Setting Up a Website with a Crash Course on HTML and CSS

JOSEPH GUTIERREZ

Easy Options:

- https://www.squarespace.com/templates/
- https://www.wix.com/ ← Actually Free. Like for everything.
- https://colorlib.com/wp/templates/

But you are a CS student so you should at least know HOW to set up a website

PROS TO LEARNING

- Show off skill to a potential client/employer
- Be self-reliant
- Some classes do require you to build a website. Might as well learn now.
- Lots of professional work options
- You're officially a cool kid
- Having something YOU built online is a hella cool feeling.

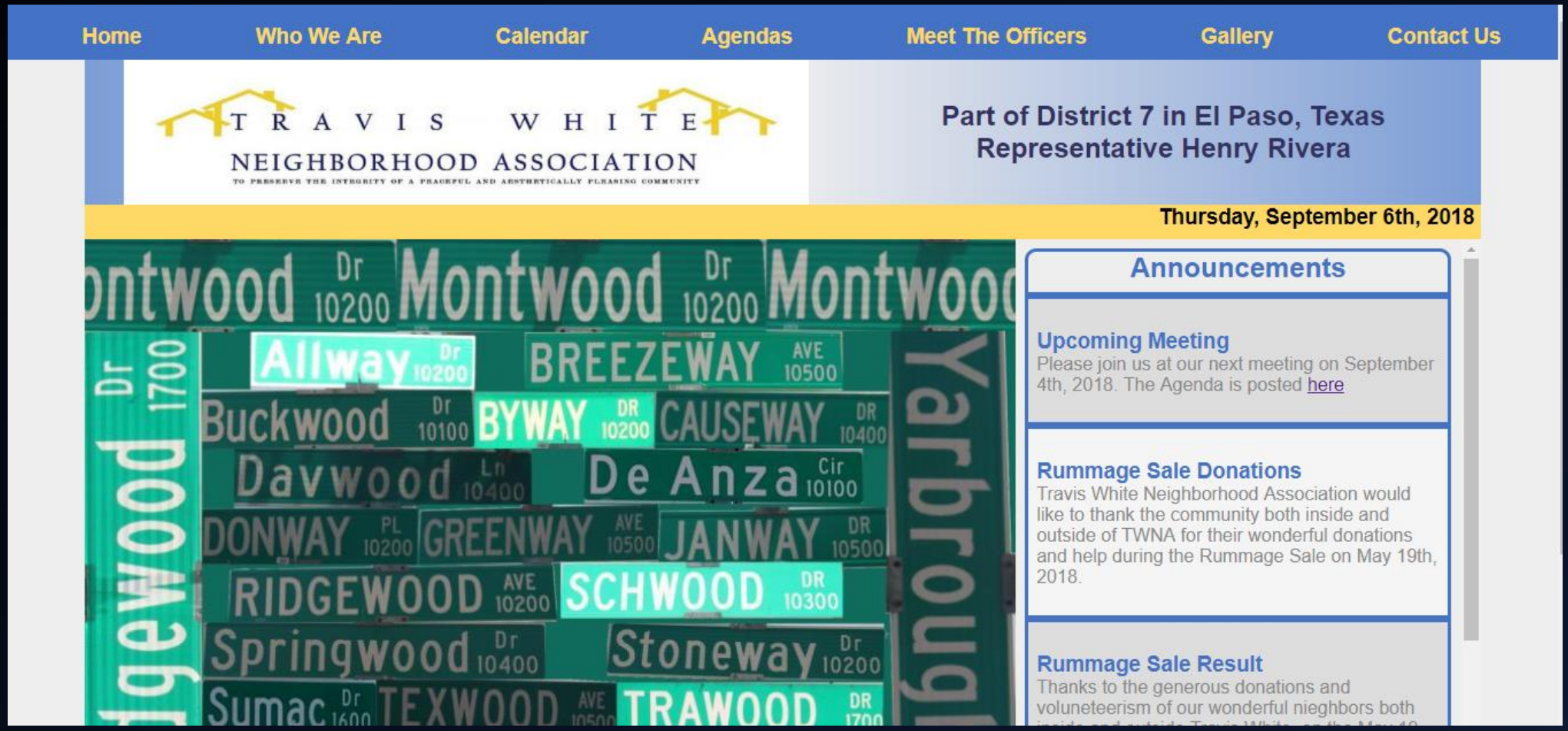
CONS TO LEARNING

- Takes some time
- Costs a little bit of money (Only to publish. You can build for free)
- …. I can't think of another ¯_(ツ)_/¯

Experience

- www.epas.com
- www.utep.edu/provost/
- www.traviswhitena.com

Example Site for Today



Tools We Will Need Today

VISUAL STUDIO CODE-INSIDERS

FILEZILLA

We Will Also Need

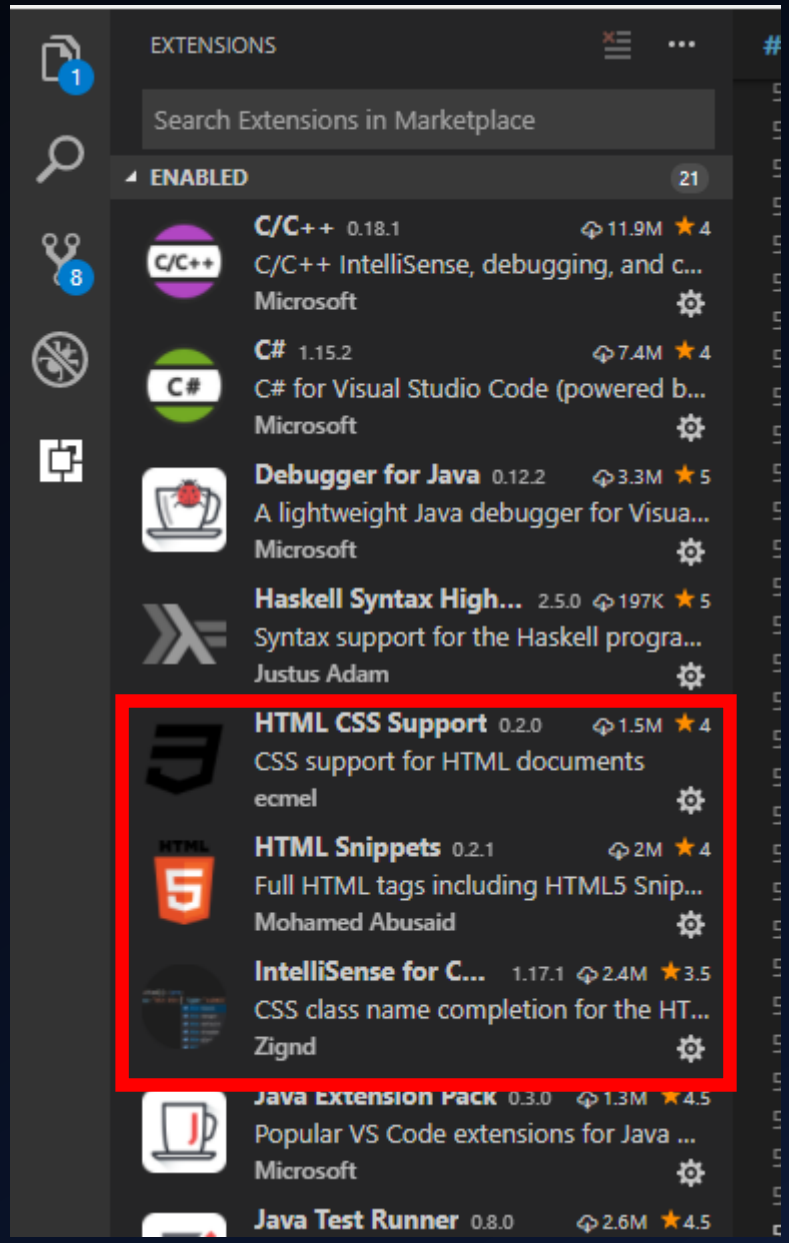
CHROME

OR

FIREFOX

Visual Studio Code -Insiders

- Fast, Light-weight
- Almost IDE but so much better
- Intelli-sense
- Built-in Command Line
- Built-in Version Control
- Open Project Folders
- Pop Ups
- Multiple Cursors
- Endless Extensions
- Color Thingy



FileZilla

- Any FTP software would work
- This is MY Favorite
- GUI Interface
- FREE

Firefox

- I prefer Firefox
- Better developer tools, (In My Opinion)
- Ctrl + Shift + I opens developer options in most browsers

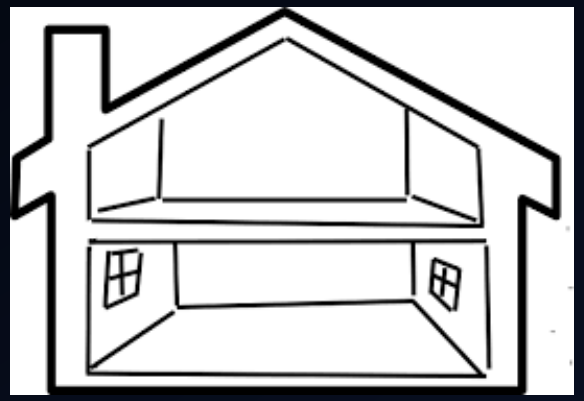
How Websites Work

Basic Structure

Address

+

House



+

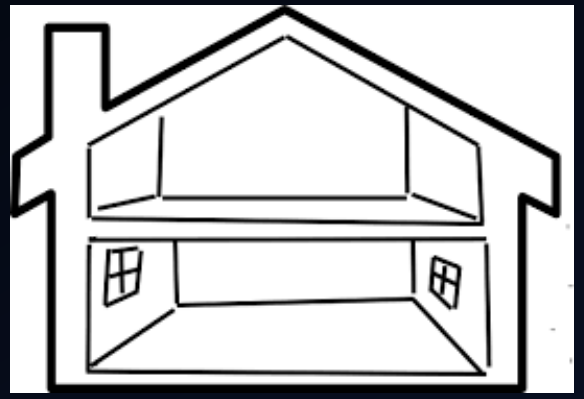
Stuff You Wanna Show

Basic Structure

Domain Name

+

Server



+

Code/Website

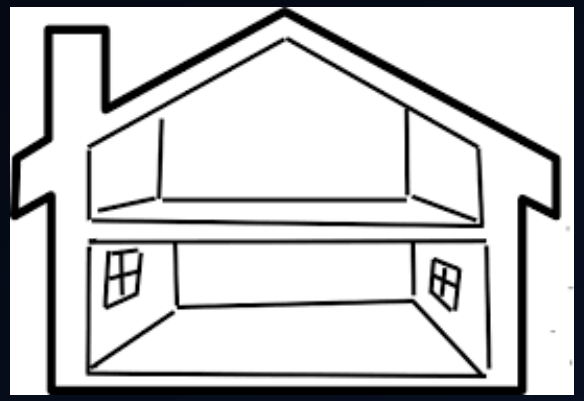
Basic Structure

Domain Name

www.mysite.com
vs.
192.168.1.1

+

Server



Physical computer that delivers website

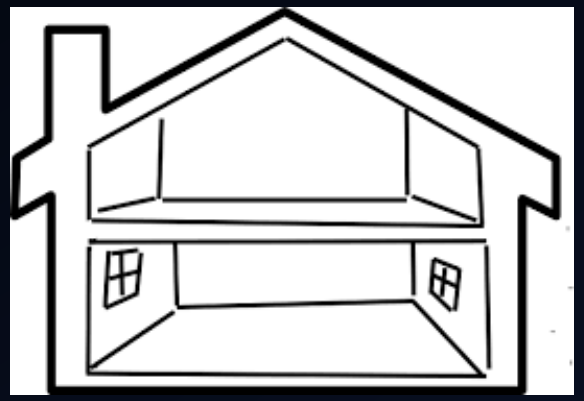
+

Code/Website

HTML and CSS
+
Other Languages

Basic Structure

Domain Name + Server + Code/Website

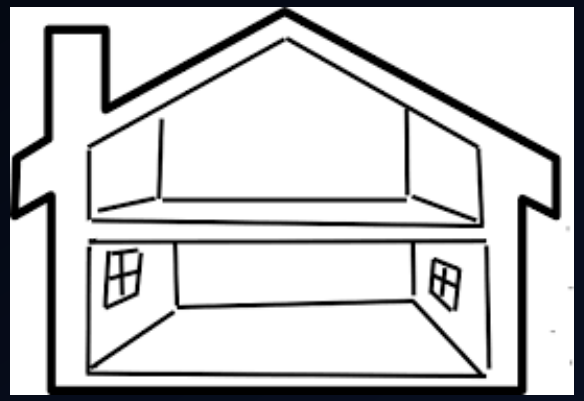


Need to Buy ☹

You build ☺

So Let’s Talk About Buying

Domain Name + Server + Code/Website



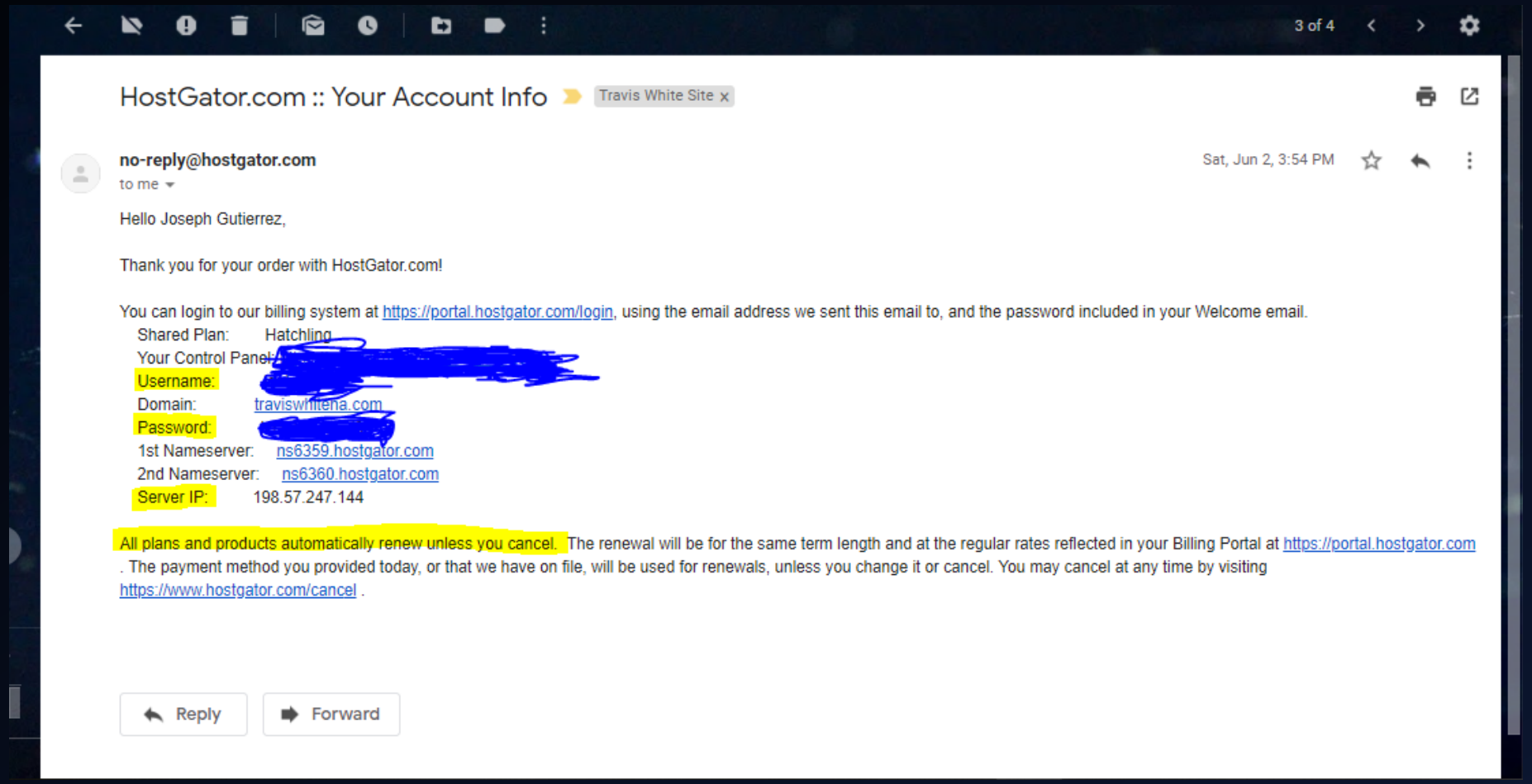
Need to Buy ☹

You build ☺

HostGator

- https://www.hostgator.com
- Reliable and easy to use
- Domain Name Pretty Cheap
  - (about $13/yr for a .com, starts at $0.95/yr for others)
- Hosting (Server)
  - (Price depends on how long you want the hosting. Cheapest walk away price is $10.95)
- Pay the $15 for the Domain Privacy Protection

When You Buy



3 of 4

HostGator.com :: Your Account Info Travis White Site x

no-reply@hostgator.com
to me

Sat, Jun 2, 3:54 PM

Hello Joseph Gutierrez,

Thank you for your order with HostGator.com!

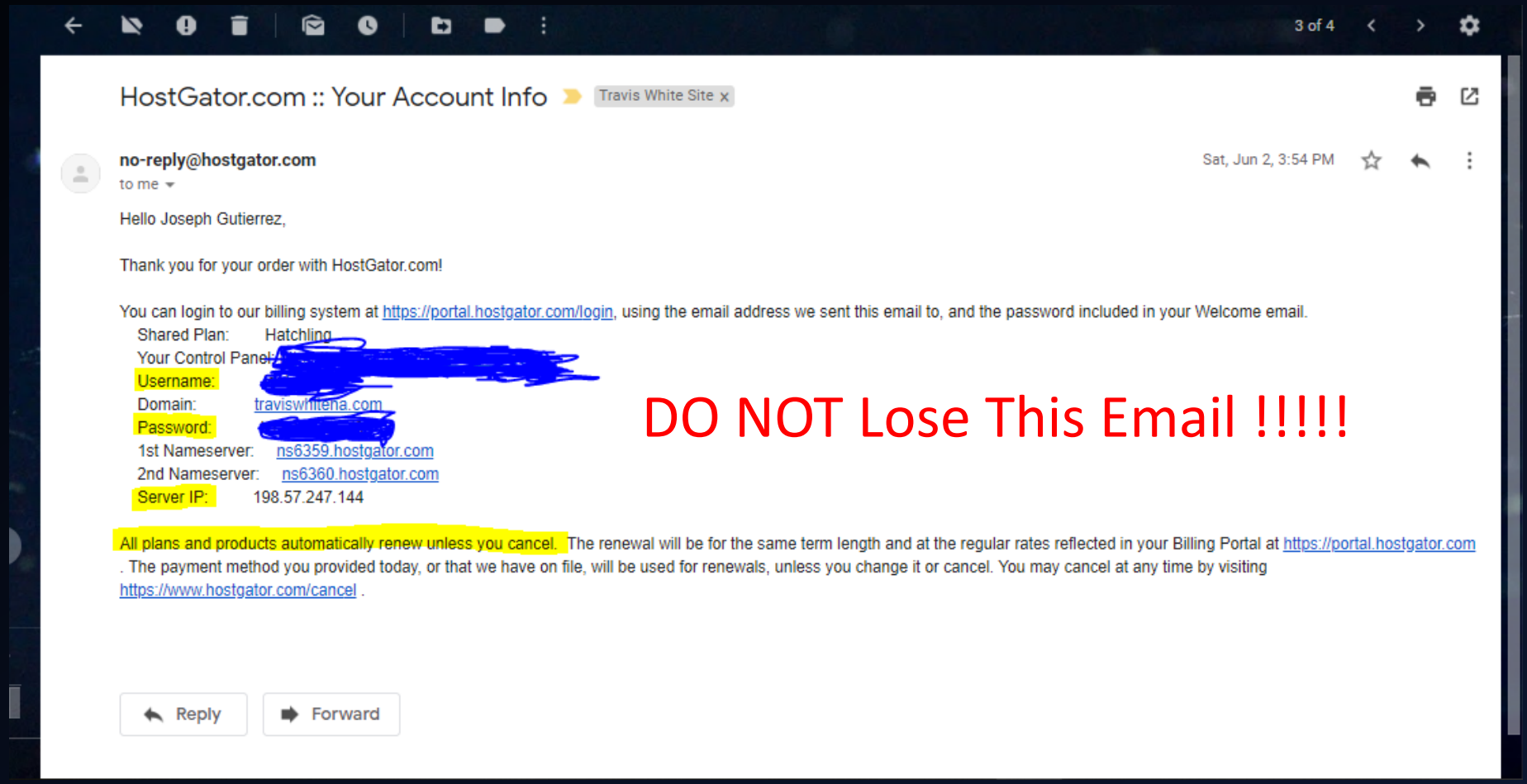
You can login to our billing system at https://portal.hostgator.com/login, using the email address we sent this email to, and the password included in your Welcome email.

Shared Plan: Hatchling
Your Control Panel:
Username: [redacted]
Domain: traviswhitena.com
Password: [redacted]
1st Nameserver: ns6359.hostgator.com
2nd Nameserver: ns6360.hostgator.com
Server IP: 198.57.247.144

All plans and products automatically renew unless you cancel. The renewal will be for the same term length and at the regular rates reflected in your Billing Portal at https://portal.hostgator.com . The payment method you provided today, or that we have on file, will be used for renewals, unless you change it or cancel. You may cancel at any time by visiting https://www.hostgator.com/cancel .

Reply Forward

When You Buy



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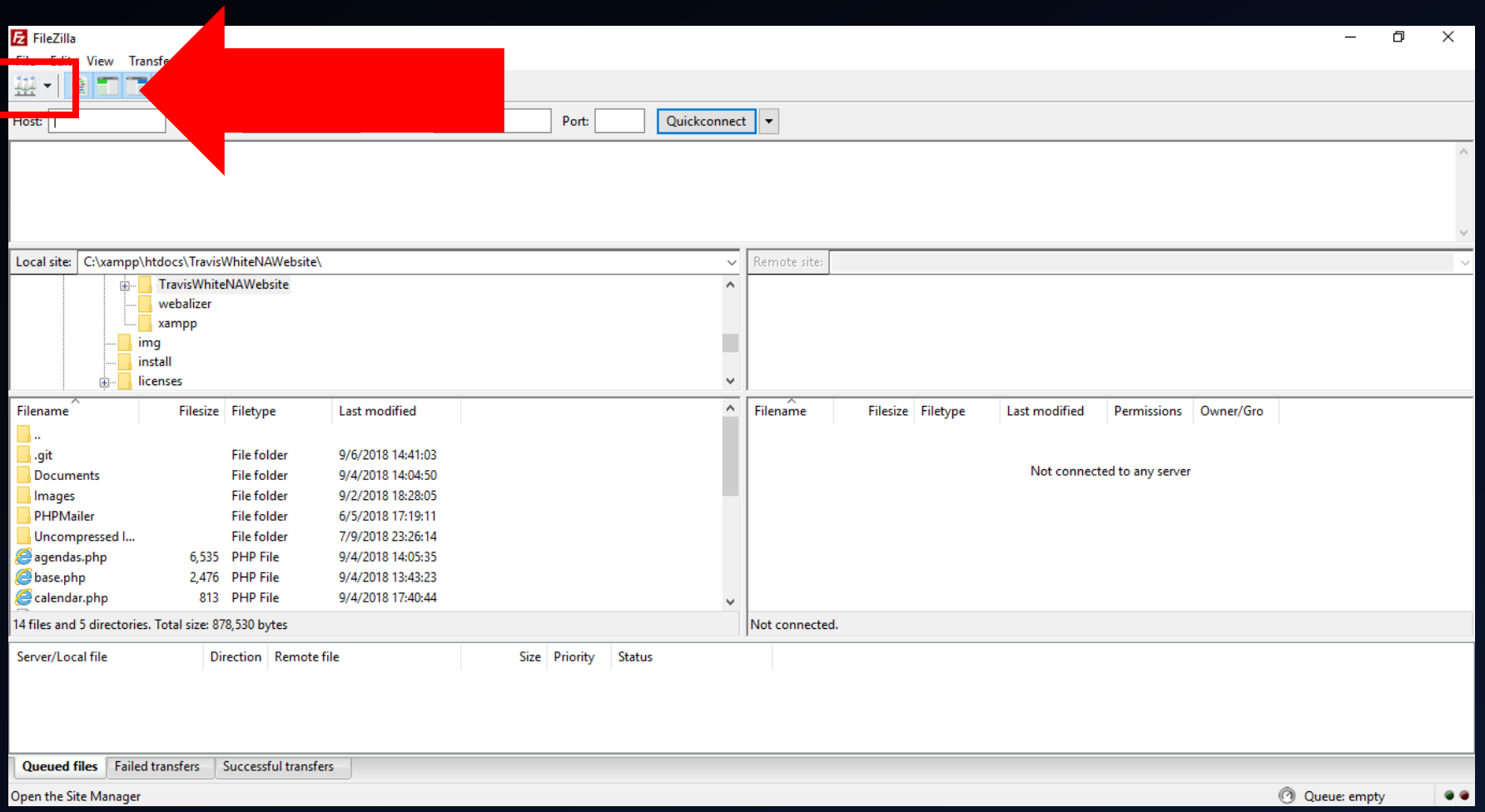
Reply Forward

DO NOT Lose This Email !!!!!

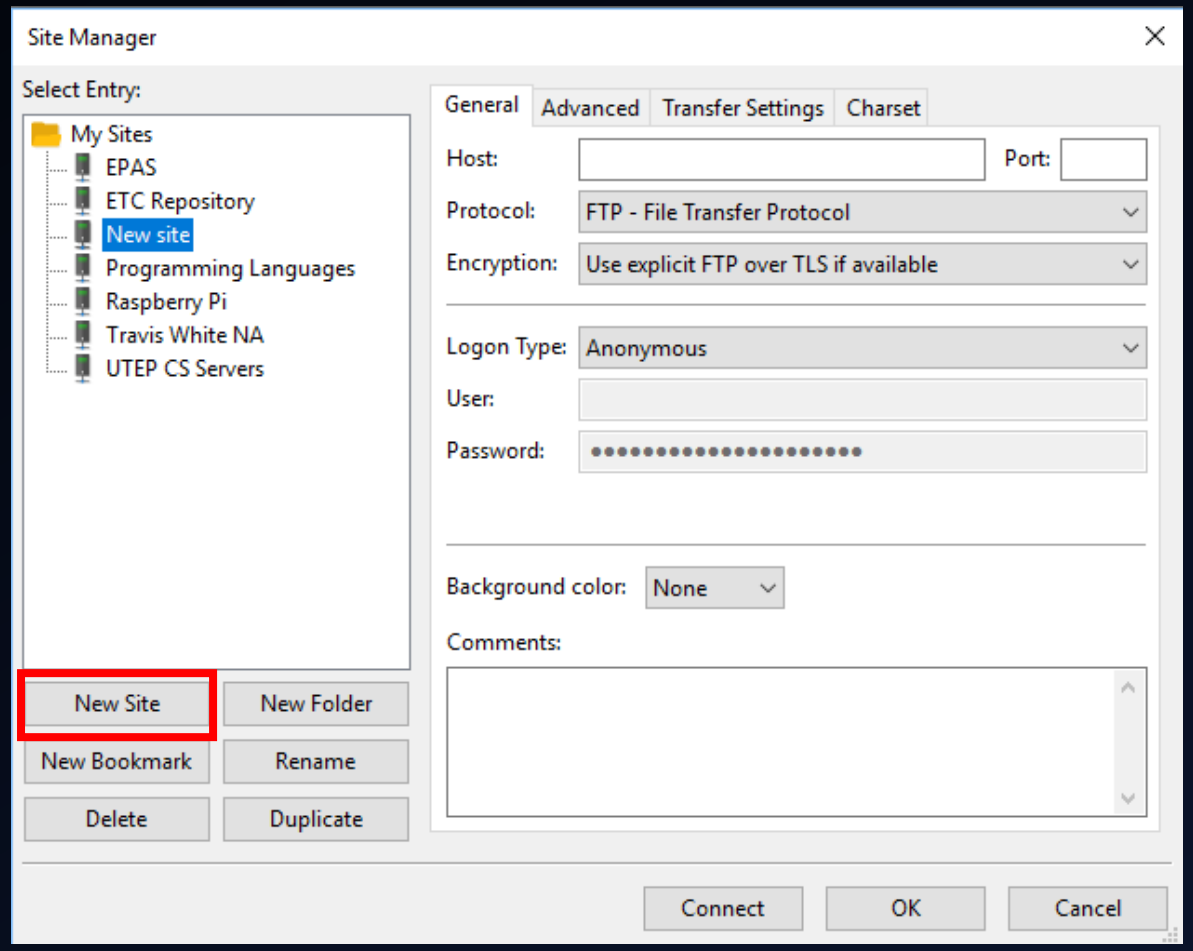
Transferring Files To Server

FILEZILLA

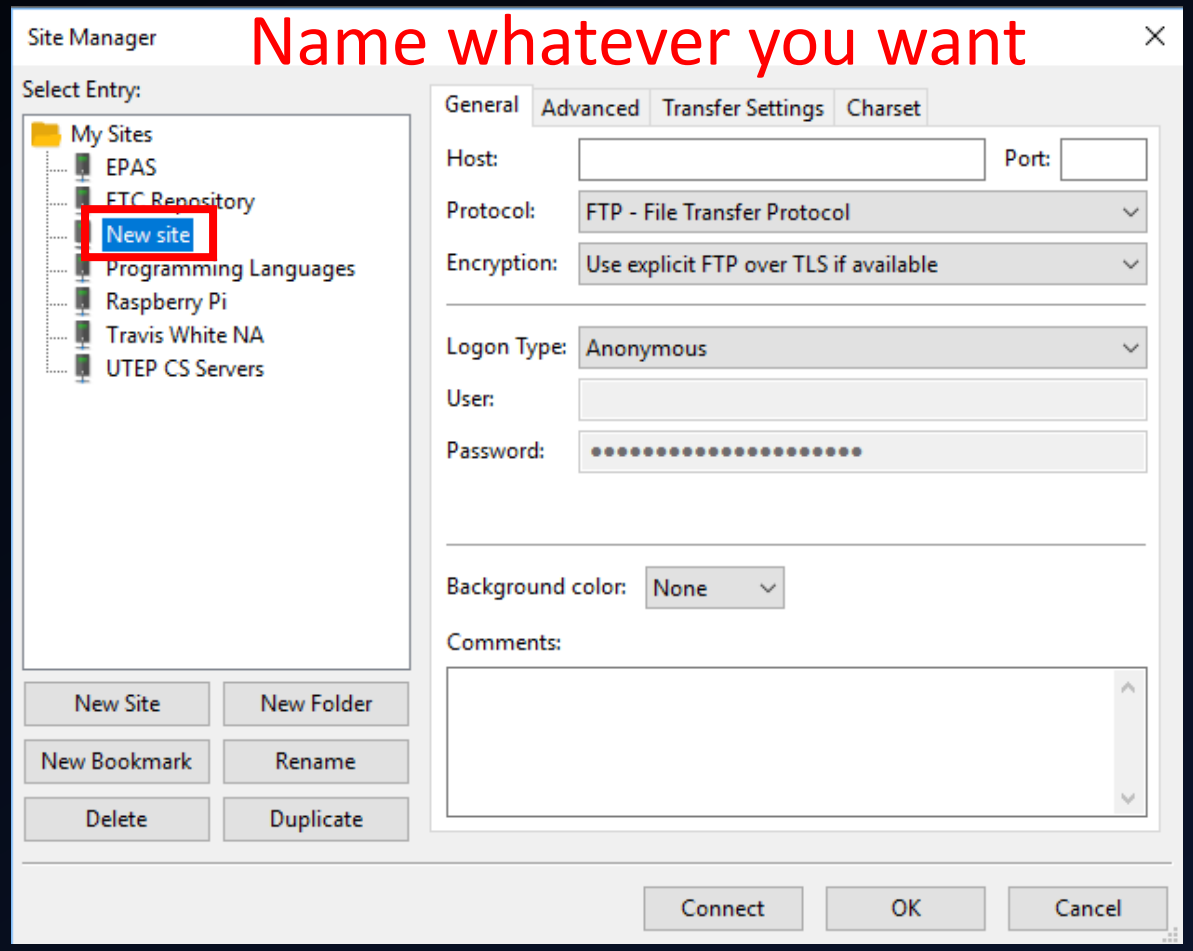
When Want To Go Live



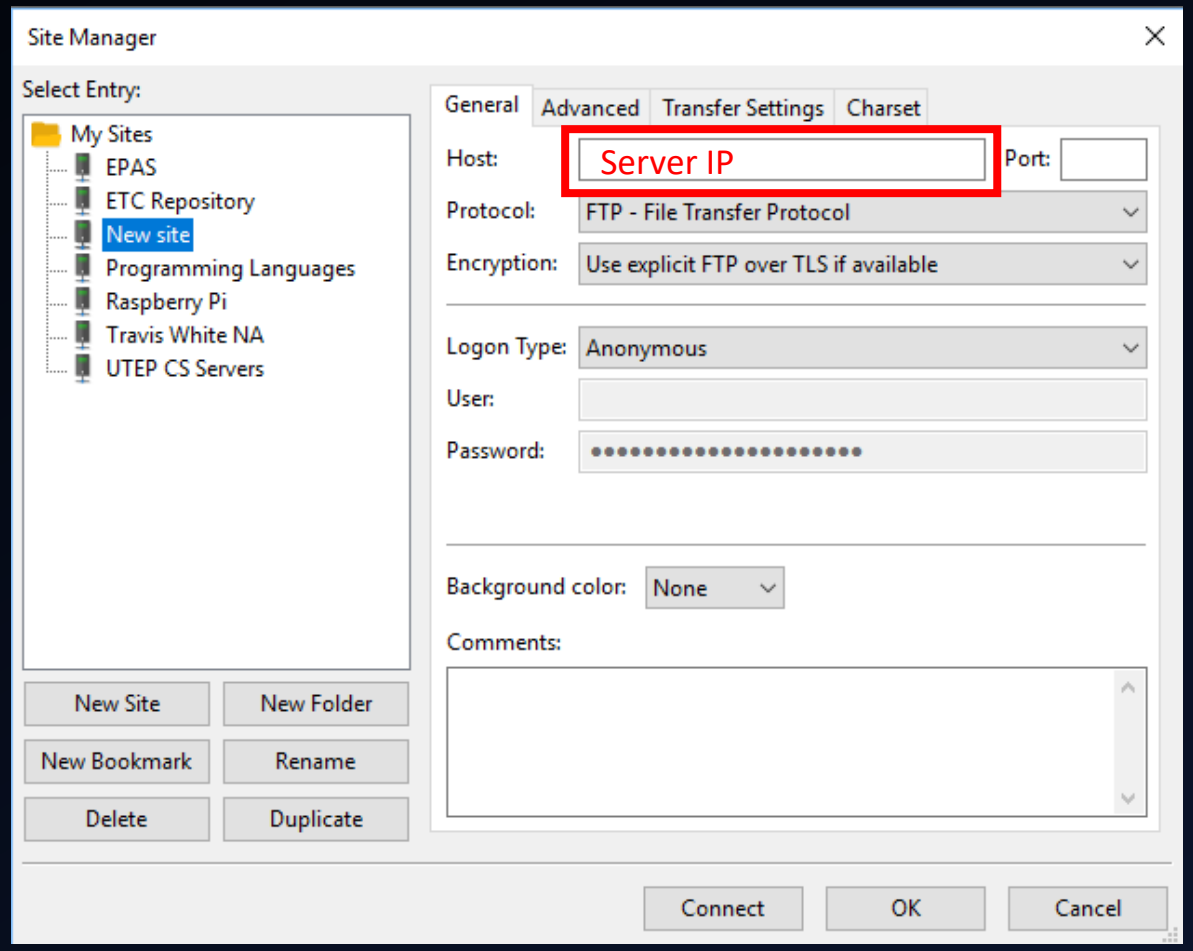
Adding a Site



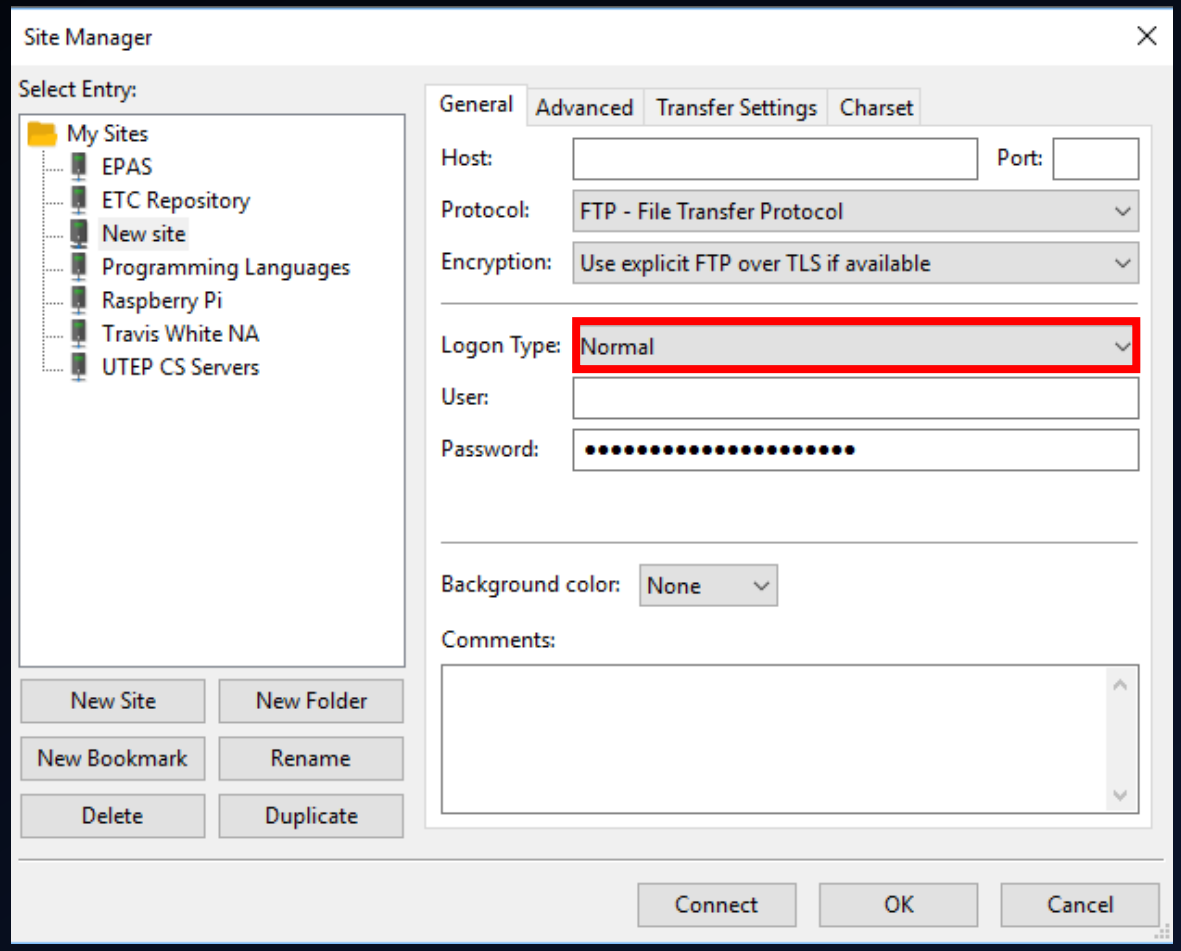
Name Site


Site Manager
Name whatever you want
Select Entry:
My Sites
EPAS
FTC Repository
New site
Programming Languages
Raspberry Pi
Travis White NA
UTEP CS Servers
General
Advanced
Transfer Settings
Charset
Host:
Port:
Protocol:
FTP - File Transfer Protocol
Encryption:
Use explicit FTP over TLS if available
Logon Type:
Anonymous
User:
Password:
Background color:
None
Comments:
New Site
New Folder
New Bookmark
Rename
Delete
Duplicate
Connect
OK
Cancel

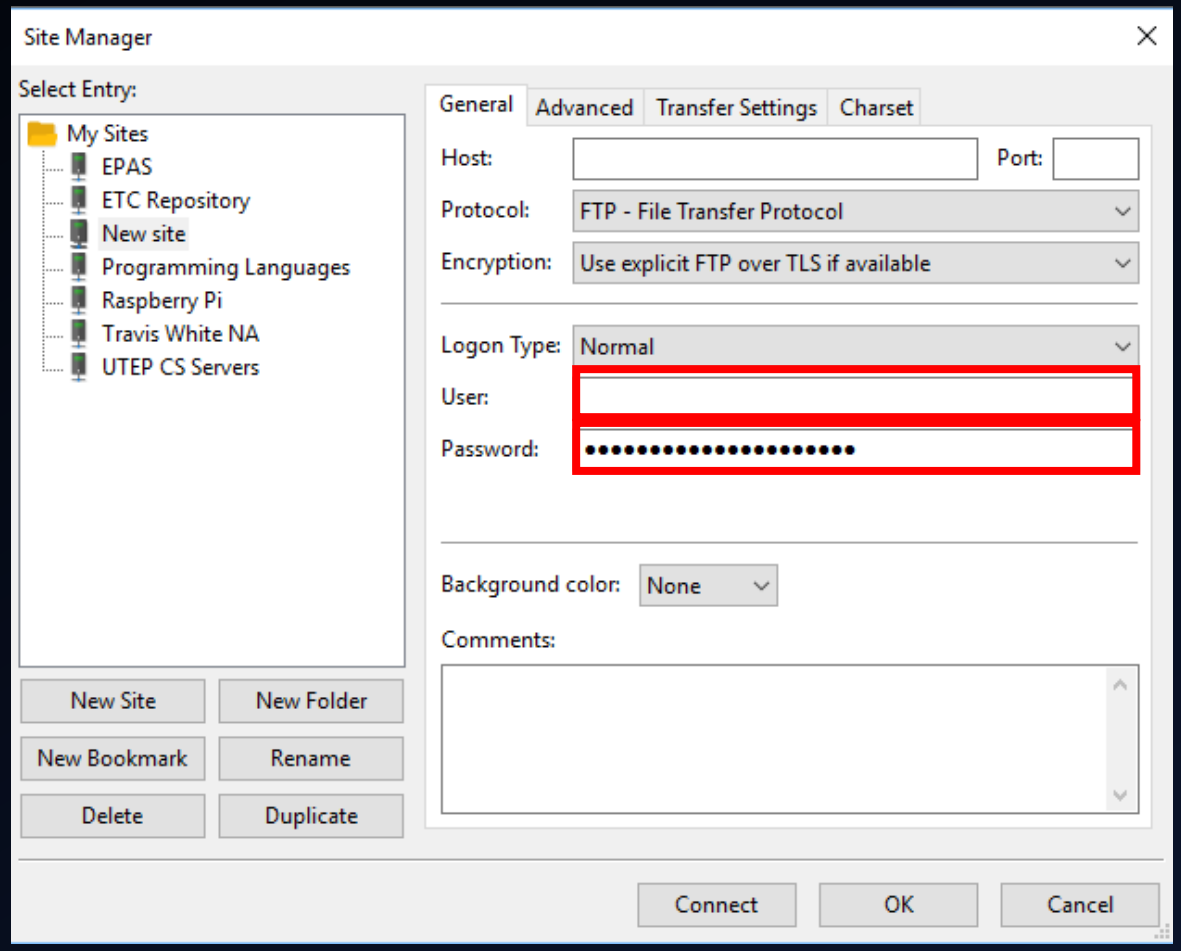
Site IP


Site Manager
Select Entry:
My Sites
EPAS
ETC Repository
New site
Programming Languages
Raspberry Pi
Travis White NA
UTEP CS Servers
New Site
New Folder
New Bookmark
Rename
Delete
Duplicate
General
Advanced
Transfer Settings
Charset
Host:
Server IP
Port:
Protocol:
FTP - File Transfer Protocol
Encryption:
Use explicit FTP over TLS if available
Logon Type:
Anonymous
User:
Password:
Background color:
None
Comments:
Connect
OK
Cancel

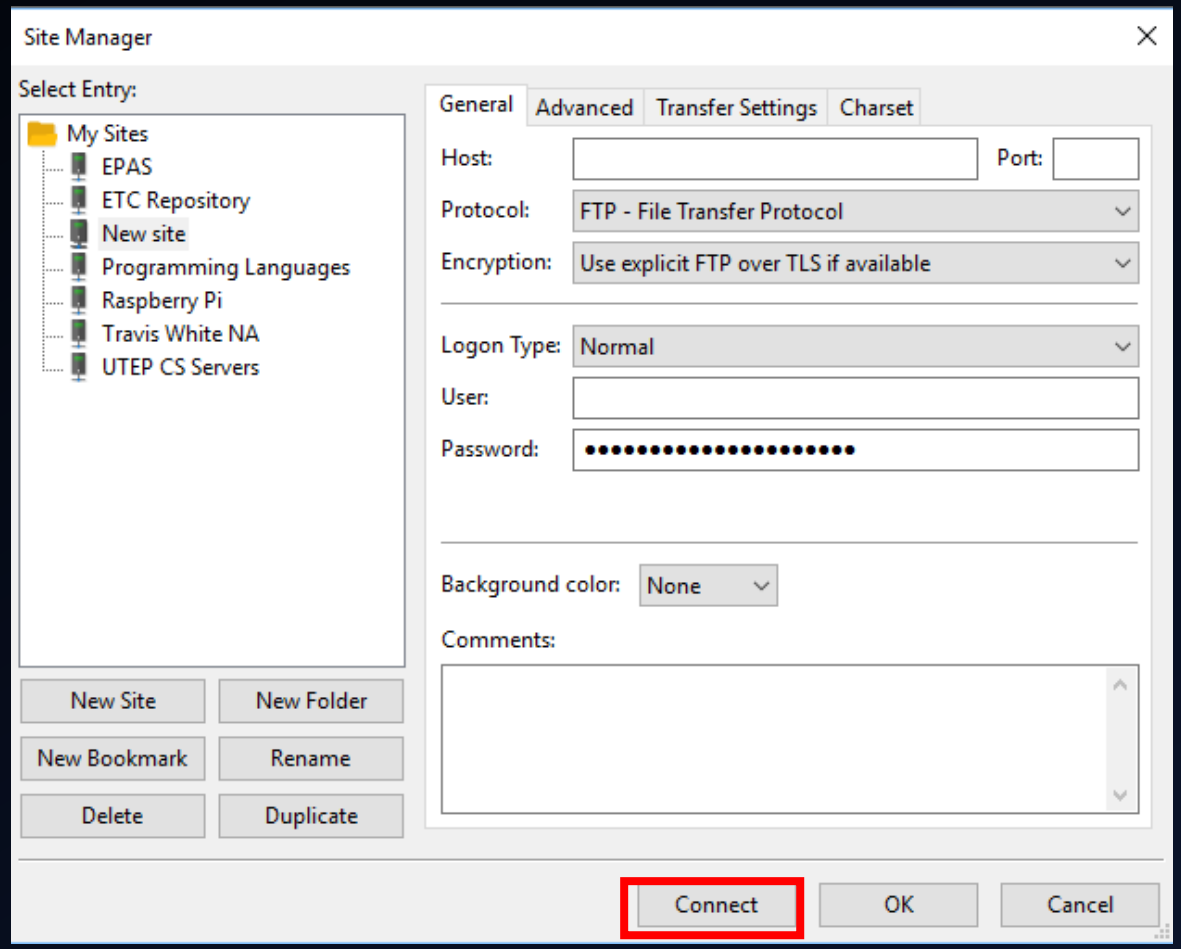
Change Authentication Type



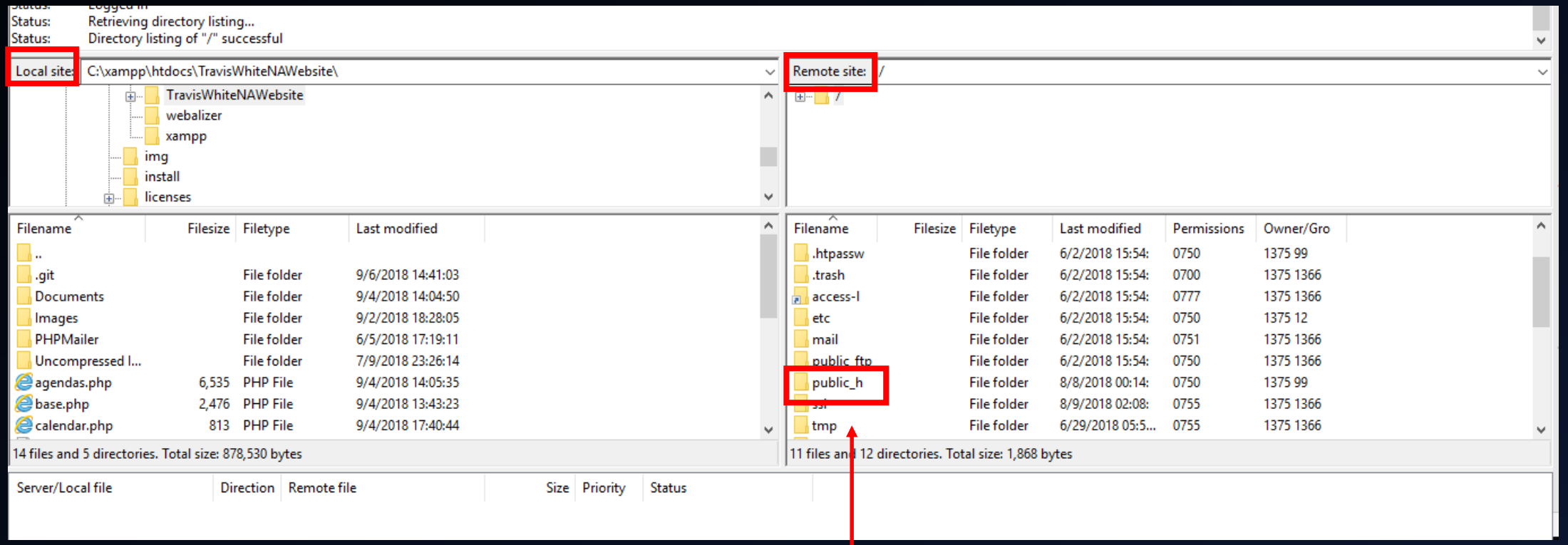
Change Authentication Type



Change Authentication Type



Navigating



It says “public_html”

General Rules for Website Servers

- Your files go in “public_html” folder
- These files are PUBLIC so only put things that are okay for people to see
- DO NOT ERASE ANYTHING THAT IS ALREADY THERE
- When in doubt, Google it out.

If Your Domain Name Does Not Work Right Away

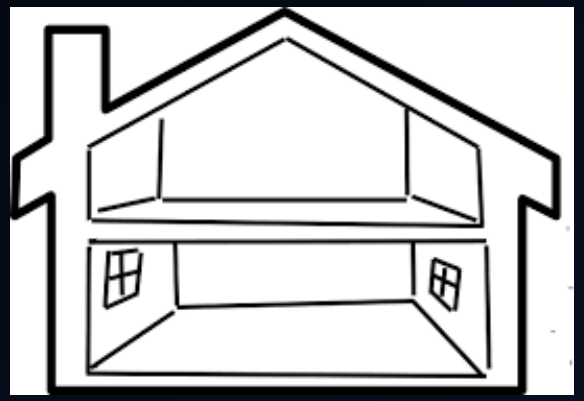
- Don’t freak out!
- It’s okay!
- DNS takes time to update
- If you have already uploaded files, just type in the IP of the server as a URL (That SHOULD work)
- Check back in an hour
- Could take up to 24 hours to update DNS (usually takes about 1 hour)

Now Let’s Talk About Building

Domain Name

+

Server



+

Code/Website

Need to Buy ☹

You build ☺

Creating Files

HTML, CSS, AND MEDIA, OH MY

Recipe For a Website

+

+

^^Zero or more of these^^

Recipe For a Website

Backbone

+

Decoration

+

Other Stuff

HTML

- Hyper Text Markup Language
- Backbone of internet
- Actual text
- Links things together

CSS

- Cascading Style Sheets
- Adds decoration and stylization to back bone
- Can do SO MUCH more than you think
- CSS Grid ❤️

Javascript

- Client side Language
- Great for animations
- Can be used for a ton of stuff
- Security risks because trusted
- Some users do not trust and turn off
- Lots of games are coded in JS
- (Nothing to do with Java)

MySQL

- Used for databases
- Needs another language to connect to server and query stuff
- Most SQL (Structured Query Languages) are similar

PHP

- Server side language
- Great for scripting
- Secure
- Often used when need to access/use databases
- Great for forms
- HUGE time saver

Ruby On Rails

- Github is written in it
- Can do a ton of cool stuff
- I don’t know too much about it but people who use it treat it like a pseudo religion
- Apparently its pretty good
  ¯_(ツ)_/¯

HTML

CONTENT OF YOUR SITE

Base Code

```
<html>
        <head>
                <title> My First Website</title>
        </head>
        <body>
                <!--  This is where content goes -->
        </body>
</html>
```

Headings

```
<h1>Heading level 1</h1>
<h2>Heading level 2</h2>
<h3>Heading level 3</h3>
<h4>Heading level 4</h4>
<h5>Heading level 5</h5>
<h6>Heading level 6</h6>
```

Here is the result of this code:

Heading level 1

Heading level 2

Heading level 3

Heading level 4

Heading level 5

Heading level 6

Common Text Markup

- Paragraph - This is a paragraph
  - (Text in code is not directly shown. Need several   to make more paragraphs. “\n” in code does nothing.)
- Line Break -
  - Basically is a “\n” in HTML
- Link - <a href = “ ” > This is a link </a>
  - <a href = “https://www.google.com” >Google</a>
  - <a href = “gallery.html” >Internal page named “gallery.html”</a>

Common Text Markup

- Comments - <!-- This is a comment. Seen on code. Not by page. -->
- Bold - This is bold text
- Italics - This is italicized text
- Underline - <u> This is underlined text </u>

Images

- It is generally recommended to use a folder to organize images
- Images - <img src = “Images/image001.jpg”>
- If an Image does not or cannot load, you should have an “alt”>
  - <img src = “Images/image001.jpg” alt = “Example Image”>

Lists

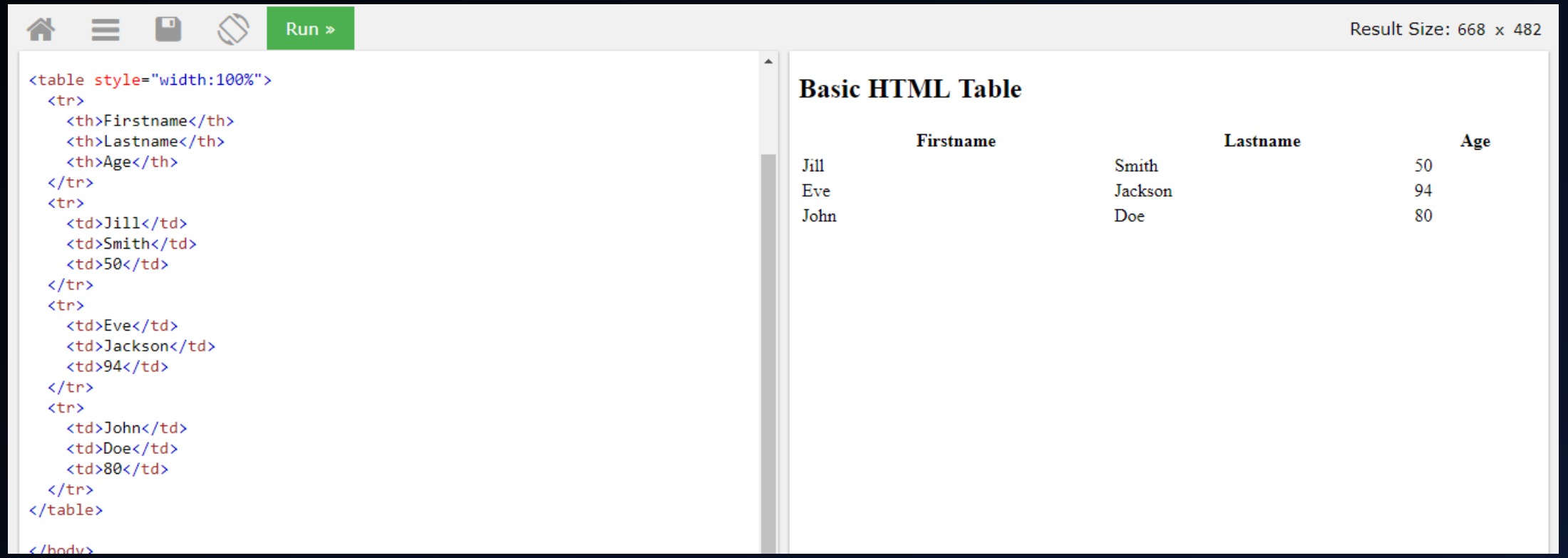
BULLETED LISTS (UNORDERED LISTS)

```
<ul>
        <li>List Item 1</li>
        <li>List Item 2</li>
        <li>List Item 3</li>
</ul>
```

ENUMERATED LISTS (ORDERED LISTS)

```
<ol>
        <li>List Item 1</li>
        <li>List Item 2</li>
        <li>List Item 3</li>
</ol>
```

Tables


Run »
Result Size: 668 x 482
<table style="width:100%">
<tr>
<th>Firstname</th>
<th>Lastname</th>
<th>Age</th>
</tr>
<tr>
<td>Jill</td>
<td>Smith</td>
<td>50</td>
</tr>
<tr>
<td>Eve</td>
<td>Jackson</td>
<td>94</td>
</tr>
<tr>
<td>John</td>
<td>Doe</td>
<td>80</td>
</tr>
</table>
</body>
Basic HTML Table
Firstname
Lastname
Age
Jill
Smith
50
Eve
Jackson
94
John
Doe
80

Divs

- Divs are basically just containers
- Divs are super important in positioning and targeting items with CSS.
-

Classes and IDs

- Every Item can have several Classes and one ID
- Classes and IDs help CSS know what items to format by which rules
  - Class 1 formatted text
  - <p class = “class1 class2”> Class 1 and Class 2 formatted text
  - Class 1 formatted text that is specifically targeted by the exampleParagraph id

CSS

MAKE YOUR SITE PRETTY

Good CSS Habits

THE KEY TO CLEANER CODE AND LESS WASTED TIME

What NOT To Do

- You can individually style elements like this:
  - <p style = “–CSS goes here-”> Text </p>
- You can add CSS to a page like this:

```
<html>
        <head>
            <title> My First Website</title>
            <style> -CSS goes here- </style>
        </head>
        <body>
            <!--  This is where content goes -->
        </body>
</html>
```

Why Not To Do That

- Either of these approaches work fine for a one page site
- Once your page grows to 2, even 3 pages it will be a nightmare to update, change, find what targets what, etc.
- You cant reuse code

Keep code “DRY”

Don’t

Repeat

Yourself

What to do

1. Create a file called “stylesheet.css”
2. Put all your CSS in this file
3. Add a link to the file in the <head> </head> of each page/file you create
   - <link rel = “stylesheet” type = “text/css” href = “stylesheet.css”>
4. Smile because you just saved yourself SO MUCH work

CSS Rules

CODING ACTUAL CSS

CSS Rules

FOR A CLASS

```
.className{
        border: 2px solid black;
        text-align: center;
}
```

FOR AN ID

```
#IDName{
        border: 2px solid black;
        text-align: center;
}
```

More Targeting

SEVERAL CLASSES

```
.className, .className2{
        border: 2px solid black;
        text-align: center;
}
```

SPECIFYING NESTED ELEMENTS

```
.class1 h3{
        border: 2px solid black;
        text-align: center;
}
```

Example:

```
<div class = “class1”>
        <h3> TARGETED</h3>
</div>
```

Tag Targets

- You can tags as targets like this:

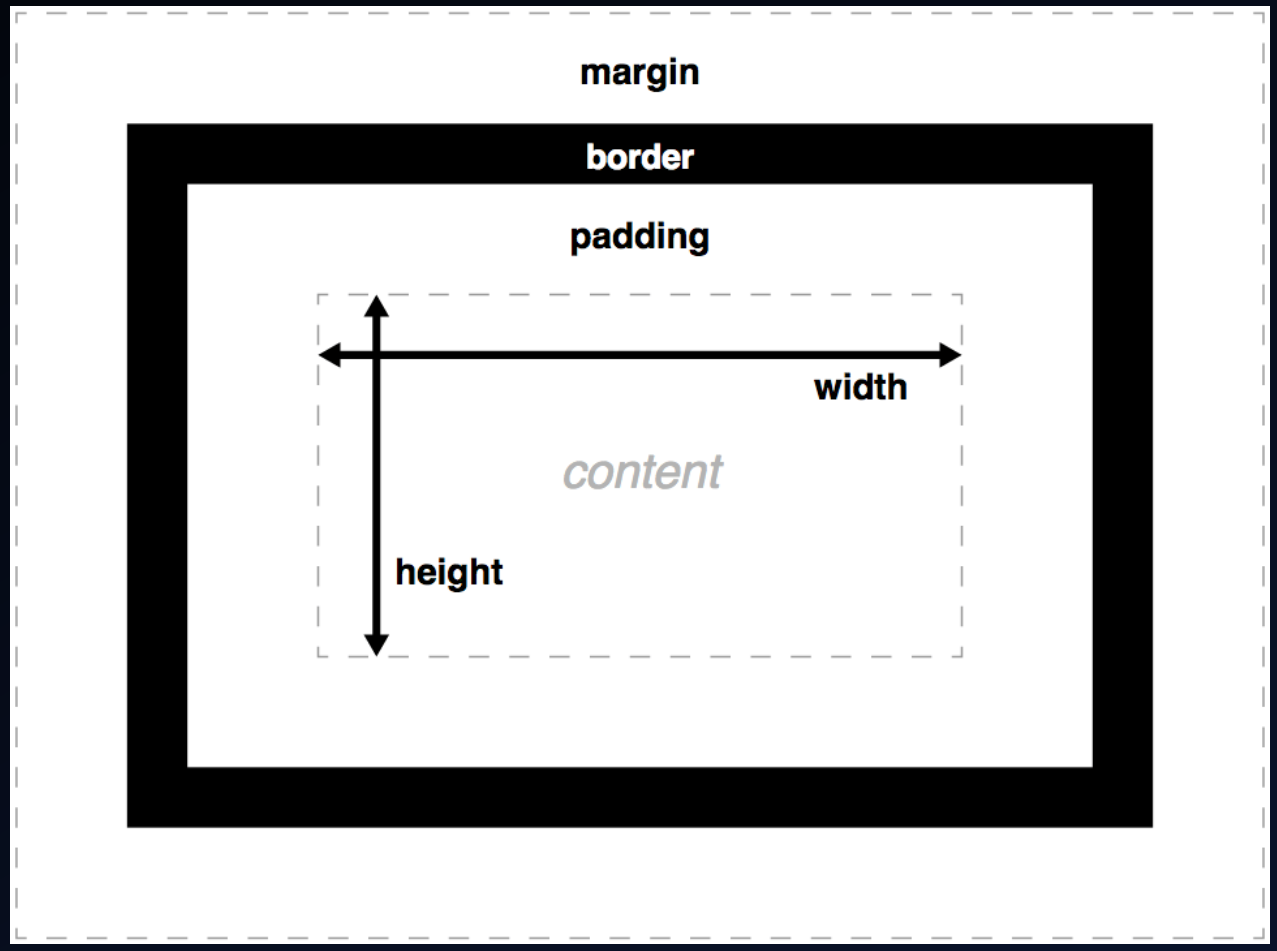
```
p, h1 {
        -CSS rules here-
}
```

- Used to ensure consistent look across site:

```
html, body{
    background: #eee;
    margin: 0;
    padding: 0;
    height: 100%;
    width: 100%;
}

h1, h2, h3, h4, h5, h6, p, div, a,
li, td, th{
    font-family: "Lato", sans-serif;
}
```

CSS Box Model



CSS Shorthands For 4 Sided Stuff

Using Margin as Example:

margin-top: 0;

margin-left: auto;

margin-bottom: 0;

Margin-right: auto;

margin: 0 auto 0 auto;

margin: 0 auto;

Pro Tips

Pro Tips

- Compress your pictures
- ALWAYS design for mobile first
- Before you start coding anything, draw out the structure of your site and rough ideas of how you want things to look
- If you make changes that don’t appear in the next refresh, Ctrl + F5

Pro Tips

- PHP is amazing for repetitive tasks
- CSS Grid is the best thing ever for formats
- Focus on content over aesthetics (You can tweak a website until you die and still not be happy with it)
- Remember everyone has been where you are at some point.

Pro Tips

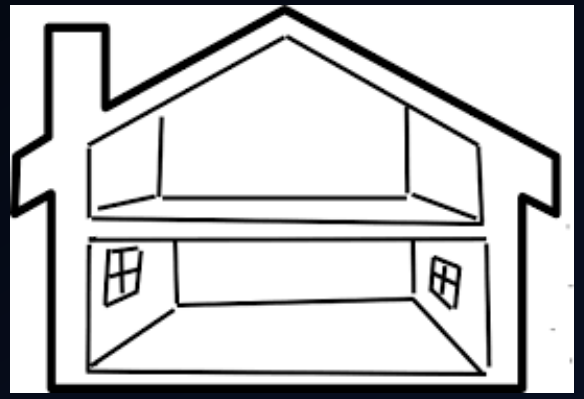
- It doesn’t have to be THAT Expensive
- I cheated a bit on what you have to pay
- https://www.youtube.com/watch?v=vzojwG7OB7c
- What I did ^^^

How I Saved Money

Domain Name

+

Server



+

Code/Website

How I Saved Money

Domain Name

+

Server

+

Code/Website

How I Saved Money

Domain Name

+

Server

+

Code/Website

How I Saved Money

Domain Name + Server + Code/Website

Free

Raspberry Pi 3 - Model B+ ≈ $35

+

Micro SD Card ≈ $10

Disclaimer

- You will do more work
- Need to set up a small program to update IP
- No Customer Support
- You’re a CS Student, you should be fine…. Besides, Google has your back

Where to Get Started

How to Get Started

1. Draw out sections and work on navigation first

How to Get Started

1. Draw out sections and work on navigation first
2. Get the file, head, and nav set up with an empty body for every page

```
<!DOCTYPE html>
<html>
  <head>
    <title>Travis White NA</title>
    <meta name = "viewport" content = "width=device-width, initial-scale=1">
    <meta name = "description" content = "This website is for the Travis White Neighborhood Association
      in El Paso, Texas. Here we will display current events, news, and show the world our beautiful neighborhood.">
    <meta name = "keywords" content = "Travis White, Neighborhood, Association, El Paso">
    <link rel = "stylesheet" type = "text/css" href = "stylesheet.css">
  </head>
  <body>
    <nav>
      <div class = "topNav" id = "myTopNav">
        <h3 class = "topNavItem"><strong><a href = "index.php">Home</a></strong></h3>
        <h3 class = "topNavItem"><strong><a href = "who-we-are.php">Who We Are</a></strong></h3>
        <h3 class = "topNavItem"><strong><a href = "calendar.php">Calendar</a></strong></h3>
        <h3 class = "topNavItem"><strong><a href = "agendas.php">Agendas</a></strong></h3>
        <h3 class = "topNavItem"><strong><a href = "meet-the-officers.php">Meet The Officers</a></strong></h3>
        <h3 class = "topNavItem"><strong><a href = "gallery.php">Gallery</a></strong></h3>
        <h3 class = "topNavItem"><strong><a href = "contact-us.php">Contact Us</a></strong></h3>
        <h3 class = "topNavItem"><strong><a href = "#" class = "menuButton" onclick =
"toggleNav()">&#x2630;</a></strong></h3>
      </div>
    </nav>
  </body>
</html>
```

How to Get Started

1. Draw out sections and work on navigation first
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3. Use HTML (in order) to make an ugly but content full page
4. Use CSS to format site (consolidate code where you can)
5. Work on responsive design

Responsive Web Design

ADAPTING TO THE THOUSANDS OF DEVICES OUT THERE

Units of measurement

Unit	Description	Example
%	Defines a measurement as a percentage relative to another value, typically an enclosing element.	p {font-size: 16pt; line-height: 125%;}
cm	Defines a measurement in centimeters.	div {margin-bottom: 2cm;}
em	A relative measurement for the height of a font in em spaces. Because an em unit is equivalent to the size of a given font, if you assign a font to 12pt, each "em" unit would be 12pt; thus, 2em would be 24pt.	p {letter-spacing: 7em;}
ex	This value defines a measurement relative to a font's x-height. The x-height is determined by the height of the font's lowercase letter x.	p {font-size: 24pt; line-height: 3ex;}
in	Defines a measurement in inches.	p {word-spacing: .15in;}
mm	Defines a measurement in millimeters.	p {word-spacing: 15mm;}
pc	Defines a measurement in picas. A pica is equivalent to 12 points; thus, there are 6 picas per inch.	p {font-size: 20pc;}
pt	Defines a measurement in points. A point is defined as 1/72nd of an inch.	body {font-size: 18pt;}
px	Defines a measurement in screen pixels.	p {padding: 25px;}
vh	1% of viewport height.	h2 { font-size: 3.0vh; }
vw	1% of viewport width	h1 { font-size: 5.9vw; }
vmin	1vw or 1vh, whichever is smaller	p { font-size: 2vmin;}

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Break Points

- Change rules to fit screen size

```
@media only screen and (min-device-width : 945px) {
  @supports (grid-area: auto){
```

Resources For Later

- https://developer.mozilla.org/en-US/
- https://www.w3schools.com/
- https://www.youtube.com/user/thenewboston
- https://css-tricks.com/snippets/css/complete-guide-grid/

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