

Introduction to Web Design

The term "**Internet**" is a generalization that covers thousands of **interconnected networks** around the world based on very different technologies. The networks differ in almost any possible network specific parameter such as transmission medium, geographical size, number of nodes, transmission speed, throughput, reliability etc.

In other hand we can say that **Internet** is a *network of networks*.

World Wide Web (known as "WWW", "Web" or "W3") : **Tim Berners-Lee invented the World Wide Web in 1989, The World Wide Web is not synonymous with the Internet.**

The World Wide Web is the universe of network-accessible information, an embodiment of human knowledge.

In contrast, the World Wide Web is a global collection of documents and other resources, linked by hyperlinks and uniform resource identifier.

A site or website is a set of related web pages located under a single domain name, typically produced by a single person or organization. For examples wikipedia.org, google.com, amazon.com, nielit.gov.in etc.

Web Application:

The applications which will provide services over the web are called web applications.

Eg: gmail.com, facebook.com etc.

Every web application contains 2 main components

- 1. Front-End**
- 2. Back-End**

1) Front-End:

The term "front-end" refers to the user interface .

Front end development manages everything that users visually see first in their browser or application.

developers who are responsible for the look and feel of a site is called Front end developers.

We can develop Front-End content by using the following technologies:

HTML, CSS ,JavaScript, w3.css, Angular JS etc.

HTML: HyperText Markup Language

Every web application should contain HTML. i.e HTML is the mandatory technology for web development.

It represents structure of web page

CSS: Cascading Style Sheets

It is optional technology; still every web application contains CSS.
The main objective of CSS is to add styles to the HTML Pages like colors, fonts, borders etc.

Java Script:

JavaScript is a lightweight, cross-platform and interpreted scripting language.
The main objective of Java Script is to add functionality to the HTML Pages. ie to add dynamic nature to the HTML Pages.

Static Response vs Dynamic Response:

If the response is not varied from time to time and person to person then it is considered as static response.
e.g.: Login page of gmail
home page of google.com etc.

If the response is varied from time to time and person to person then it is considered as dynamic response.
Eg inbox page of gmail
Eg: welcome page of any internet banking. Etc.

2) Back End:

back-end” means the server, application and database that work behind the scenes to deliver information to the user.

It is the technology used to decide what to show to the end user on the Front-End.
i.e. Backend is responsible to generate required response to the end user, which is displayed by the Front-End.

In order to make the server, application, and database communicate with each other, back-end developers uses server-side languages like PHP, Ruby, Python, Java, and .Net to build an application, and tools like MySQL, Oracle, and SQL Server to find, save, or change data and serve it back to the user in front-end code.

Responsive Web design :

Responsive Web design is the approach that suggests that design and development should respond to the user's behavior and environment based on screen size, platform and orientation.

Responsive web design makes your web page look good on all devices.

Editors

Text editors are used to create and modify web pages. HTML ,css , JavaScript etc. codes can be written in any text editors including the **notepad**. Some of the popular text editors are given below:

- Notepad
- Notepad++
- Sublime Text Editor etc.

Notepad: Notepad is a basic text editor included with all versions of Microsoft Windows, you can use this editor for creating simple documents or for creating web pages and any kind of file with given extension.

To open Notepad, select the Start Windows logo Start button button and then type Notepad in the search box. Select Notepad from the results.

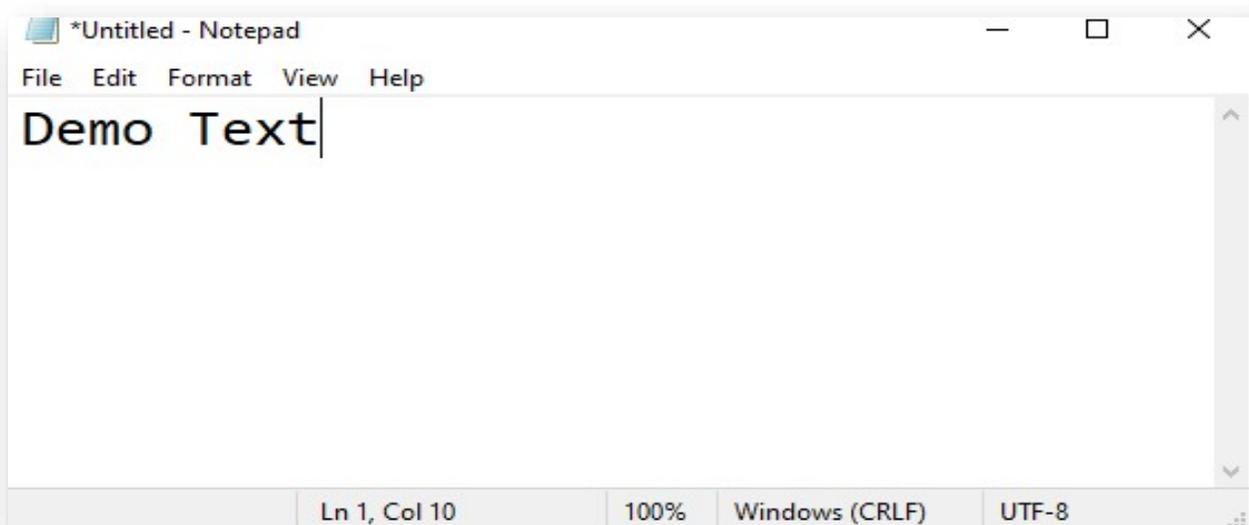
Another way to open notepad in windows operating system:

step1: press windows key+r to open run dialogue box.

step2: in run dialogue box write notepad and press enter key/ok button.
after that you will get the notepad application.

=>Default extension of notepad file is .txt

=>ctrl+s To save file



Notepad++: Notepad++ is a free source code editor and Notepad replacement that supports several languages. **Notepad++ is written in C++.** It supports tabbed editing, which allows working with multiple open files in a single window. The project's name comes from the C increment operator.

Official website of notepad++ is <https://notepad-plus-plus.org/>

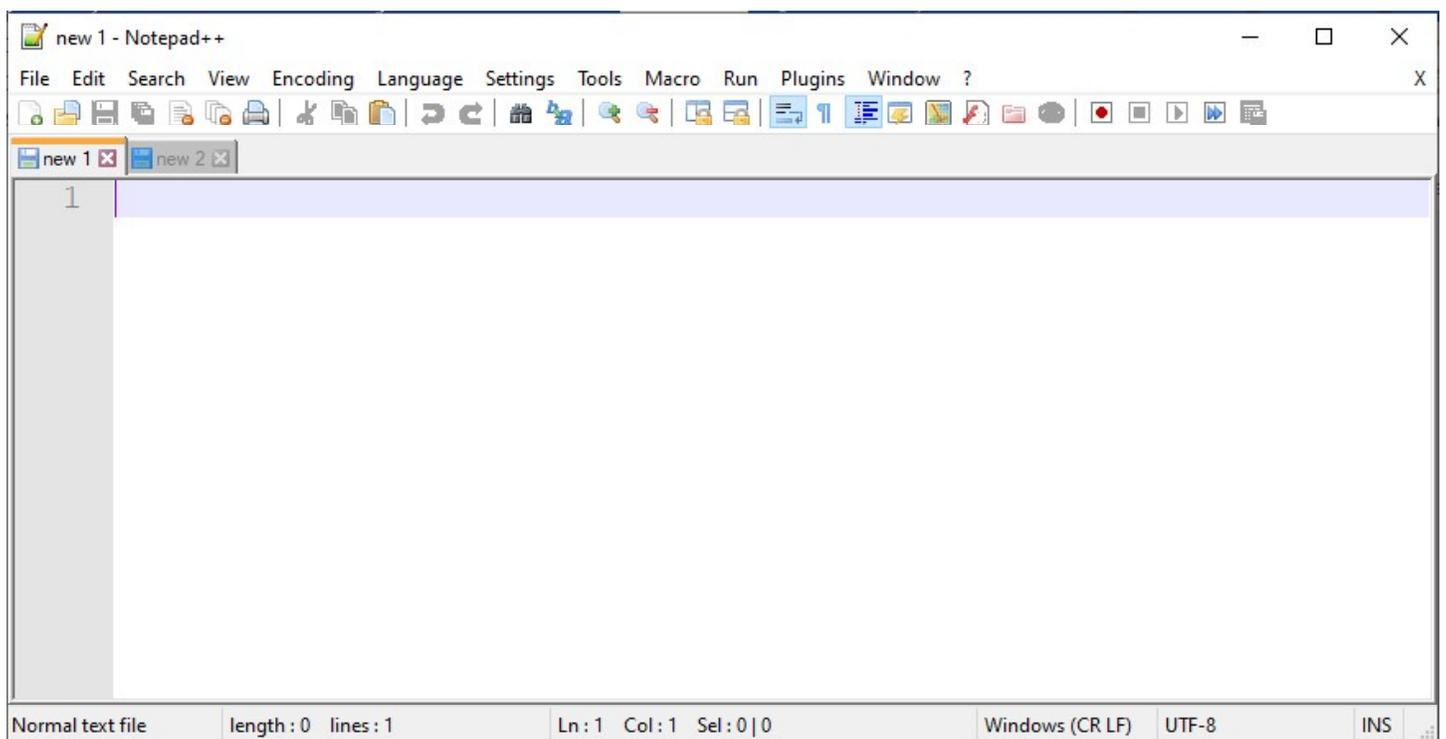
To download notepad++ using the following link:

For 32 bit system-

<https://github.com/notepad-plus-plus/notepad-plus-plus/releases/download/v7.9.1/npp.7.9.1.Installer.exe>

For 64 bit system-

<https://github.com/notepad-plus-plus/notepad-plus-plus/releases/download/v7.9.1/npp.7.9.1.Installer.x64.exe>



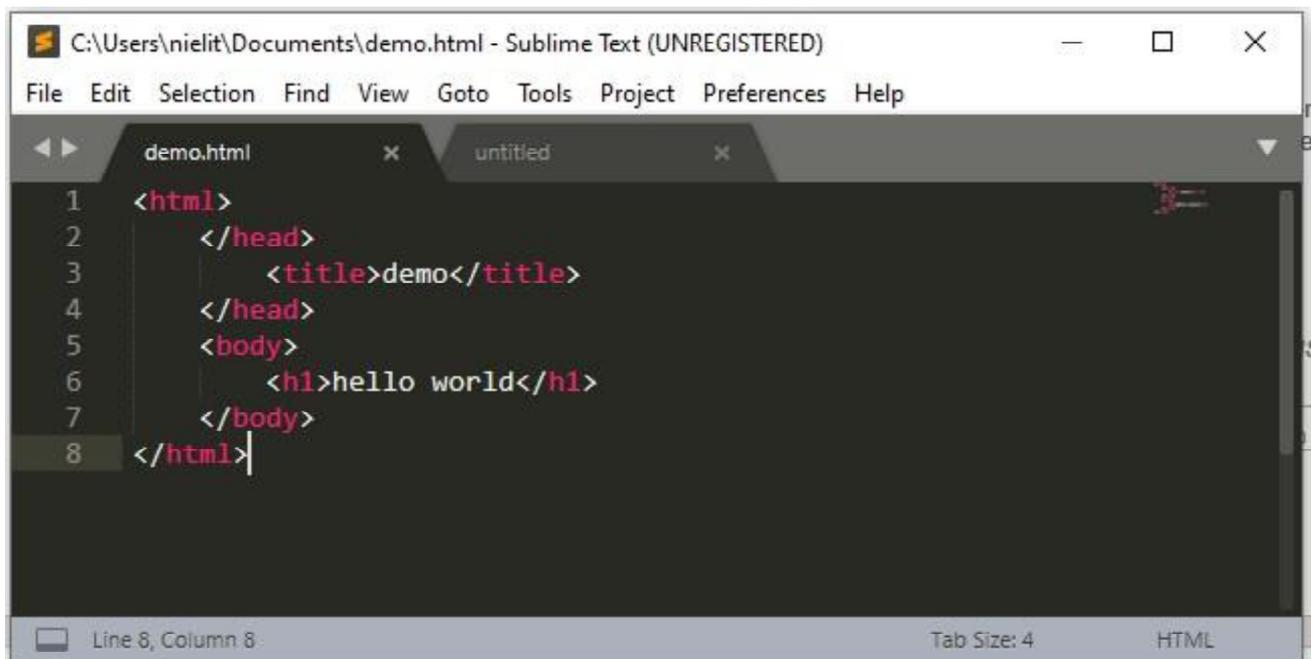
Sublime text editor:

Sublime Text is a code editor software program that allows you to be able to write code efficiently. Here you can do all that you want within the coding process, and it has a solid number of plugins and packages to customize the platform directly to your needs.

Sublime Text 3 is the current version of Sublime Text.

To download sublime text use the <https://www.sublimetext.com/3> link.

Sublime Text may be downloaded and evaluated for **free**, however a license must be purchased for continued use. There is currently no enforced time limit for the evaluation.



The screenshot shows the Sublime Text editor interface. The title bar reads "C:\Users\nielit\Documents\demo.html - Sublime Text (UNREGISTERED)". The menu bar includes "File", "Edit", "Selection", "Find", "View", "Goto", "Tools", "Project", "Preferences", and "Help". The editor has two tabs: "demo.html" and "untitled". The "demo.html" tab is active and displays the following HTML code:

```
1 <html>
2   </head>
3     <title>demo</title>
4   </head>
5   <body>
6     <h1>hello world</h1>
7   </body>
8 </html>
```

The status bar at the bottom indicates "Line 8, Column 8", "Tab Size: 4", and "HTML".