**
Crops or trims the image.
- Rotate View Tool (R)**
Rotates the canvas view.
- Zoom Tool (Z)**
Zooms in or out of the image.

D. TEXT TOOL

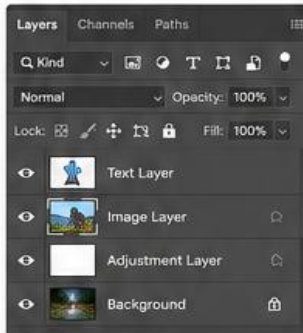
- Horizontal Type Tool (T)**
Adds horizontal text.
- Vertical Type Tool (T)**
Adds vertical text.

E. OTHER IMPORTANT TOOLS

- Eyedropper Tool (I)**
Samples colors from the image.
- Hand Tool (H)**
Moves the canvas within the window.
- Foreground / Background Color**
Sets colors for painting and editing.

2 LAYERS

Layers allow you to work on different elements separately without affecting others.



Benefits:

- ✓ Edit non-destructively
- ✓ Rearrange layers
- ✓ Adjust opacity and blending
- ✓ Apply effects to individual layers

3 BRIGHTNESS / CONTRAST

Adjust the brightness and contrast to improve the overall look.



4 IMPROVE COLORS AND TONE

Enhance colors, saturation, hue and tone for a more vibrant image.

- Hue / Saturation
- Vibrance
- Color Balance
- Levels
- Curves



5 FILTERS

Filters add special effects and artistic looks to your images.



6 WORKFLOW: BASIC PHOTO EDITING PROCESS



7 EXAMPLE: BEFORE & AFTER EDITING

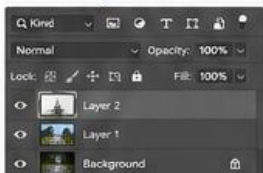


QUICK TIP

- ✓ Always work on a duplicate layer.
- ✓ Use adjustment layers for non-destructive editing.
- ✓ Use zoom in (Ctrl + +) for precise work.
- ✓ Save your work regularly.
- ✓ Use high resolution for better quality.

IMPORTANT PANELS

Layers Panel



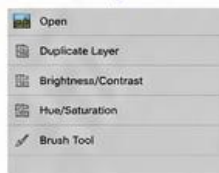
Manage and organize layers.

Adjustments Panel

Add adjustment layers.



History Panel



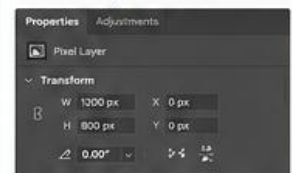
Track and undo actions.

Color Panel



Choose and manage colors.

Properties Panel



View and edit layer properties.

WHY USE PHOTOSHOP?



COMMON SHORTCUTS

Ctrl + N	Ctrl + O	Ctrl + S	Ctrl + Z	Ctrl + T	Ctrl + D	Ctrl + J
New File	Open File	Save File	Undo	Transform	Deselect	Duplicate Layer

Create, Publish, Discover & Access Information on the World Wide Web

1 OVERVIEW

Web publishing is the process of making information available on the World Wide Web.



Key Benefits

- Global reach
- 24/7 availability
- Easy updates
- Cost effective communication
- Interactive and multimedia support

2 SGML

(Standard Generalized Markup Language)

SGML is a meta-markup language used to define markup languages for documents.

Features

- Describes document structure
- Platform independent
- Separates content from presentation
- Basis for HTML, XML and many other markup languages



```
Example:
<book>
  <title>Web Publishing</title>
  <author>John Doe</author>
</book>
```

3 WEB HOSTING BASICS

Web hosting is a service that allows organizations and individuals to make their website accessible via the Internet.

How It Works



Types of Hosting

- Shared Hosting
- VPS Hosting
- Dedicated Hosting
- Cloud Hosting

Key Points

- Domain + Hosting = Website
- 99.9% uptime for availability
- Backup & security important

4 DOCUMENTS INTERCHANGE STANDARDS

Standards ensure that documents can be created, exchanged and viewed across different systems.

Standard	Purpose / Use
HTML	Web page structure
XML	Data storage and transport
XHTML	Strict version of HTML using XML rules
CSS	Presentation and layout of web pages
Unicode (UTF-8)	Universal character encoding
PDF	Portable document format
JSON	Data interchange format
RSS / Atom	Web content syndication

5 COMPONENTS OF WEB PUBLISHING

The web publishing process involves the following components:

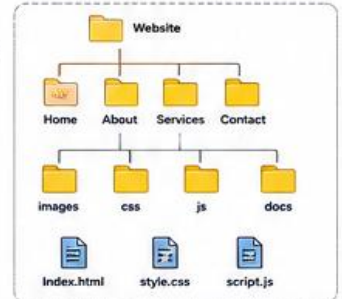
- Content** – Text, images, audio, video, data
- Design** – Layout, colors, fonts, graphics
- Authoring Tools** – Create web pages
- Web Server** – Stores and delivers web pages
- Domain Name** – Unique address (www.example.com)
- Hosting** – Space and resources on the server
- Publishing** – Upload content to the server
- Maintenance** – Update and manage content

6 DOCUMENT MANAGEMENT

It involves organizing, storing, retrieving and updating web documents efficiently.

Key Activities

- Create and organize files and folders
- Version control
- Backup and recovery
- Access control and permissions
- Metadata and indexing
- Archiving and deletion



7 WEB PAGE DESIGN CONSIDERATIONS & PRINCIPLES

Considerations

- Purpose and target audience
- Content organization
- Navigation and usability
- Browser compatibility
- Page load time
- Accessibility
- Devices (Responsive design)
- SEO and metadata

Design Principles

- Consistency
- Simplicity
- Clarity
- Balance
- Contrast
- Emphasis
- Alignment
- Repetition

8 SEARCH AND META SEARCH ENGINES

Search engines help users find information on the web.

Search Engines (Examples)



Meta Search Engines

Meta search engines gather results from multiple search engines.



9 WWW, BROWSER AND HTTP

WWW (World Wide Web)

A system of interlinked hypertext documents accessed via the Internet.



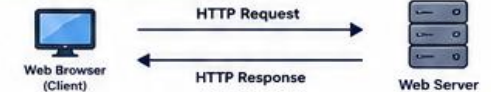
Browser

Software used to access and display web pages.



HTTP (HyperText Transfer Protocol)

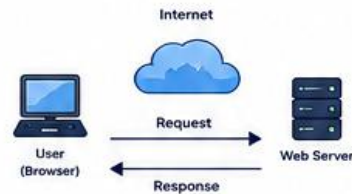
Protocol used for communication between web browser and web server.



10 HOW THE WEB WORKS

Step-by-Step

- 1 User enters URL in browser
- 2 Browser sends HTTP request to web server
- 3 Web server processes request
- 4 Server sends HTTP response (HTML, CSS, JS, images)
- 5 Browser renders and displays the web page



Example URL Anatomy



11 PUBLISHING TOOLS

Tools used to create, design, test and publish websites.

Authoring / Design Tools



Other Useful Tools



Publishing Tools / Services



Functions

- ✓ Create and edit web pages
- ✓ Test across browsers
- ✓ Validate HTML/CSS
- ✓ Optimize images and files
- ✓ Publish via FTP/Hosting
- ✓ Manage and update content

12 SUMMARY



Web publishing makes information available to the world.



Standards and tools ensure compatibility and efficiency.



Good design and management improve usability and access.



Search engines help users find what they need quickly.



Secure and reliable hosting ensures your site is always available.



Follow principles and best practices for better web presence.



OUR COURSES

Career-Focused Learning. Future-Ready You.



Scan to Visit
Our Website



Office & Online
Classes Available



Get Practical
Learning Exposure



One to One Classes
Available

CERTIFICATION COURSES

Course Name	Duration
CCC	3 Months
BCC	3 Months
O Level	6 Months / 1 Year

BASIC COURSES

Course Name	Duration
CCA	3 Months
DCA	6 Months
DFA	6 Months
ADCA	1 Year
DOAP	1 Year
DIT	1 Year
DTP	3 Months
Tally Prime	3 Months
Advance Excel	2 Months

SPECIAL TRAINING COURSES

Course Name	Duration
Full Stack Web Development Using PHP & MYSQL	6 Months
Full Stack Web Development Using Python Django	5 Months
Diploma in Digital Marketing	3 Months
Python Data Science	6 Months
Data Analytics Using Python	4 Months
Python for AI	6 Months
Cyber Security	3 Months

UNIVERSITY COURSES

Course Name	Duration	Fees (Per Sem)
BCA	3 Years	12800/-
BBA	3 Years	12800/-
MCA	2 Years	17000/-
MBA	2 Years	17000/-
B.COM	3 Years	6500/-
M.COM	2 Years	9000/-
MSW	2 Years	9000/-
M.SC(Math)	2 Years	10000/-
BA.	3 Years	5500/-
MA	2 Years	9000/-

TECHNICAL COURSES

Course Name	Duration
C Language	2 Months
C++	3 Months
PYTHON	3 Months
DSA	2 Months
Java (Class- IX, X, XI, XII)	3-6 Months
Core Java	4 Months
HTML	1 Months
HTML & CSS	2 Months
Java Script	1 Months
SQL/MYSQL	1 Month



EXPERT FACULTY
Learn from Industry
Professionals



PRACTICAL APPROACH
Hands-on Training
& Live Projects



CERTIFIED COURSES
NIELIT & Industry
Recognized



CAREER SUPPORT
Placement Assistance
& Guidance



OFFICE:
G. R. COMPLEX (1ST FLOOR)
PREETAM NAGAR, (BESIDE RAJASTHAN SWEETS),
DHOOMANGANJ, PRAYAGRAJ U.P 211011



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