

FWDP 1000 – Day 6

Course: Web Development 1
Instructor: Jonathon Leathers

Morning Review

- Download the files.
- Edit styles.css to follow the styling best practices from the Day 5 slides.

We will go over this in 15 minutes.

If you have not already done so, please install FileZilla.

Agenda

- Introduction to FTP
- Pointing a Domain
- SSL Certificates
- Lab Time

Introduction to FTP

File Transfer Protocol

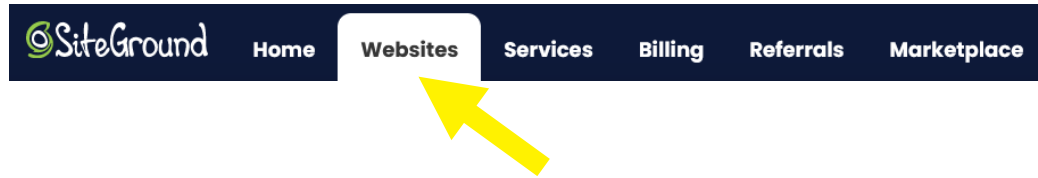
FTP is a common way to move files from your device to a web server.

It requires a web server (a hosting account) and an FTP client (an application).

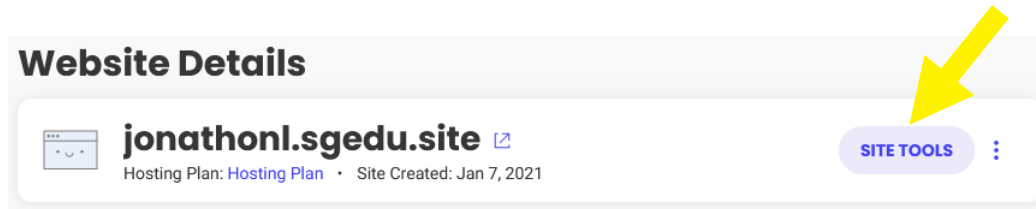
I will use **SiteGround** as my web server and **FileZilla** as my FTP client.

Login to SiteGround

Login to your SiteGround account and click on Websites.



Click on “Site Tools”.

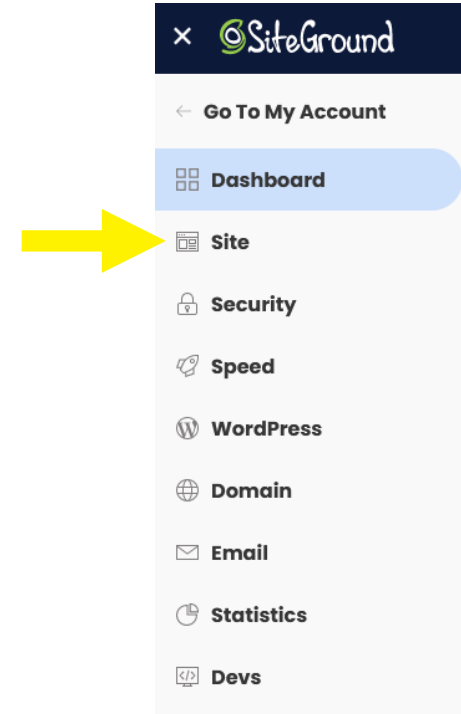


SiteGround Site Tools

SiteGround's "Site Tools" page is where you manage your websites.

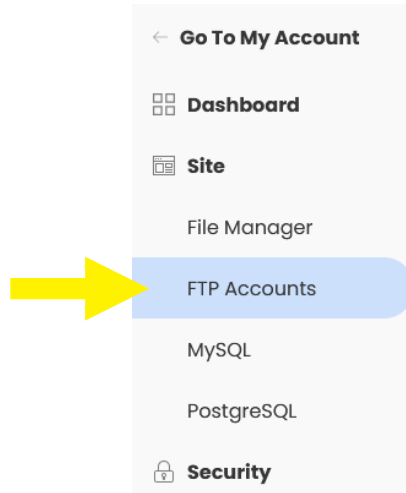
You will be here most often during the Content Management Systems course.

Click on "Site" to begin.




Create an FTP Account

Under “Site”, click
“FTP Accounts”.



Fill in the Account Name and Password Fields.
I recommend using a generated password.

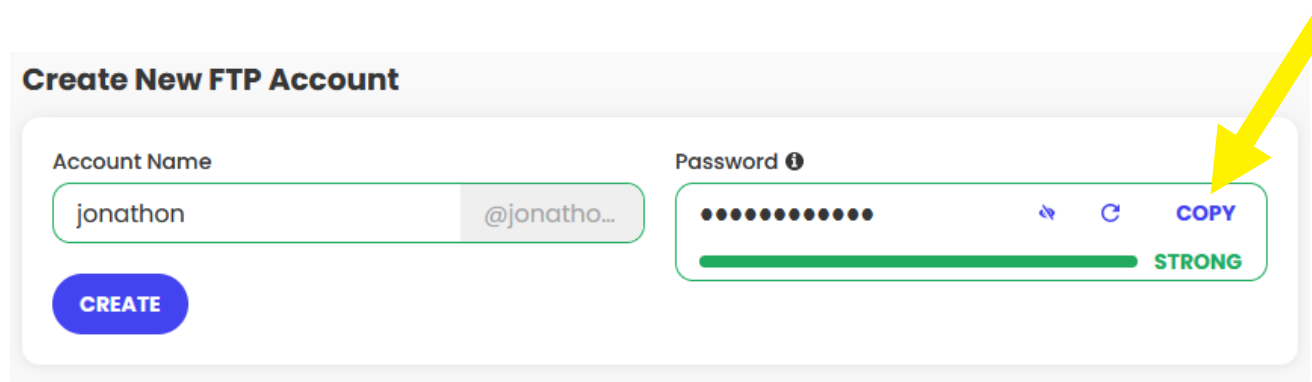
Create New FTP Account

Account Name	Password ⓘ
<input type="text" value="e.g. jsmith"/> @jonatho...	<input type="text" value="8 or more characters"/>  GENERATE
CREATE	

Create an FTP Account

Copy the FTP Account Password before you click “Create”.

Open a notepad or text file and paste the password.



The screenshot shows a web form titled "Create New FTP Account". It has two main input fields: "Account Name" and "Password". The "Account Name" field contains the text "jonathon" and a suggestion "@jonatho...". The "Password" field contains a series of dots, a strength indicator bar, and a "COPY" button. A yellow arrow points to the "COPY" button. Below the "Account Name" field is a blue "CREATE" button.

Create New FTP Account

Account Name
jonathon @jonatho...

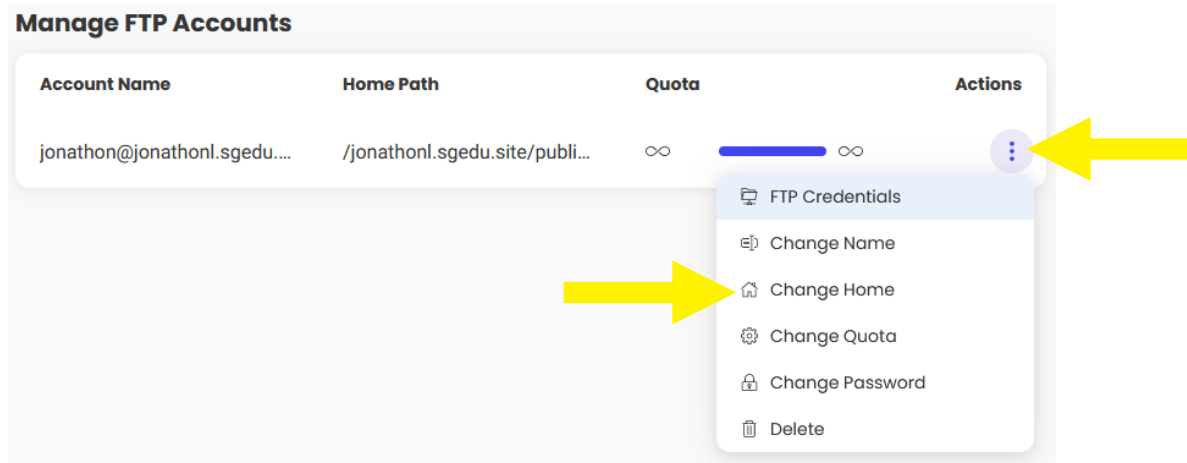
Password ⓘ
●●●●●●●●●● 🔍 🔄 COPY
STRONG

CREATE

Change FTP Home Directory

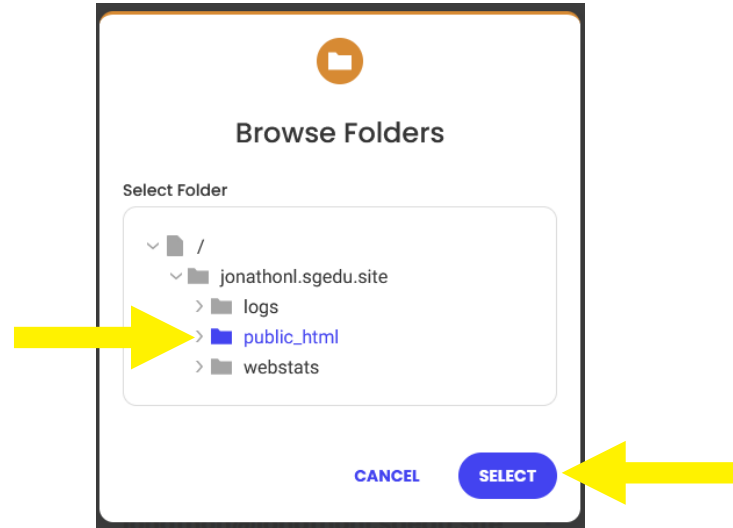
After clicking “Create”, scroll down to find the account.

Click on the three dots and choose “Change Home”.



Change FTP Home Directory

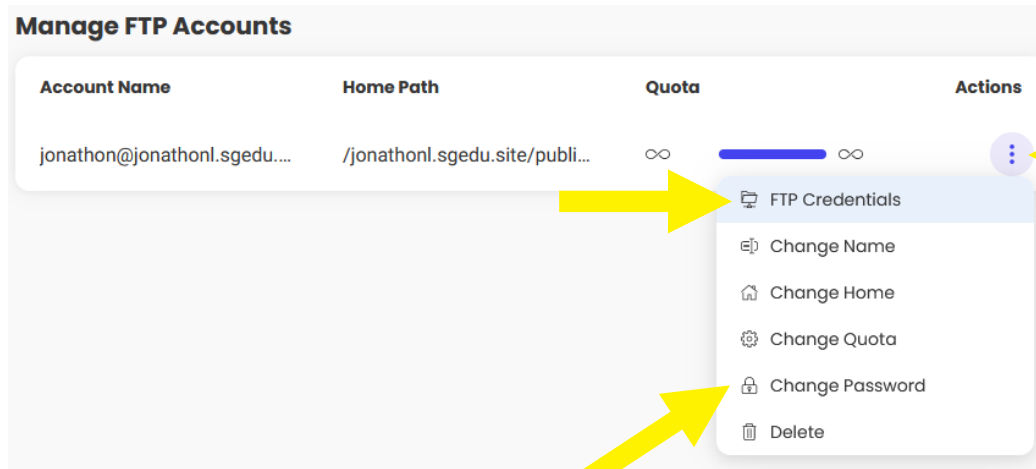
Click on the **public_html** folder then click “Select”.



This will make FileZilla always start in the **public_html** folder when connecting to your server.

FTP Credentials

Click on the three dots and choose FTP Credentials.

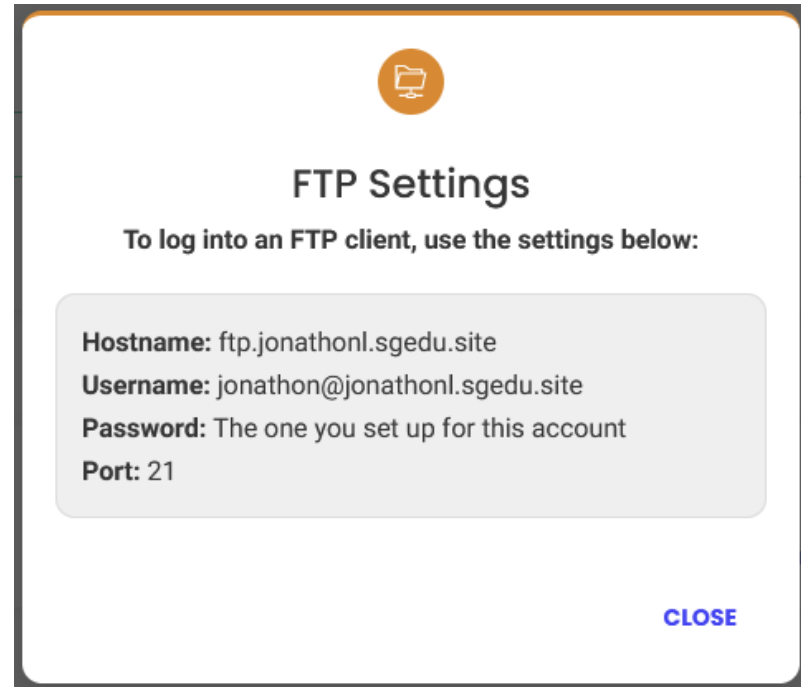


You can also change your FTP password here if you need to.

FTP Credentials

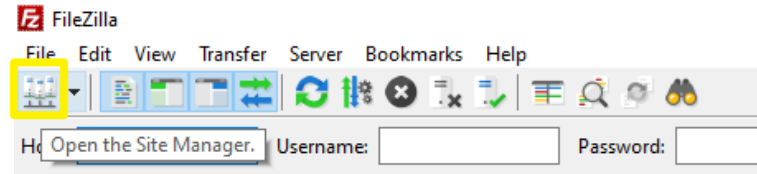
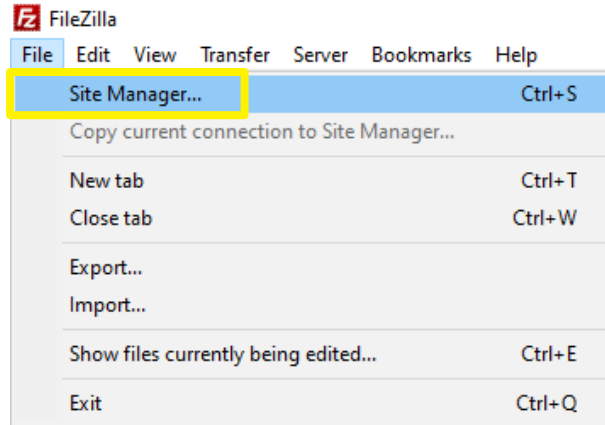
The popup modal will contain the information you need to add to your FTP client.

In our case, we will use FileZilla.



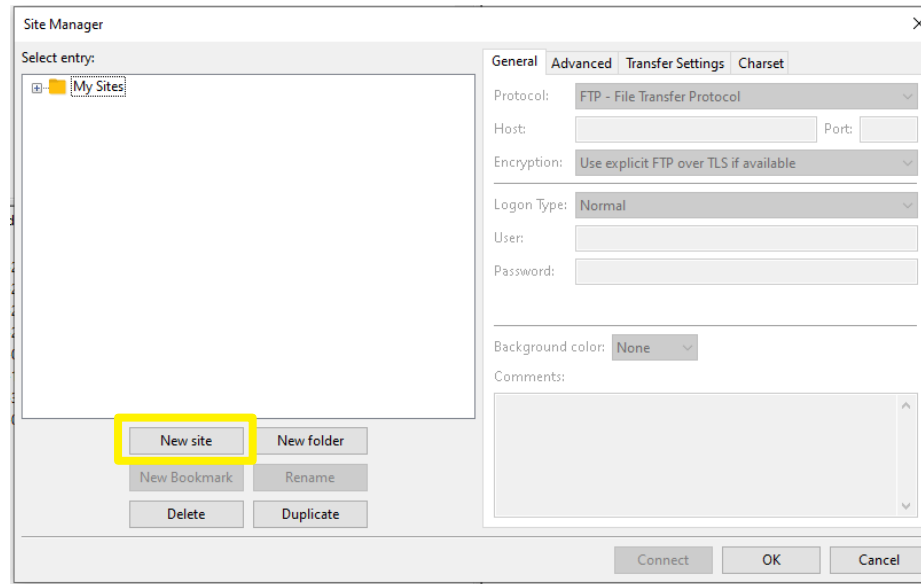
FileZilla – Site Manager

Open FileZilla and click on File → Site Manager or the Site Manager icon in the top left.



FileZilla – New Site

In the popup modal, click on the “New site” button.



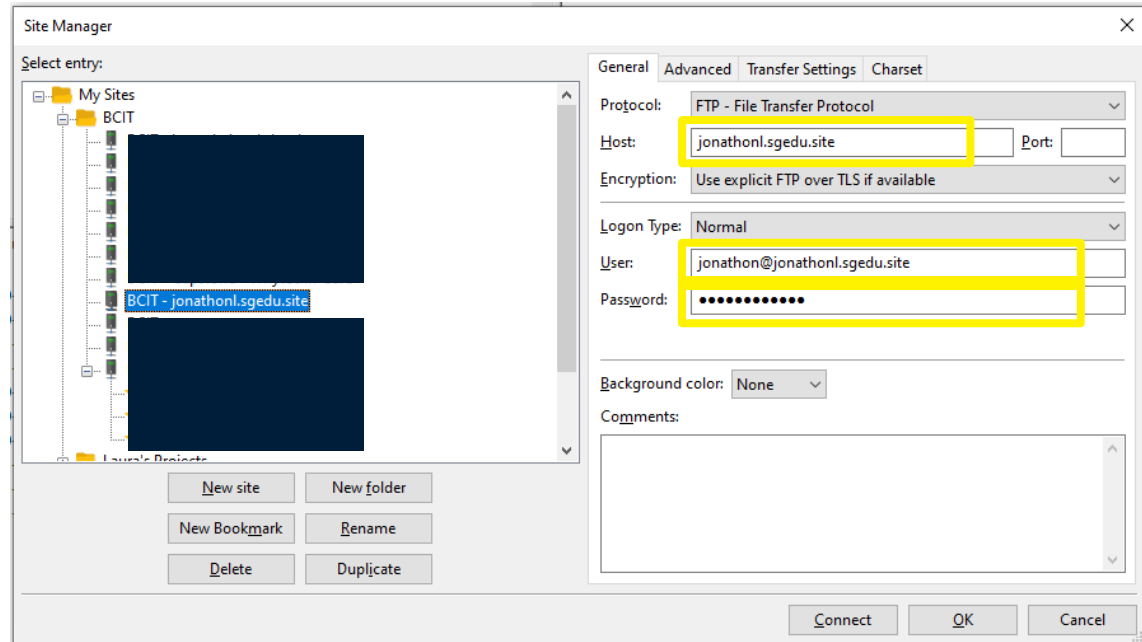
FileZilla – New Site

Give your New Site a name.

Then fill in the three fields on the right:

- **Host**
- **User**
- **Password**

Click “Connect”.

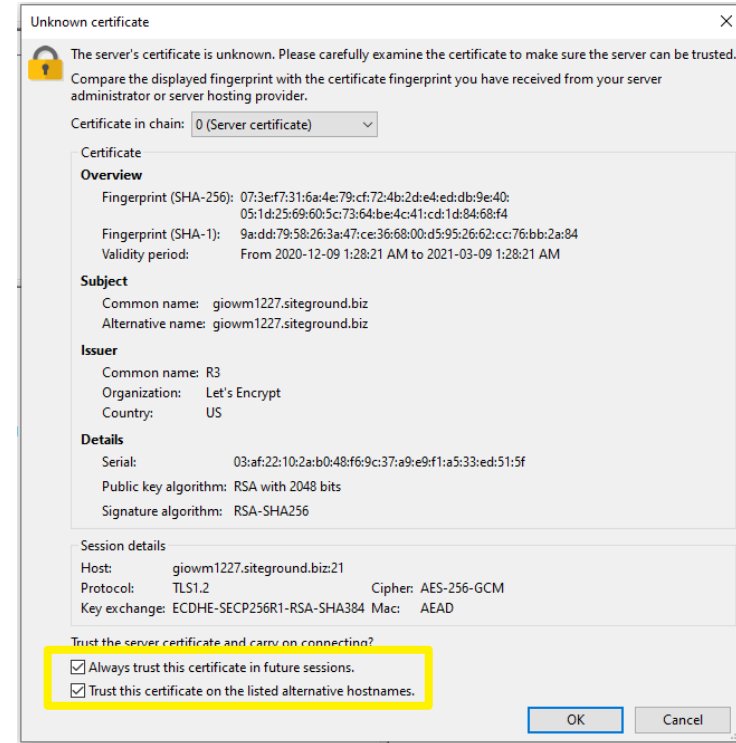


FileZilla – Connect to Server

Once you click “Connect” you may get a pop-up like this one.

If you can, check the two boxes at the bottom.

Click “OK”.

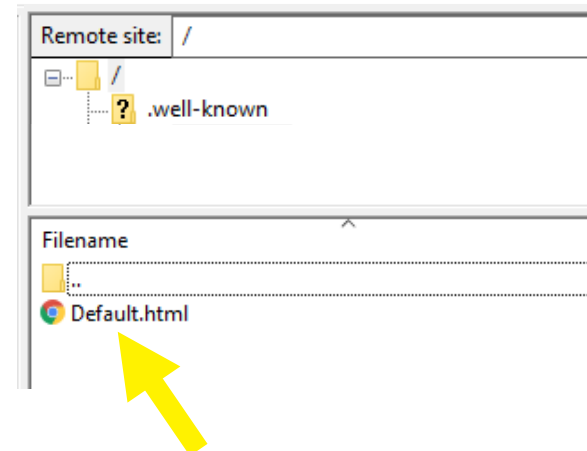


FileZilla – Correct Home Directory

If you set your home directory to **public_html** then you should see a Default.html file immediately.

Instead of seeing **public_html** as the folder name you will just see a forward slash.

This is where you will upload your landing page and future projects.



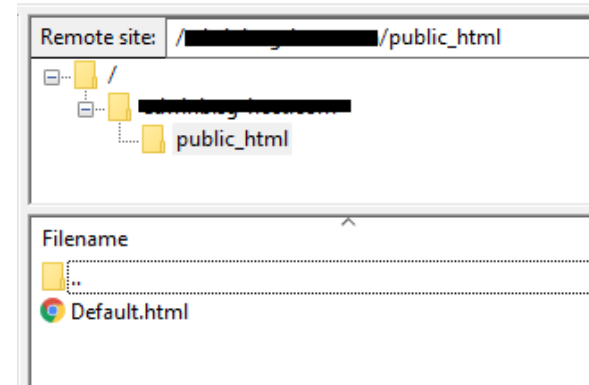
This file can be deleted.

FileZilla – INCORRECT SETUP

If you did **NOT** set your home directory to **public_html** then you will have to click into directories to find the **public_html** folder.

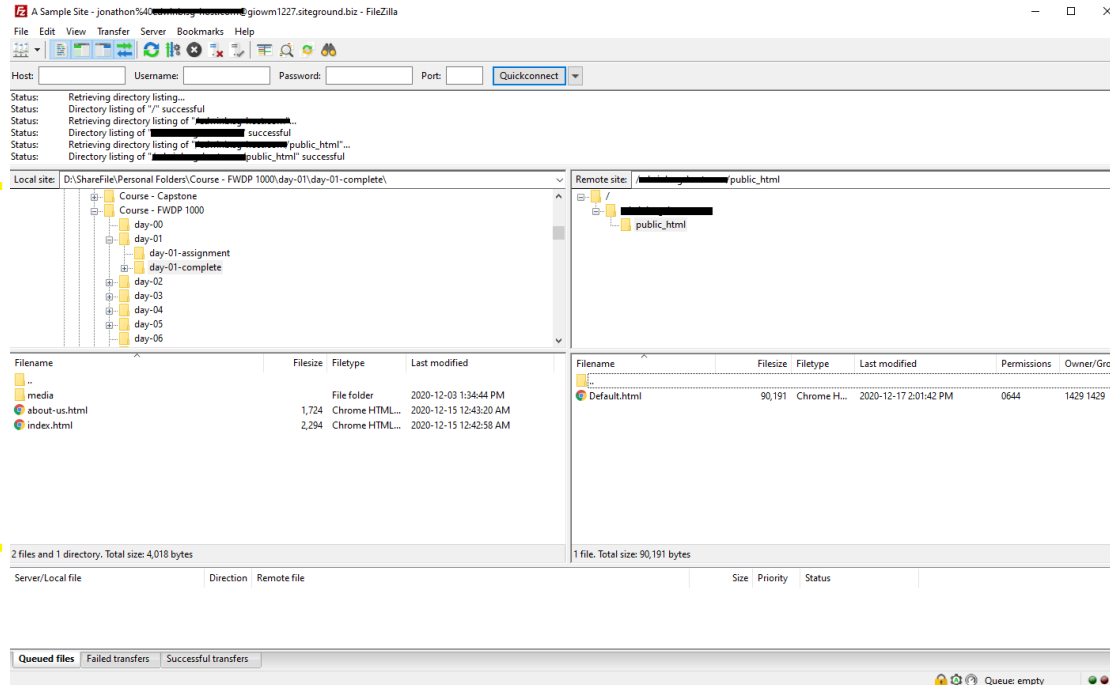
You only need access to the **public_html** directory and risk breaking things if you go elsewhere.

Go back and change your home directory!



FileZilla – Interface

Local files
and folders



Server files
and folders

FileZilla – Uploading Files

Use the left side of the screen to navigate to your files and folders on your computer.

Use the right side of the screen to navigate to where you want to upload those files and folders to the server.

To upload files and folders... double click items on the left or click and drag them to the right side.

FileZilla – Updating Files

When you make additional changes to your files, you will still need to upload those files through FileZilla.

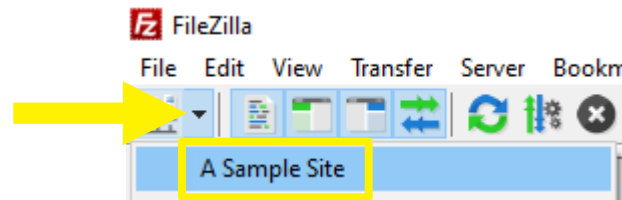
Complete the work on your local version of the website (the files on your computer).

Once you are done, then you can upload all of the completed files and “Overwrite” what is on the server within FileZilla.

FileZilla – Connect to Server

Now that your server information is saved in FileZilla...

...in the future, click on the dropdown arrow and choose your site to connect to the server.



Directories and URLs

The **public_html** folder is equivalent to the homepage URL.

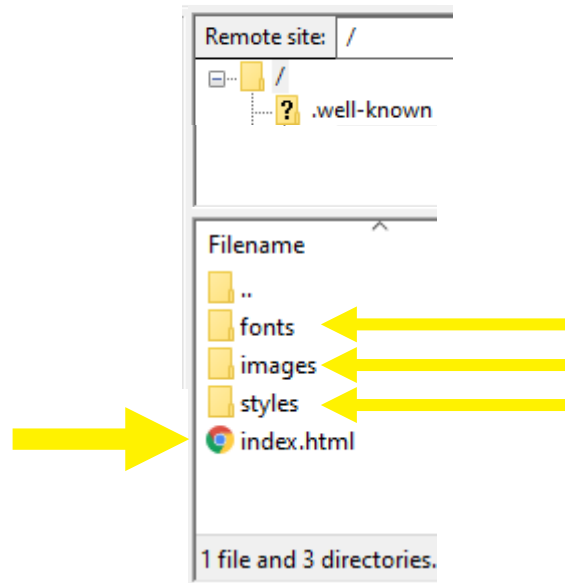
Directory: **public_html**
URL: **<https://example.com/>**

Directory: **public_html/styles/styles.css**
URL: **<https://example.com/styles/styles.css>**

Directory: **public_html/country-website**
URL: **<https://example.com/country-website/>**

FileZilla – Upload Landing Page

Your landing page should be an **index.html** file and uploaded directly to the **public_html** folder.

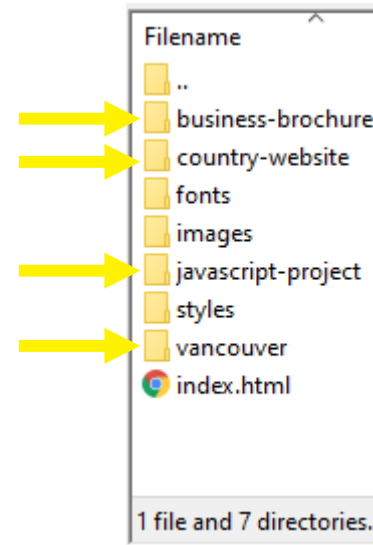


Any additional folders should also be uploaded into the **public_html** folder.

FileZilla – Upload Projects

Your Country Website and all other projects or assignments that you want to upload should be in their own folders.

On the server, these will be “sub-directories” of the **public_html** directory.



Index.html

The homepage for all of your projects should be **index.html**.

If a user navigates to a directory/folder, the server looks for an **index.html** file.

If I have a directory of “country-project” with an index.html file in it, then these URLs are the same...

`https://example.com/country-project/`

`https://example.com/country-project/index.html`

Pointing a Domain

Quick note...

Please follow along but wait to do the steps **after** I finish.

Change Nameservers

The simplest way to point a domain to a server is to change the nameservers (DNS).

Copy the nameservers from your hosting account and paste them into your domain registrar account.

Step 1 – Copy Nameservers

First you need to get the nameservers from your hosting provider.

They will look something like this...

ns1.siteground.net

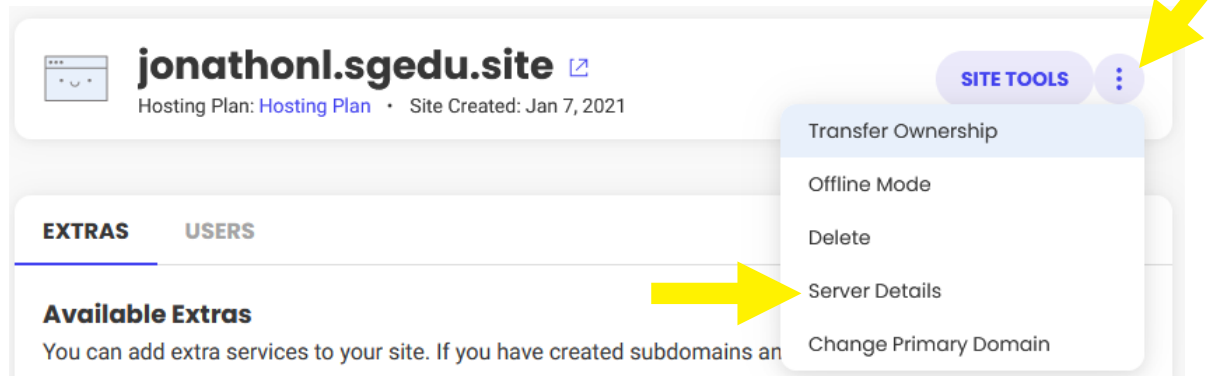
ns2.siteground.net

Step 1 – Copy Nameservers

Login to your SiteGround account and click on Websites.



Click on the three dots and choose “Server Details”



Step 1 – Copy Nameservers

In the popup modal, copy **both** URLs (ns1 and ns2).

You will paste these URLs into your domain registrar account.



Server Details
jonathonl.sgedu.site

Data Center:
Iowa (USA)

IP:
35.208.173.172

Name servers [Show IP Addresses ⓘ](#)
ns1.siteground.net
ns2.siteground.net


[CLOSE](#)


Step 1 – Copy Nameservers

The nameservers can also be found inside “Site Tools”.


Site Information


Disk Usage

 Disk Space
314 MB

 Inodes
13904

IP and Name Servers

 Site IP
35.208.173.172

 Name Servers
ns1.siteground.net
ns2.siteground.net

To view more server usage information, visit the [Hosting Plan Statistics](#) section in your Client Area

Step 2 – Paste Nameservers

Login to your domain registrar and find where to paste in the nameservers.

You will replace the current nameservers with the new nameservers.

Step 2 – Paste Nameservers

Check the documentation for your domain registrar for how to change the nameservers in your account.

Here are some common domain registrars:

GoDaddy - <https://ca.godaddy.com/help/change-nameservers-for-my-domains-664>

NameCheap - <https://www.namecheap.com/support/knowledgebase/article.aspx/767/10/how-to-change-dns-for-a-domain/>

Porkbun - <https://kb.porkbun.com/article/22-how-to-change-nameservers>

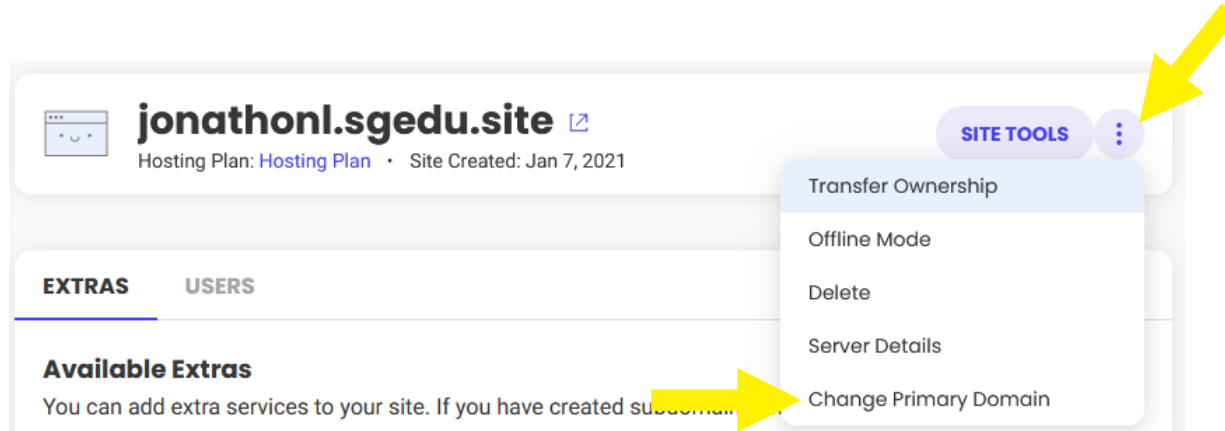
Hover - <https://help.hover.com/hc/en-us/articles/217282477--Changing-your-domain-nameservers>

NameSilo - <https://www.namesilo.com/Support/NameServer-Manager>

Step 3 – Set Primary Domain

After pointing the domain to the SiteGround server, you may need to add the domain to your SiteGround account.

Click on the three dots. Choose “Change Primary Domain”.



Step 3 – Set Primary Domain

Enter your new domain and click “Confirm”.

Change Primary Domain of jonathonl.sgedu.site

New Domain	Confirm New Domain
<input type="text" value="jonathonleathers.com"/>	<input type="text" value="jonathonleathers.com"/>

! You can choose a new domain for your site. This will not register a new domain for you.

! PLEASE READ CAREFULLY BEFORE CONFIRMING:

- Your site backups will not be available for the new domain.
- Your mailboxes will be automatically changed from email@old-domain.com to email@new-domain.com and messages sent to your old emails will bounce. You will have to reconfigure your email clients.
- All your FTP accounts will be automatically renamed to use the new domain name.
- If you have applications configured to use the old domain name (like WordPress, Magento, PrestaShop, etc.), you may need to re-configure them.
- Any custom DNS records of the old domain will be assigned to the new domain, while the DNS zone of the old domain will be reset to a default one. If you need the custom records for the old domain, you can adjust its records with the DNS Zone Editor tool.
- If you expect traffic to the old domain, we advise you to park it after the primary domain change. Please navigate to your Site Tools > Domain > Parked Domains and add your old domain there.

[CANCEL](#) [CONFIRM](#)

Step 4 – Wait...

It can take up to 48 hours for your nameserver records to propagate to the various DNS servers on the internet.

Realistically it is much quicker and you can start checking after 30 minutes...

<https://www.whatsmydns.net/> or <https://intodns.com/>

Once it shows the new nameservers, check your URL in the browser.

Step 5 – Update FileZilla

You may need to update the Hostname and Username fields in FileZilla.

For example...

Host: **example.sg-host.com** to **mydomain.com**

User: **jonathon@example.sg-host.com** to **jonathon@mydomain.com**

FileZilla – Exporting Site Manager

To add your FTP information to FileZilla on another computer, Export your FTP credentials then Import them.



Save the .xml file and use the Import feature to open it.

FileZilla – SFTP Connections

If you want to use SFTP instead of FTP, this guide will show you how to set that up with SiteGround and FileZilla:

https://www.siteground.com/kb/how_to_establish_sftp_connection_to_hosting_with_filezilla/

If you are using another hosting provider, check their documentation for the steps.

Caching

What is caching?

A cache is a temporary storage of data to speed up a request in the future.

On the web this means when you visit a webpage, it will be faster if you visit it again before the cache has expired.

Caching Levels

There are multiple levels of caching that happen on the web:

- **Browser** – Chrome, Firefox, etc.
- **Router** – The device that connects your device to the internet that you unplug when it stops working.
- **ISP** – Telus, Shaw, Rogers, Bell, etc.
- **Server** – SiteGround, Bluehost, etc.

Caching is great... and annoying

As a web developer caches are annoying because you will make changes and want to see those changes immediately...

...but the web wants to make things fast.

So, we can turn off caching in some places and clear caches in other places while developing our sites and apps.

Browser Cache

The browser cache is the easiest cache to clear. A hard refresh on your browser is usually sufficient.

Windows: **Ctrl + F5**

Mac: **Cmd + Shift + R**

This tells the browser to delete the temporary data (HTML, Images, CSS, etc.) it has stored for the page you are on.

Browser Cache

The browser cache can also be disabled by having your browser's developer tools open and checking the box to Disable Cache.

Chrome



Network

- ☐ Preserve log
- ☒ Record network log
- ☐ Enable network request blocking
- ☒ Disable cache (while DevTools is open)
- ☐ Color-code resource types
- ☐ Group network log by frame
- ☐ Force ad blocking on this site

Firefox



Advanced settings

- ☒ Enable Source Maps
- ☒ Disable HTTP Cache (when toolbox is open)
- ☐ Disable JavaScript *
- ☐ Enable Service Workers over HTTP (when toolbox is open)
- ☐ Enable browser chrome and add-on debugging toolboxes
- ☐ Enable remote debugging

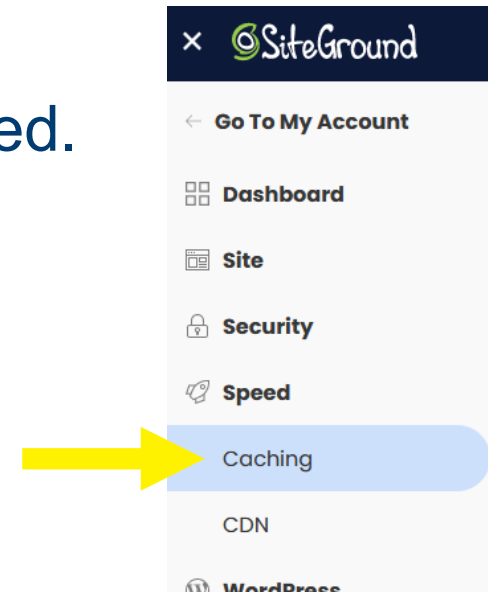
Server Caching

Caching is extremely important to speed up your websites once they are completed.

But while being developed, it should be disabled.

I recommend you **disable all caching** in SiteGround while in the FWD program.

Re-enable it after you finish.



SiteGround NGINX & Memcached

NGINX Direct Delivery and Memcached can be disabled.

The image shows a screenshot of the SiteGround 'Caching Levels' interface. At the top, there's a header 'Caching Levels'. Below it, there are three tabs: 'NGINX DIRECT DELIVERY', 'DYNAMIC CACHE', and 'MEMCACHED'. A yellow arrow points from the text 'Click on each tab and then, toggle OFF.' to the 'NGINX DIRECT DELIVERY' tab. Another yellow arrow points from the same text to the 'MEMCACHED' tab. To the right of the tabs, there's an 'Actions' section with a toggle switch. A yellow arrow points from the text 'Click on each tab and then, toggle OFF.' to this toggle switch.

Click on each tab and then, toggle OFF.

SiteGround Dynamic Cache

Dynamic Cache cannot be disabled.

If you upload files to the server and clear your browser cache but do not see the updates, click on the broom icon under Dynamic Cache to clear the server cache.



ISP & Router Cache

You can try to clear your **Router's cache** by restarting it. It works sometimes but generally is not needed.

You cannot do anything about your **Internet Service Provider's cache**. This is why you have to wait for domain names to propagate for instance. Using another network or a VPN is a workaround.

SSL Certificates

Securing Sites with HTTPS

Every website you upload to a server should be using **HTTPS** instead of the unencrypted HTTP.

Let's look at why this is needed and how to do this...

HTTP

HTTP is not encrypted and is able to be read and manipulated by a third-party.

For example:

- Intercepting a form submission on a website.
- Injecting malware or advertisements on a website.

HTTPS

HTTPS adds another step before transmitting data: the handshake.

The handshake verifies that the server and browser are both who they claim to be using TLS/SSL Protocols and Certificates.

Then data is transmitted in an encrypted connection.

Why You Need HTTPS

Security: Encryption of data between the server and the browser.

SEO: Google uses HTTPS as a ranking factor.

Performance: Every major browser requires HTTPS to use HTTP/2.

Let's Encrypt

Let's Encrypt launched in December 2015.

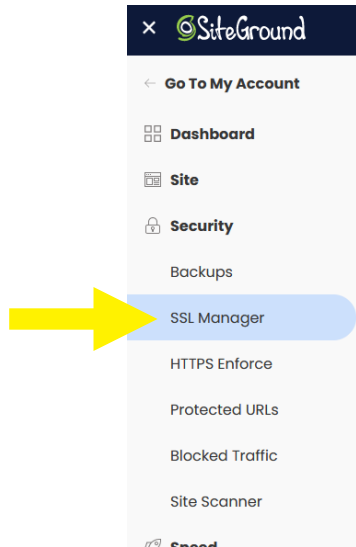
It's a service that generates free and auto-renewing TLS/SSL Certificates.

Many hosting providers use Let's Encrypt:

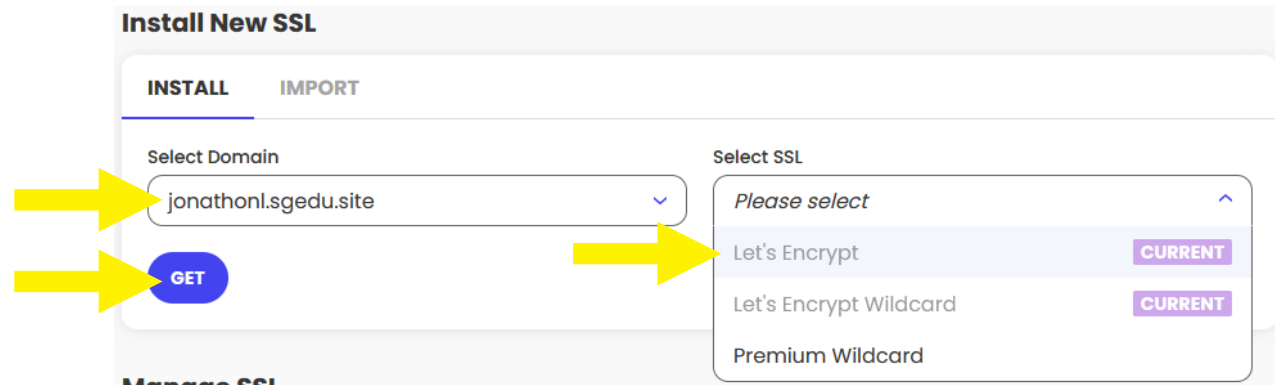
<https://community.letsencrypt.org/t/web-hosting-who-support-lets-encrypt/6920>

SiteGround – SSL Manager

Click on Security,
then SSL Manager.



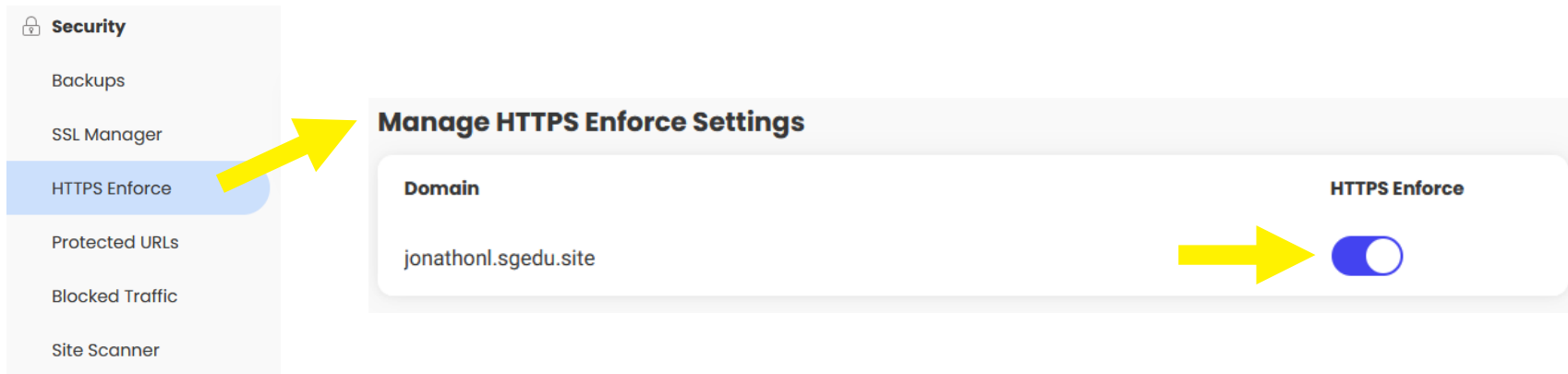
Select your domain.
Choose “Let’s Encrypt”.
Click “Get”.



Force HTTPS

Once the SSL Certificate is installed, you can begin to access all of your sites from **https://** now.

Toggle HTTPS Enforce ON to force all traffic over **https**.



Other Hosting Providers

If you are using another hosting provider, you will need to check their documentation to see where to create your free SSL certificate.

If they do not offer a free SSL certificate, find a better hosting provider.

Once you have created the certificate, if they do not offer an option to force HTTPS on the server, you can do this manually.

Force HTTPS – Manually

1. Create a **.htaccess** file.

a. *Note: This is a hidden file so you will need to show hidden files to see it on your computer.*

2. Add this code to the **.htaccess** file:

<https://gist.github.com/jtleathers/3da9bf64c623ccf143794c7344b4d2ac>

3. Upload the edited **.htaccess** file through FTP to your **public_html** folder, which should be the root directory.

Recap

My domain is <https://jonathonleathers.com/> and when users go to that URL it should load my landing page. How should I upload my landing page to make that work?

- a) Upload my "landing-page" folder from my computer into public_html on the server.
- b) Upload the files/folders in my "landing-page" folder from my computer into public_html on the server.

Recap

True or False: Once a file has been uploaded through FileZilla, it will automatically be updated on the server when you make changes to it on your computer.

Lab Time for Projects

Projects

No assignment today.

Use the rest of the day to work on your Projects:

- Landing Page – **Due October 6 by 11:59pm**
- Country Website – Due October 22

Peer Review

Before submitting your Landing Page, consider asking a classmate to look at the page and your code.

Do the same for them.

Give each other suggestions and see if you can find any issues with the code, design, functionality, accessibility, etc.

QUESTIONS & ANSWERS