

<https://www.halvorsen.blog>



Web Server

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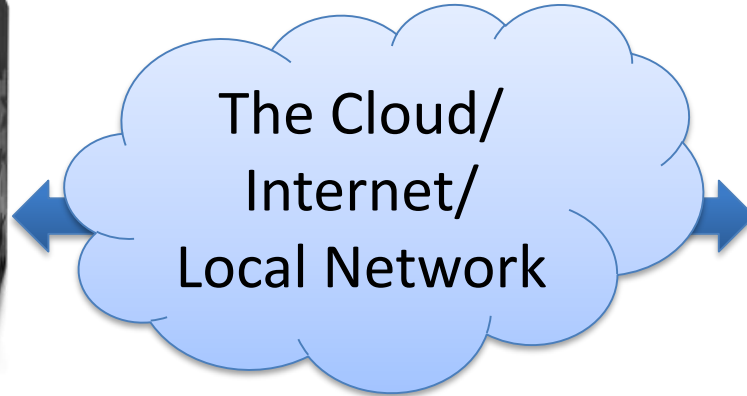
Web Platforms

Servers



Web Servers

Database Servers



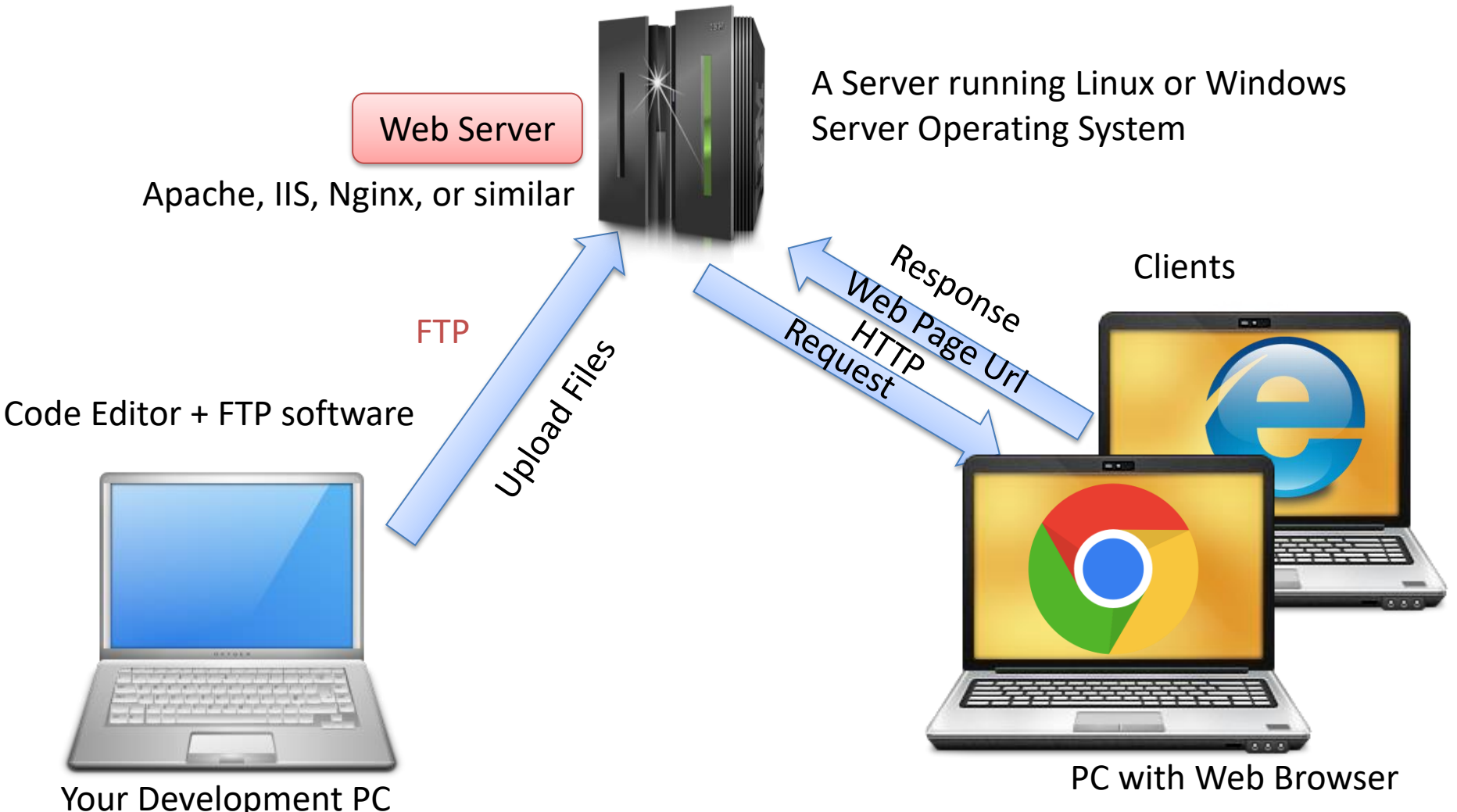
Clients



PCs with Web Browsers

Web Server

- A Web Server program host your Web Site and respond to requests from the Clients (Web Browser). The requested web page will then be sent to the Web browser
- The Web Server software is typically installed on a Server, running OS like Linux or Windows Server
- You can install your own Server and Web Server software, but normally you use an ISP (Internet Service Provider) or a Cloud Platform like Microsoft Azure, AWS (Amazon Web Services), etc.



Web Server

Apache, IIS, Nginx, or similar

A Server running Linux or Windows Server Operating System

Clients

FTP

Upload Files

Code Editor + FTP software



Your Development PC



Response Web Page Url

Request HTTP



PC with Web Browser

Web Server Platforms



(pronounced "engine x")
- Has become very popular lately

Cross-platform: UNIX, Linux, OS X, Windows, ...



PHP

Apache



Microsoft IIS

Internet Information Services

ASP.NET

The term web server can refer to either the hardware (the computer) or the software (the computer application) that helps to deliver web content that can be accessed through the Internet.

The most common use of web servers is to host websites, but there are other uses such as gaming, data storage or running enterprise applications.

Web Servers Market share*

Product	Vendor	Platform	Percent
Apache	Apache	Open Source Cross Platform	45.9%
Nginx	Nginx, inc	Free + Paid versions Cross Platform	39.0%
IIS (Internet Information Services)	Microsoft	Windows, Included with Windows (Windows Server, Windows 10 Pro)	9.5%
LiteSpeed	LiteSpeed	Proprietary, Linux	3.4%
GWS (Google Web Server)	Google	Custom Linux-based Web server that Google uses for its online services	1.0%

https://en.wikipedia.org/wiki/Web_server

*July 2018

Setup Web Site/Web
Server @ usn

Web Servers at USN

The university has 2 ready to use Web Servers:

- home.usn.no (Microsoft Server, IIS)
- web01.usn.no (Linux Server, Apache)

The setup and use is almost identical

In this Tutorial we will use home.usn.no

Web Server

home.usn.no

Web Server - home.usn.no

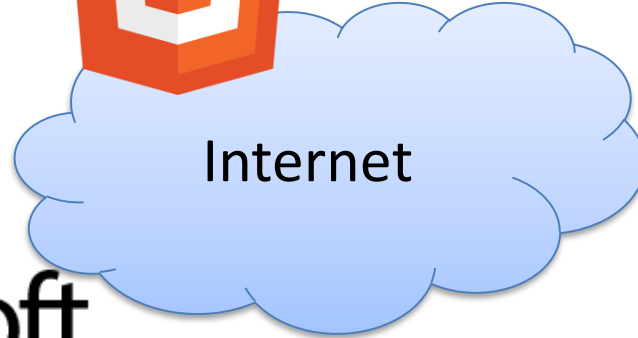
Server-side



HTML



CSS



Clients



PCs with Web Browsers



MySQL®



Web Server - home.usn.no

- Server:
 - Operating System: Windows Server
 - Web Server: Microsoft Internet Information Server (IIS)
 - Database: MySQL
 - Supported Languages: HTML, CSS, PHP, ASP.NET
- Web Address: <https://home.usn.no/username>
- UserName = Student Number (typically a 6 digits number)
- Allowed Start Pages:
 - Default.htm, Index.html, Index.php, Default.asp, Default.aspx
- FTP: WinSCP, FileZilla or similiar

Start using home.usn.no

Follow the guidelines below to setup the Web Server:

- Norwegian Guide: <https://min.usn.no/student/tjenester-for-studenter/it-tjenester/nettverk/webomrade-egne-nettsider-article122884-28849.html>
- English Guide: <https://my.usn.no/student/student-services/it-services/network/create-your-own-webpages-website-article210002-31394.html>

MySQL Database

When creating the the space on the web server, select “I need a MySQL Database ...”

Your Home on the Web

This is a place where you can create your own home on the web.

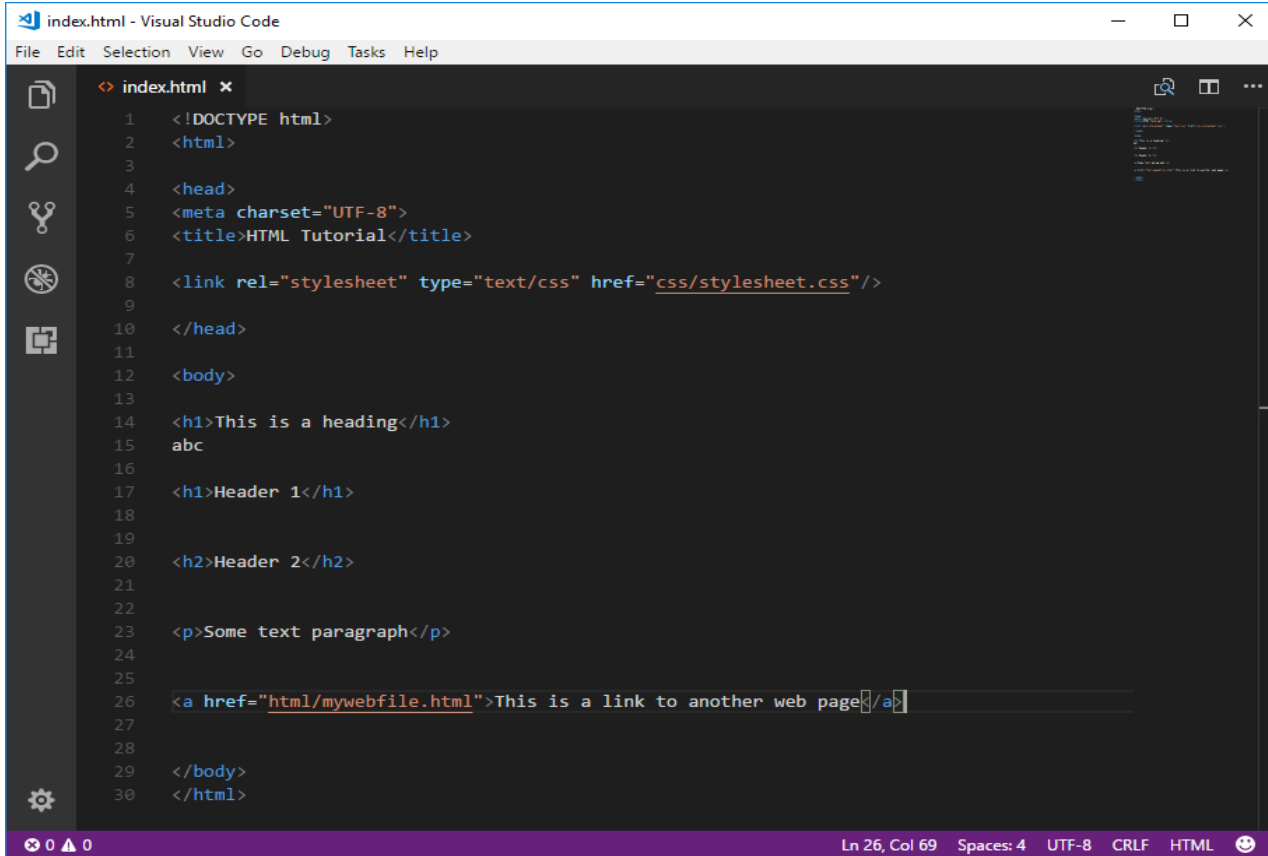
I need a MySQL database to use with my home on the web. If you are unsure about needing this you probably do not need one!
IMPORTANT! If the above box is checked and you currently do have a database, the password of your MySQL user will be reset and displayed below.

Create/update my Home on the Web!

Make sure to save/remember the generated Password for the MySQL database that will be created

Create Web Site

Visual Studio Code



```
index.html - Visual Studio Code
File Edit Selection View Go Debug Tasks Help

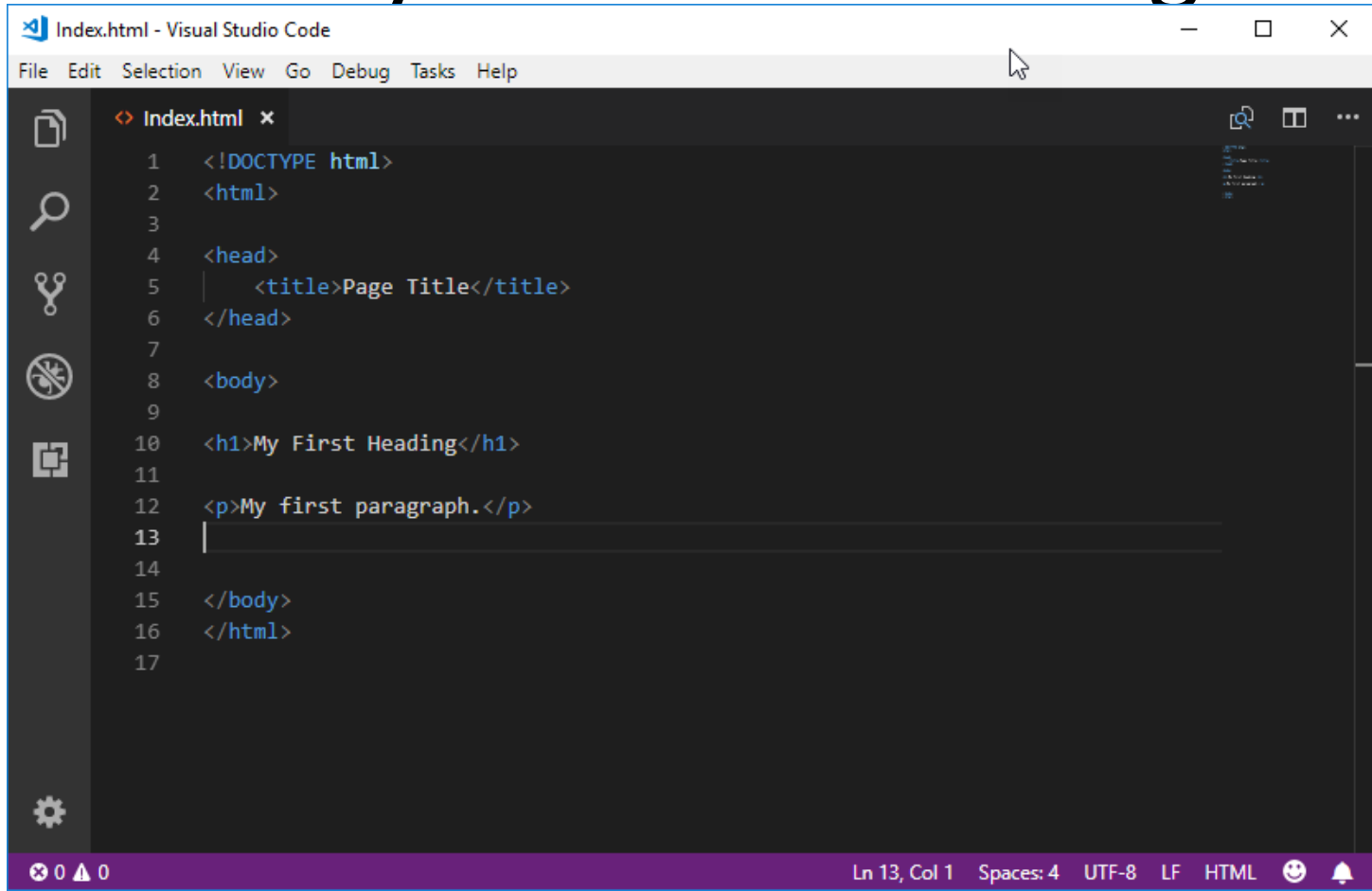
index.html x
1 <!DOCTYPE html>
2 <html>
3
4 <head>
5 <meta charset="UTF-8">
6 <title>HTML Tutorial</title>
7
8 <link rel="stylesheet" type="text/css" href="css/stylesheet.css"/>
9
10 </head>
11
12 <body>
13
14 <h1>This is a heading</h1>
15 abc
16
17 <h1>Header 1</h1>
18
19
20 <h2>Header 2</h2>
21
22
23 <p>Some text paragraph</p>
24
25
26 <a href="html/mywebfile.html">This is a link to another web page</a>
27
28
29 </body>
30 </html>
```

Ln 26, Col 69 Spaces: 4 UTF-8 CRLF HTML

Simple, lightweight and
easy to use Editor
Cross-platform

Download: <https://code.visualstudio.com/>

Create your first Web Page

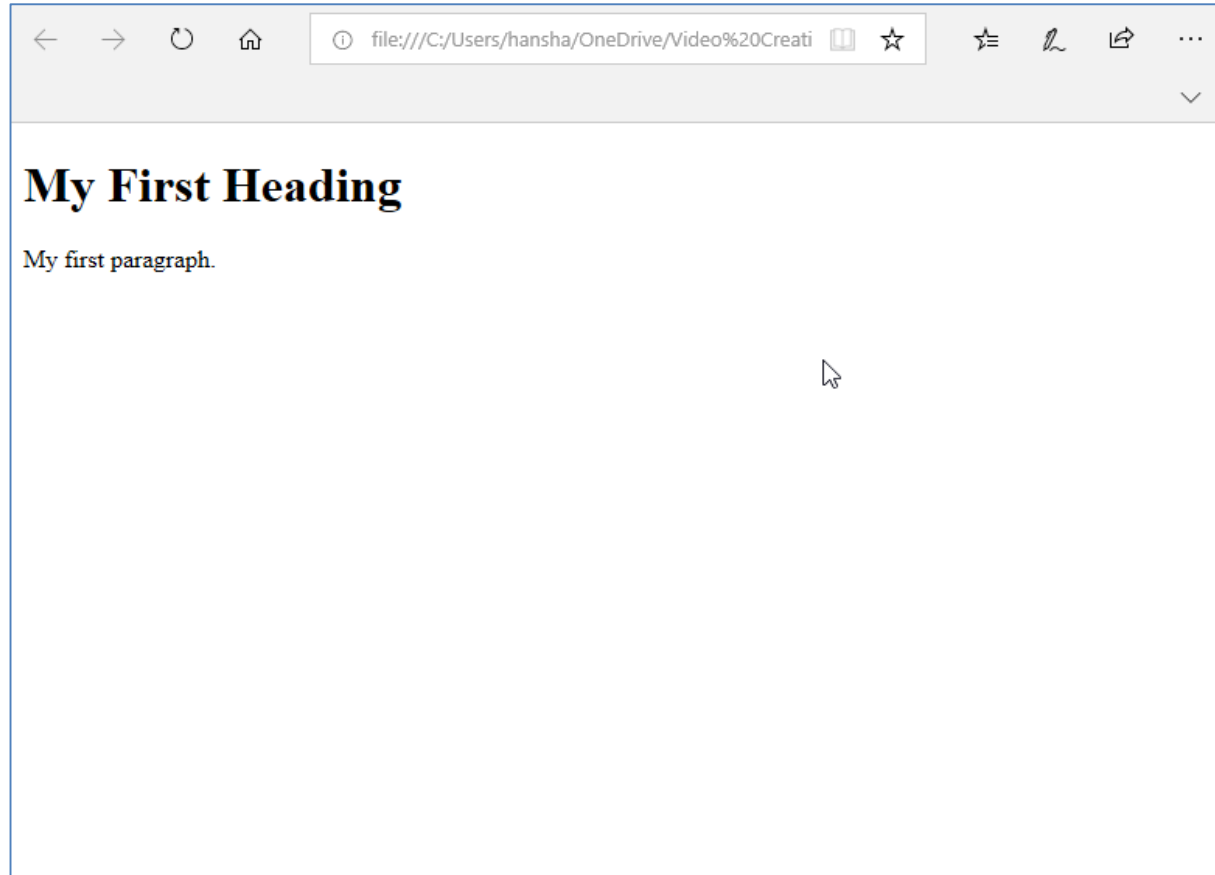


The image shows a screenshot of the Visual Studio Code editor window. The title bar reads "Index.html - Visual Studio Code". The menu bar includes "File", "Edit", "Selection", "View", "Go", "Debug", "Tasks", and "Help". The editor area displays the following HTML code:

```
1 <!DOCTYPE html>
2 <html>
3
4 <head>
5   <title>Page Title</title>
6 </head>
7
8 <body>
9
10 <h1>My First Heading</h1>
11
12 <p>My first paragnaph.</p>
13
14
15 </body>
16 </html>
17
```

The status bar at the bottom indicates "Ln 13, Col 1", "Spaces: 4", "UTF-8", "LF", "HTML", and shows icons for error, warning, and information.

Test in Web Browser



HTML

Good Resource for creating Web Pages with HTML, CSS, JavaScript, SQL, PHP, etc.

<http://www.w3schools.com>

HTML: <https://www.w3schools.com/html/>

CSS: <https://www.w3schools.com/css/>

PHP: <https://www.w3schools.com/php/>

Upload Files to Web Server

FTP

FTP – File Transfer Protocol

Software used for uploading Files to the Web Server

- FTP Software

- WinSCP - <https://winscp.net>

- FileZilla - <https://filezilla-project.org>

- ...hundreds

Many Code Editors has also built-in FTP

WinSCP

The screenshot displays the WinSCP interface with two panels. The left panel shows the local file system at `C:\...\OneDrive\Video Creation\Video Projects\Web\home.usn.no\Example\MyWebSite\`. The right panel shows the remote file system at `/`. Both panels use a table-like view to display file and folder details.

Name	Size	Type	Changed
..		Parent directory	2018-08-23 13:36:49
css		File folder	2018-08-23 13:18:02
doc		File folder	2018-08-23 13:18:02
html		File folder	2018-08-23 13:18:02
images		File folder	2018-08-23 13:18:02
js		File folder	2018-08-23 13:19:19
Index.html	1 KB	HTML File	2018-08-23 13:33:13

Name	Size	Changed	Rights	Owner
..				
documents		2018-08-23 13:20		
Private		2017-08-28 08:45		
Index.html	1 KB	2018-08-23 13:33:13		

0 B of 109 B in 0 of 6 0 B of 109 B in 0 of 3 FTP 0:07:45

FileZilla

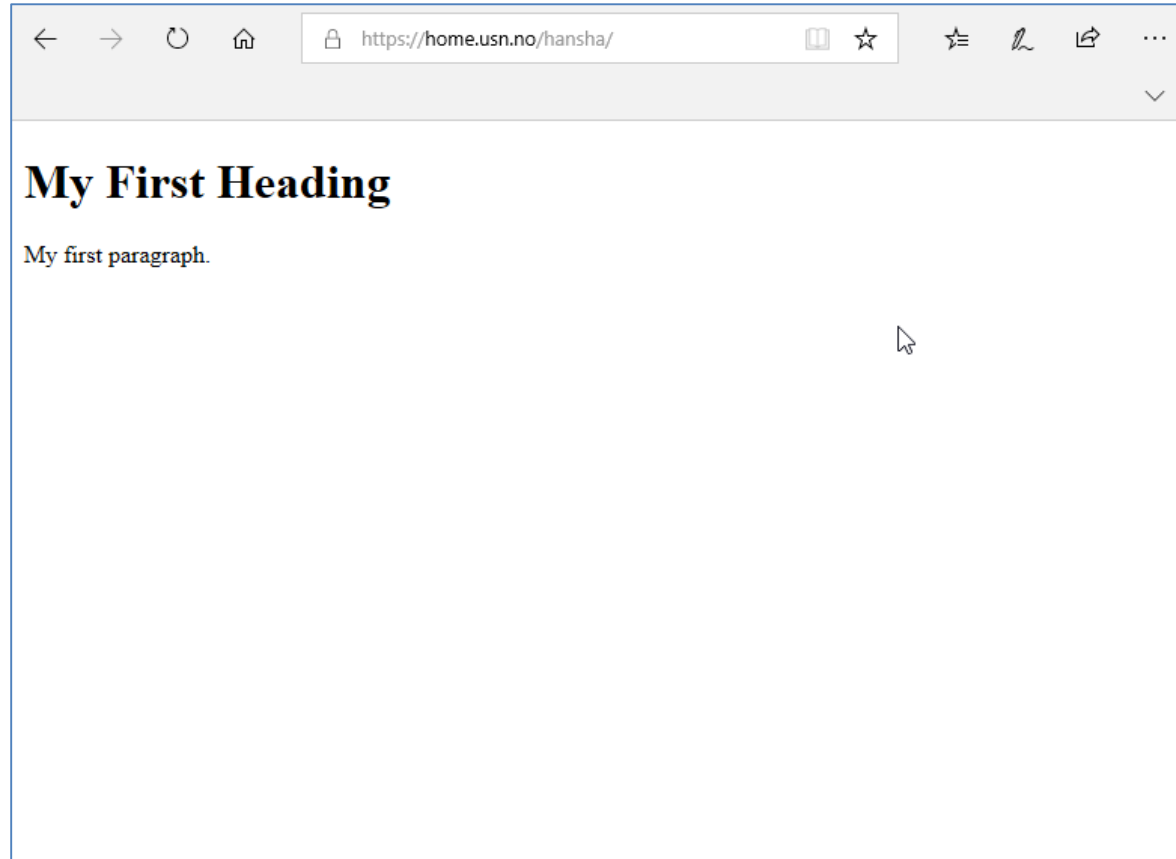
The screenshot shows the FileZilla interface with the following details:

- Title Bar:** home.usn.no - ftps://home.usn.no%7Cusn.no%5Chansha@home.usn.no - FileZilla
- Menu Bar:** File, Edit, View, Transfer, Server, Bookmarks, Help
- Toolbar:** Contains icons for local/remote site management, refresh, disconnect, and search.
- Host/Connection Fields:** Host, Username, Password, Port, and a Quickconnect dropdown menu.
- Status Log:** Shows connection progress: TLS connection established, Logged in, Retrieving directory listing..., Calculating timezone offset of server..., Timezone offset of server is 7200 seconds, Directory listing of "/" successful.
- Local Site:** sers\hansha\OneDrive\Video Creation\Video Projects\Web\home.usn.no\Example\MyWebSite\
- Remote Site:** /
- Local Site Tree:** MyWebSite, PowerPoint, HTML, USN Web Server - web01.usn.no
- Remote Site Tree:** documents, Private
- Local Site Table:**

Filename	Filesize	Filetype	Last modified
..			
css		File folder	2018-08-23 13:18:02
doc		File folder	2018-08-23 13:18:02
html		File folder	2018-08-23 13:18:02
images		File folder	2018-08-23 13:18:02
js		File folder	2018-08-23 13:19:19
Index.html	109	HTML File	2018-08-23 13:33:13
- Remote Site Table:**

Filename	Filesize	Filetype	Last modified	Permissions	Owner/Gro
..					
documents		File folder	2018-08-23 13:...		
Private		File folder	2017-08-28 08:...		
Index.html	109	HTML File	2018-08-23 13:...		
- Summary:** Local site: 1 file and 5 directories. Total size: 109 bytes. Remote site: 1 file and 2 directories. Total size: 109 bytes.
- Transfer Queue:** Queued files, Failed transfers, Successful transfers. Queue: empty.

Test your Web Site from the Browser



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