

Using Secure Shell Client (SSH)

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SSH is something you can use to connect to the school's servers.

Once you get on the school's servers, you can effectively edit and change your website, as well as other files under your Unix account.

Steps

Make sure you have **downloaded SSH**. This is the first link that comes up when I

Google "download SSH":

<http://www.ohlone.edu/org/webcenter/sftptutorial/windowssftp-downloadinstall.html>

From, there I install the software.

The screenshot shows a web page with a navigation menu on the left and a main content area. The main content area has a heading "Download and Install SSH Secure Shell: Secure File Transfer Client for Windows - Web Center". Below the heading, there is a warning: "DO NOT install software on your campus computer. You must contact the IT Service Desk for assistance. The information is provided to you for your use on your home computer for non-commercial use only." This is followed by text explaining that for non-commercial use, the software can be downloaded and installed. A section titled "Downloading SSH Secure Shell" states that the installation file is approximately 6 MB in size. A list of instructions includes "Save this file to your computer's hard drive (make sure you know which directory you put the installation file in):" and "Download SSHSecureShellClient-3.2.9.exe". The link "SSHSecureShellClient-3.2.9.exe" is circled in red, and a red arrow points to it from the right.

Follow the steps for installing and eventually you will see these two icons appear:



SSH Secure File Transfer

To do edit your website through file transfer, click the second icon.



On your own computer, **create** the file you want to **transport** in whatever editor. I made a `hello_world.html` file in **Notepad** and saved it in a folder called WEBSITE STUFF.

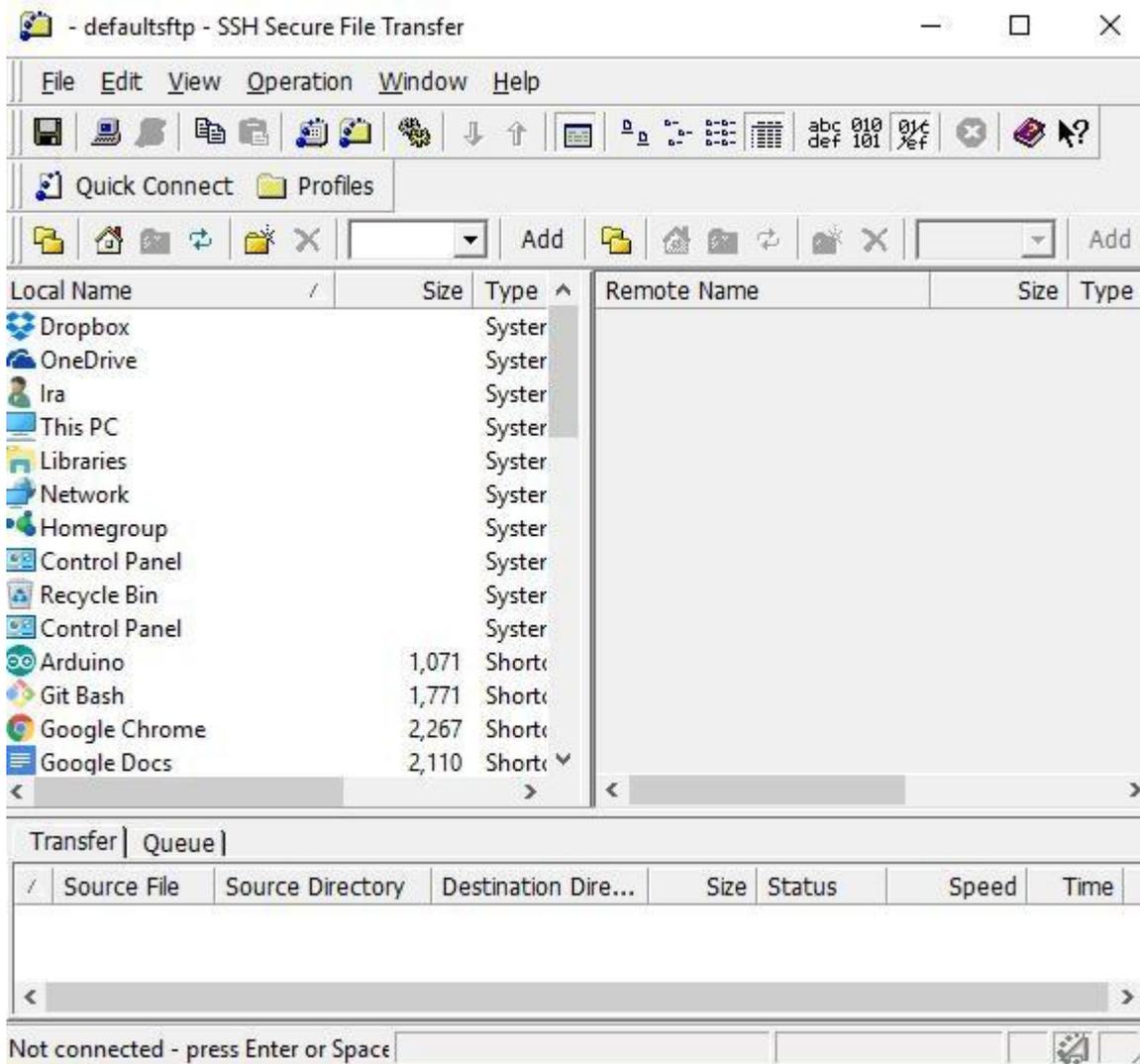
A screenshot of a Notepad window titled 'hello_world - Notepad'. The window has a menu bar with 'File', 'Edit', 'Format', 'View', and 'Help'. The text area contains the following HTML code:

```
<html>
<p> Hello World! </p>
</html>
```

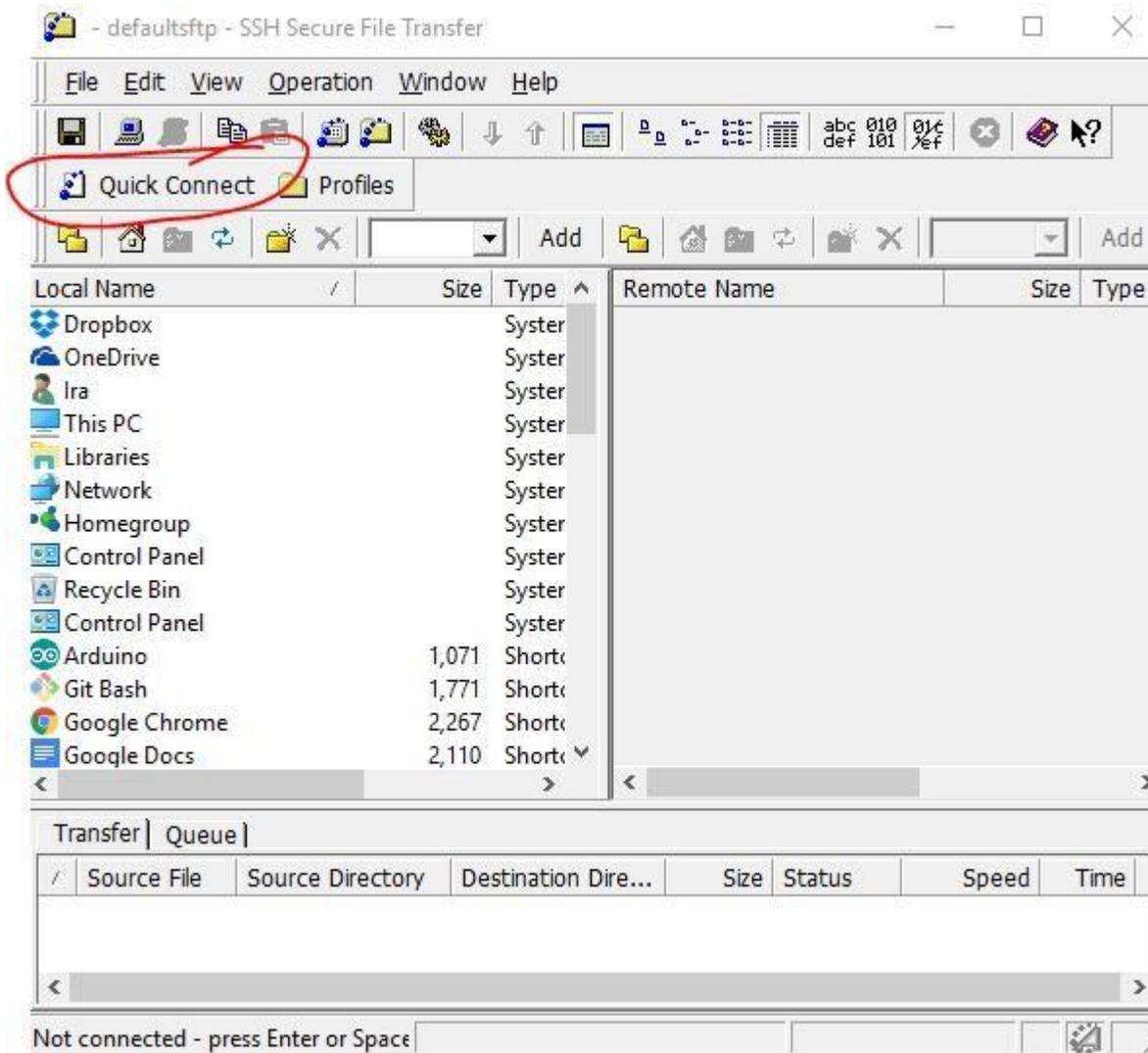
The status bar at the bottom right shows 'Ln 1, Col 1'.

Double click the SSH Secure File Transfer icon.

A window that looks something like this should appear. In the **left** window you will see what is contained in **your PC**.



Click **Quick Connect** to connect to the school's servers.



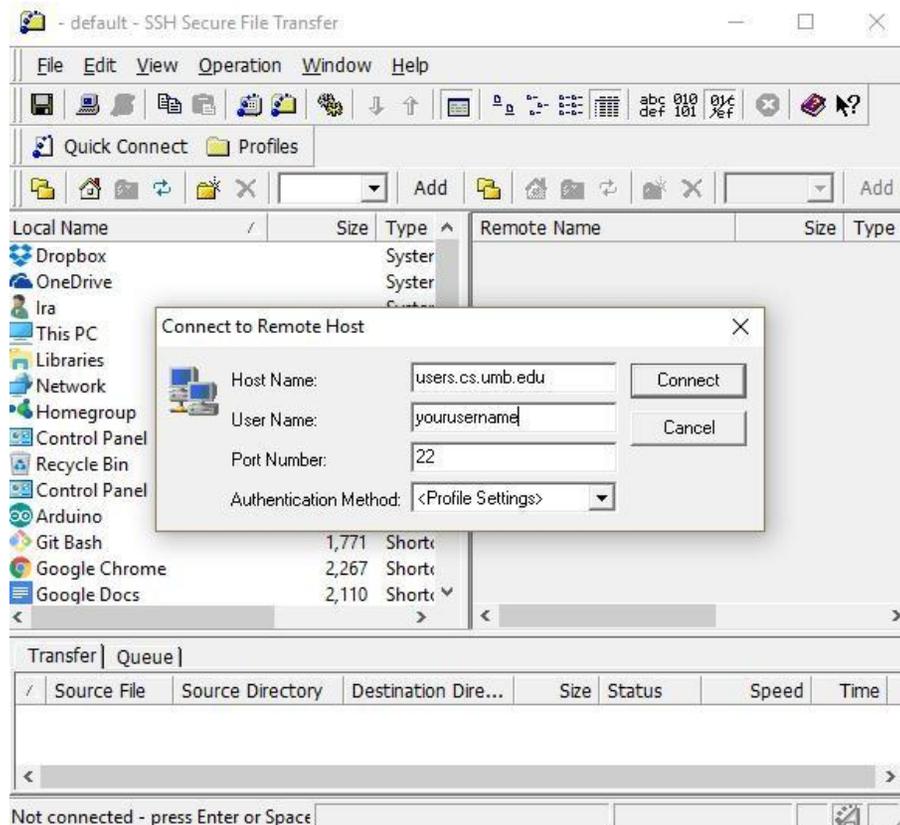
After you click **Quick Connect**, this window will pop up.

For your hostname, you can connect to one of these three servers:

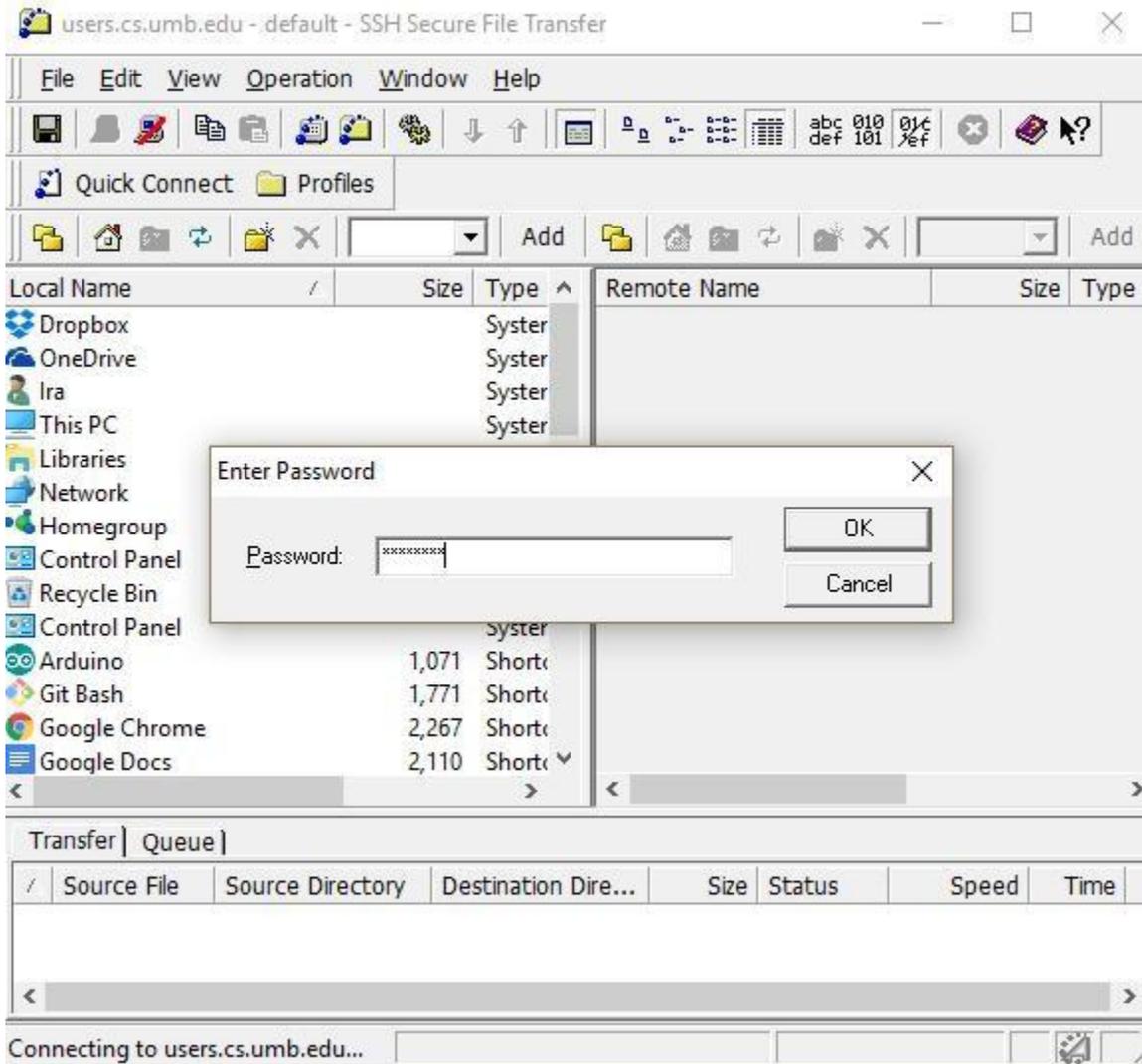
users.cs.umb.edu
users2.cs.umb.edu
users3.cs.umb.edu

In this case, I used **users.cs.umb.edu** Your username is your Unix account name. Do not enter anything for the port number. Click **Connect**.

Note: you must have internet access to do this, otherwise you will get a 'the host users.cs.umb.edu is unknown' error.



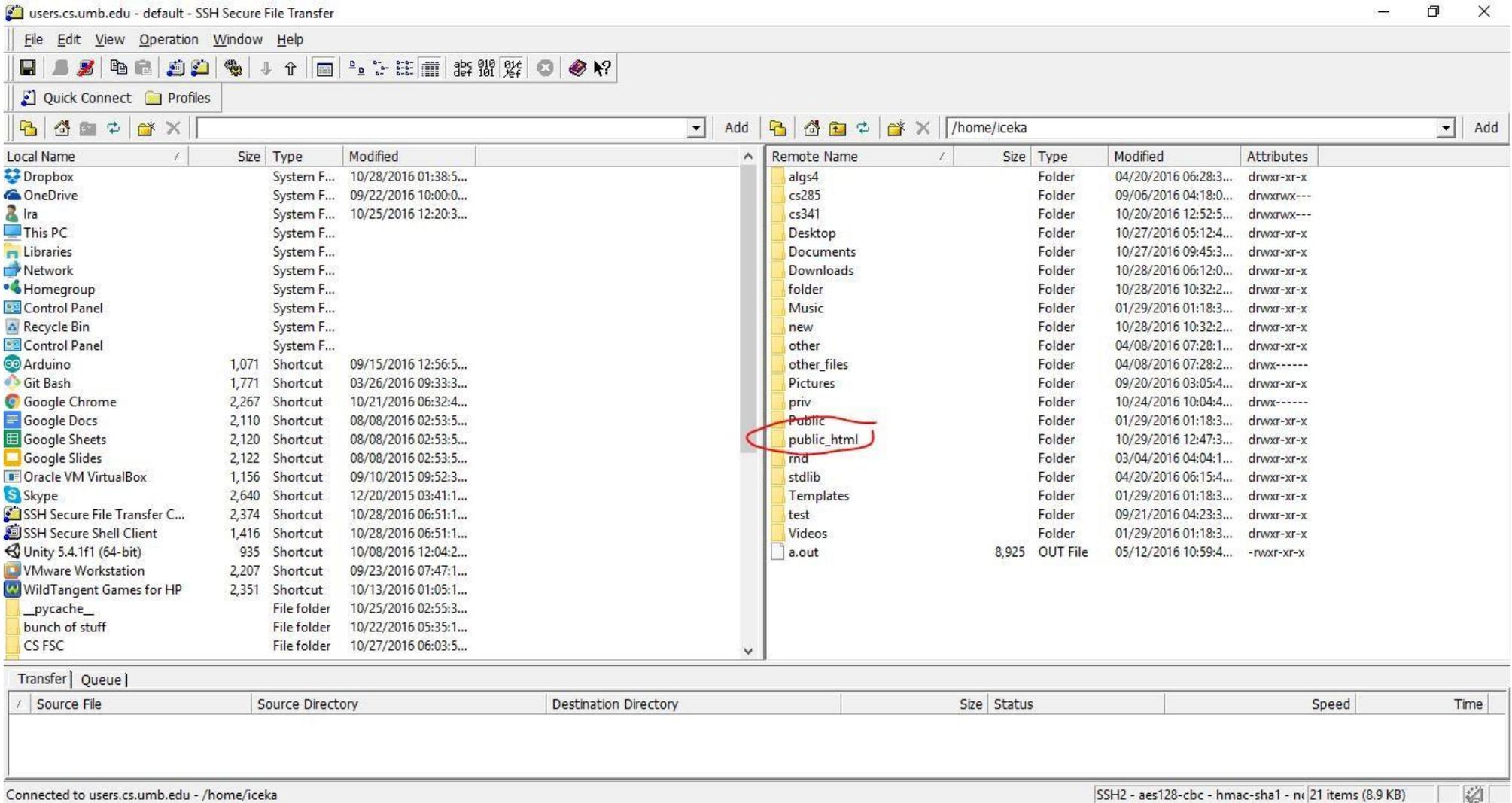
Once you hit Connect, you will be prompted to enter your password. Enter your password. Click **OK**.



Note: You might get an error like the one below. Click **No**. You will then be able to enter your password.



If you have connected successfully, you will see what is contained in your Unix Account in the right window! Our website stuff will go in a folder named "public_html".



users.cs.umb.edu - default - SSH Secure File Transfer

File Edit View Operation Window Help

Quick Connect Profiles

/home/iceka

Local Name	Size	Type	Modified	Remote Name	Size	Type	Modified	Attributes
Dropbox		System F...	10/28/2016 01:38:5...	algs4		Folder	04/20/2016 06:28:3...	drwxr-xr-x
OneDrive		System F...	09/22/2016 10:00:0...	cs285		Folder	09/06/2016 04:18:0...	drwxrwx---
Ira		System F...	10/25/2016 12:20:3...	cs341		Folder	10/20/2016 12:52:5...	drwxrwx---
This PC		System F...		Desktop		Folder	10/27/2016 05:12:4...	drwxr-xr-x
Libraries		System F...		Documents		Folder	10/27/2016 09:45:3...	drwxr-xr-x
Network		System F...		Downloads		Folder	10/28/2016 06:12:0...	drwxr-xr-x
Homegroup		System F...		folder		Folder	10/28/2016 10:32:2...	drwxr-xr-x
Control Panel		System F...		Music		Folder	01/29/2016 01:18:3...	drwxr-xr-x
Recycle Bin		System F...		new		Folder	10/28/2016 10:32:2...	drwxr-xr-x
Control Panel		System F...		other		Folder	04/08/2016 07:28:1...	drwxr-xr-x
Arduino	1,071	Shortcut	09/15/2016 12:56:5...	other_files		Folder	04/08/2016 07:28:2...	drwx-----
Git Bash	1,771	Shortcut	03/26/2016 09:33:3...	Pictures		Folder	09/20/2016 03:05:4...	drwxr-xr-x
Google Chrome	2,267	Shortcut	10/21/2016 06:32:4...	priv		Folder	10/24/2016 10:04:4...	drwx-----
Google Docs	2,110	Shortcut	08/08/2016 02:53:5...	Public		Folder	01/29/2016 01:18:3...	drwxr-xr-x
Google Sheets	2,120	Shortcut	08/08/2016 02:53:5...	public_html		Folder	10/29/2016 12:47:3...	drwxr-xr-x
Google Slides	2,122	Shortcut	08/08/2016 02:53:5...	rnd		Folder	03/04/2016 04:04:1...	drwxr-xr-x
Oracle VM VirtualBox	1,156	Shortcut	09/10/2015 09:52:3...	stdlib		Folder	04/20/2016 06:15:4...	drwxr-xr-x
Skype	2,640	Shortcut	12/20/2015 03:41:1...	Templates		Folder	01/29/2016 01:18:3...	drwxr-xr-x
SSH Secure File Transfer C...	2,374	Shortcut	10/28/2016 06:51:1...	test		Folder	09/21/2016 04:23:3...	drwxr-xr-x
SSH Secure Shell Client	1,416	Shortcut	10/28/2016 06:51:1...	Videos		Folder	01/29/2016 01:18:3...	drwxr-xr-x
Unity 5.4.1f1 (64-bit)	935	Shortcut	10/08/2016 12:04:2...	a.out	8,925	OUT File	05/12/2016 10:59:4...	-rwxr-xr-x
VMware Workstation	2,207	Shortcut	09/23/2016 07:47:1...					
WildTangent Games for HP	2,351	Shortcut	10/13/2016 01:05:1...					
__pycache__		File folder	10/25/2016 02:55:3...					
bunch of stuff		File folder	10/22/2016 05:35:1...					
CS FSC		File folder	10/27/2016 06:03:5...					

Transfer | Queue |

Source File	Source Directory	Destination Directory	Size	Status	Speed	Time
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Connected to users.cs.umb.edu - /home/iceka

SSH2 - aes128-cbc - hmac-sha1 - n... 21 items (8.9 KB)

Note: if you have not yet created the public_html folder, do so by right-clicking on the right window and selecting "New Folder".

Remote Name	Size	Type	Modified	Attributes
algs4		Folder	04/20/2016 06:28:3...	drwxr-xr-x
cs285		Folder	09/06/2016 04:18:0...	drwxrwx---
cs341		Folder	10/20/2016 12:52:5...	drwxrwx---
Desktop		Folder	10/27/2016 05:12:4...	drwxr-xr-x
Documents		Folder	10/27/2016 09:45:3...	drwxr-xr-x
Downloads		Folder	10/28/2016 06:12:0...	drwxr-xr-x
folder		Folder	10/28/2016 10:32:2...	drwxr-xr-x
Music		Folder	01/29/2016 01:18:3...	drwxr-xr-x
new			10/28/2016 10:32:2...	drwxr-xr-x
other			04/08/2016 07:28:1...	drwxr-xr-x
other_files			04/08/2016 07:28:2...	drwx-----
Pictures			09/20/2016 03:05:4...	drwxr-xr-x
priv			10/24/2016 10:04:4...	drwx-----
Public			01/29/2016 01:18:3...	drwxr-xr-x
public_html			10/29/2016 12:47:3...	drwxr-xr-x
rnd			03/04/2016 04:04:1...	drwxr-xr-x
stdlib			04/20/2016 06:15:4...	drwxr-xr-x
Templates			01/29/2016 01:18:3...	drwxr-xr-x
test			09/21/2016 04:23:3...	drwxr-xr-x
Videos			01/29/2016 01:18:3...	drwxr-xr-x
a.out			05/12/2016 10:59:4...	-rwxr-xr-x

Size	Status	Speed	Time

On the left side, move into the folder where the file you want to transfer is located.

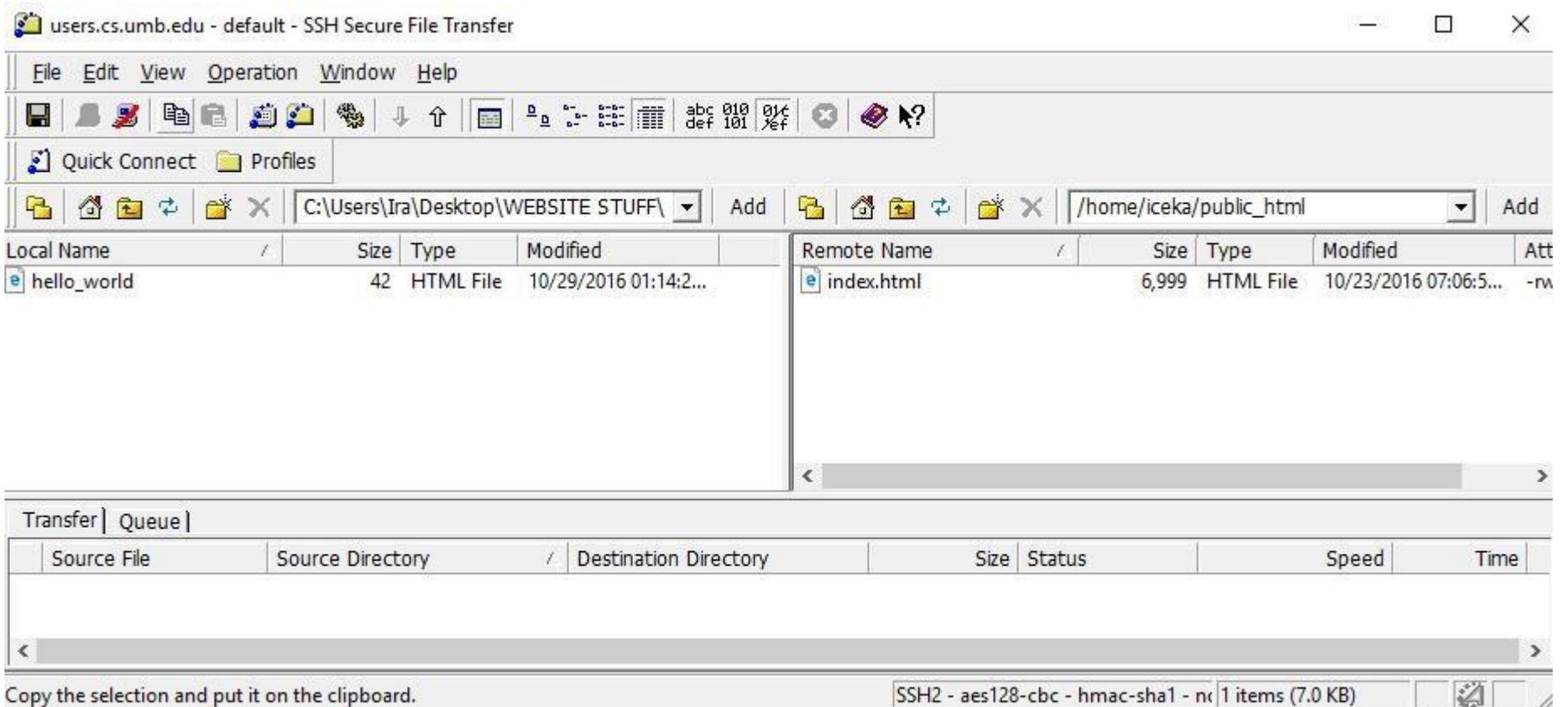
The file I want to transfer is hello_world.html, and it is contained in a folder on my Desktop called WEBSITE STUFF.

The screenshot shows the SSH Secure File Transfer application window. The title bar reads "users.cs.umb.edu - default - SSH Secure File Transfer". The menu bar includes "File", "Edit", "View", "Operation", "Window", and "Help". The toolbar contains various icons for file operations. Below the toolbar, there are "Quick Connect" and "Profiles" buttons. The main interface is split into two panes. The left pane shows the local file system with the path "C:\Users\Ira\Desktop\WEBSITE STUFF\". It contains a single file named "hello_world" with a size of 42 bytes, type of "HTML File", and a modification date of "10/29/2016 01:14:2...". A red circle highlights this file, and a red arrow points to it with the text "file I want to transfer". The right pane shows the remote file system with the path "/home/iceka/". It contains several folders: "priv", "Public", "public_html", "rmd", "stdlib", "Templates", and "test". The "public_html" folder is highlighted with a dashed border. At the bottom of the window, there is a "Transfer | Queue" section with a table that is currently empty. The status bar at the very bottom indicates "Connected to users.cs.umb.edu - /home/iceka/" and "SSH2 - aes128-cbc - hmac-sha1 - n 21 items (8.9 KB)".

Local Name	Size	Type	Modified	Remote Name	Size	Type	Modified
hello_world	42	HTML File	10/29/2016 01:14:2...	priv		Folder	10/24/2016 10:04:4...
				Public		Folder	01/29/2016 01:18:3...
				public_html		Folder	10/29/2016 12:47:3...
				rmd		Folder	03/04/2016 04:04:1...
				stdlib		Folder	04/20/2016 06:15:4...
				Templates		Folder	01/29/2016 01:18:3...
				test		Folder	09/21/2016 04:23:3...

Source File	Source Directory	Destination Directory	Size	Status	Speed	Time
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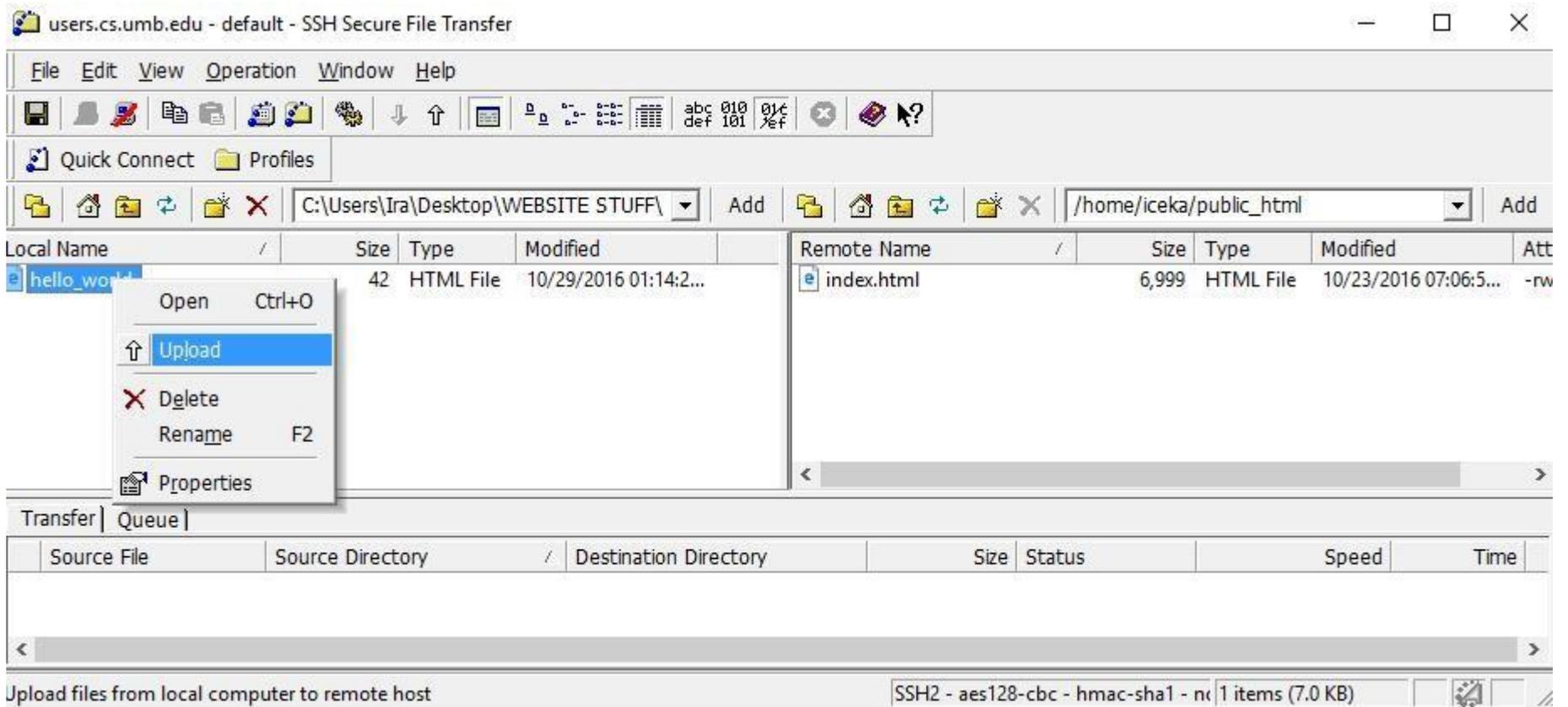
On the right side, **double-click** the `public_html` folder, this is where you will transfer your file. You should see something like the window below. In my case, I already have a file called `index.html` contained in my `public_html` folder, so it shows up.



Copy the selection and put it on the clipboard.

SSH2 - aes128-cbc - hmac-sha1 - nr 1 items (7.0 KB)

To upload hello_world.html, I must right-click on the file, and select upload.



You will see the **status** of the **upload** in the lower window as "Complete. hello_world.html is now uploaded in the right window, the public_html folder.

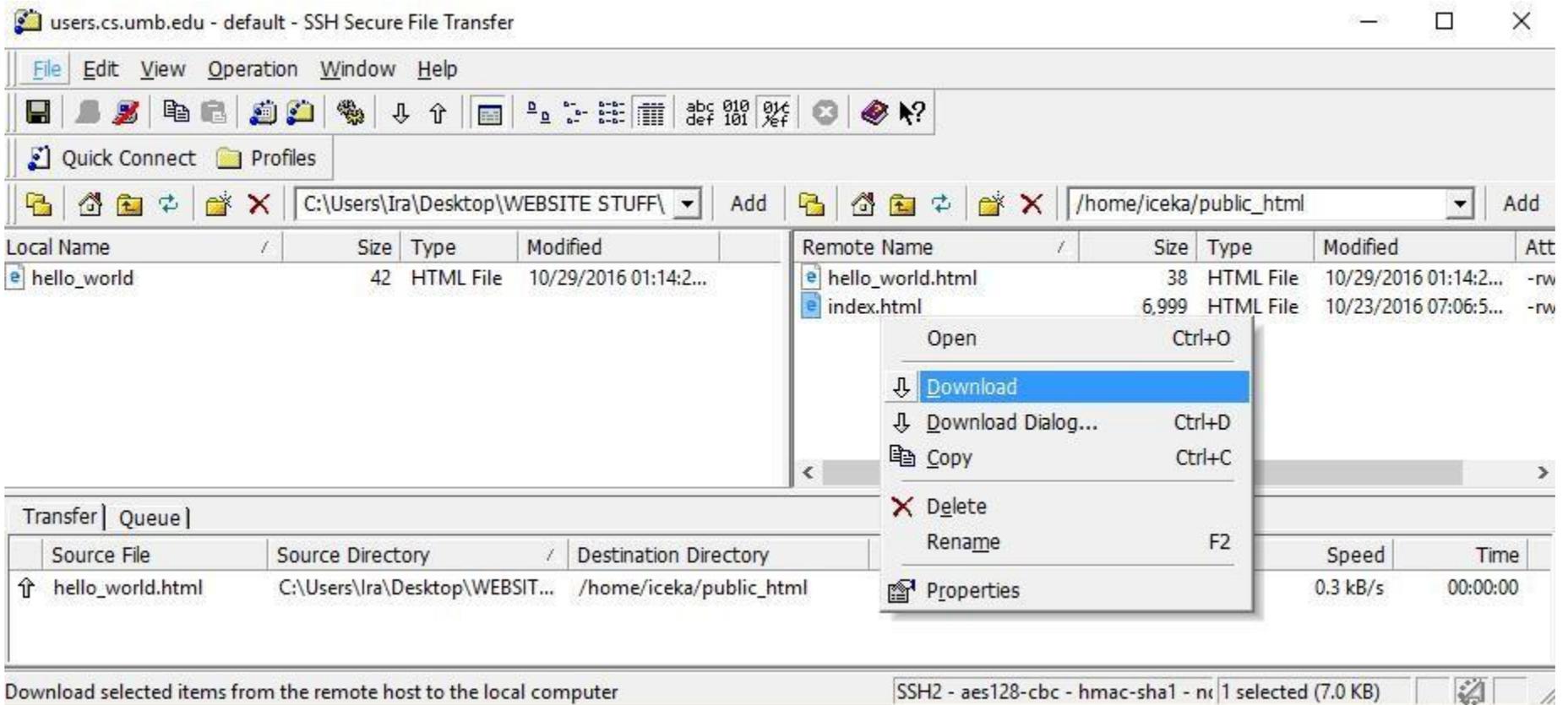
The screenshot shows the SSH Secure File Transfer application window titled "users.cs.umb.edu - default - SSH Secure File Transfer". The interface is split into two main panes. The left pane shows the local file system at "C:\Users\Ira\Desktop\WEBSITE STUFF\" with a file named "hello_world" (42 bytes, HTML File, modified 10/29/2016 01:14:2...). The right pane shows the remote file system at "/home/iceka/public_html" with files "hello_world.html" (38 bytes, HTML File, modified 10/29/2016 01:14:2...) and "index.html" (6,999 bytes, HTML File, modified 10/23/2016 07:06:5...). Below the panes is a "Transfer Queue" table showing the upload of "hello_world.html" from the local source directory to the remote destination directory, with a status of "Complete". The bottom status bar indicates the connection is to "users.cs.umb.edu - /home/iceka/public_html/Music" using "SSH2 - aes128-cbc - hmac-sha1 - nr" and shows "2 items (7.0 KB)".

Local Name	Size	Type	Modified	Remote Name	Size	Type	Modified	Att
hello_world	42	HTML File	10/29/2016 01:14:2...	hello_world.html	38	HTML File	10/29/2016 01:14:2...	-rw
				index.html	6,999	HTML File	10/23/2016 07:06:5...	-rw

Source File	Source Directory	Destination Directory	Size	Status	Speed	Time
hello_world.html	C:\Users\Ira\Desktop\WEBSITE...	/home/iceka/public_html	42	Complete	0.3 kB/s	00:00:00

Connected to users.cs.umb.edu - /home/iceka/public_html/Music SSH2 - aes128-cbc - hmac-sha1 - nr 2 items (7.0 KB)

To transfer backwards, (say you want to move index.html to your PC), you would **right-click** the index.html file and select **Download**. This will move the index.html file to my WEBSITE STUFF folder on my PC.



And now, I see the `status` of the `download` as
"Complete".

`index.html` shows up in the left window, which means I have successfully downloaded the file to the folder on my PC.

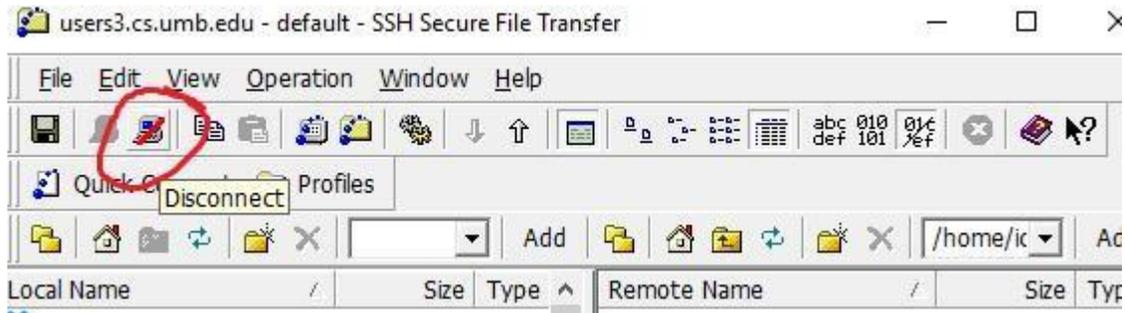
The screenshot shows the 'SSH Secure File Transfer' application window. The title bar reads 'users.cs.umb.edu - default - SSH Secure File Transfer'. The interface includes a menu bar (File, Edit, View, Operation, Window, Help), a toolbar with various icons, and a 'Quick Connect' section with 'Profiles'. The main area is split into two panes: 'Local Name' and 'Remote Name'. The 'Local Name' pane shows a directory listing for 'C:\Users\Ira\Desktop\WEBSITE STUFF\'. The 'Remote Name' pane shows a directory listing for '/home/iceka/public_html'. Below these panes is a 'Transfer | Queue' section with a table of transfer details. At the bottom, the status bar indicates 'Connected to users.cs.umb.edu - /home/iceka/public_html/Music' and 'SSH2 - aes128-cbc - hmac-sha1 - n... 1 selected (7.0 KB)'.

Local Name	Size	Type	Modified	Remote Name	Size	Type	Modified	Att
hello_world	42	HTML File	10/29/2016 01:14:2...	hello_world.html	38	HTML File	10/29/2016 01:14:2...	-rw
index	7,208	HTML File	10/23/2016 07:06:5...	index.html	6,999	HTML File	10/23/2016 07:06:5...	-rw

Source File	Source Directory	Destination Directory	Size	Status	Speed	Time
↑ hello_world.html	C:\Users\Ira\Desktop\WEBSIT...	/home/iceka/public_html	42	Complete	0.3 kB/s	00:00:00
↓ index.html	/home/iceka/public_html	C:\Users\Ira\Desktop\WEBSIT...	6,999	Complete	49.6 kB/s	00:00:00

Connected to users.cs.umb.edu - /home/iceka/public_html/Music | SSH2 - aes128-cbc - hmac-sha1 - n... | 1 selected (7.0 KB)

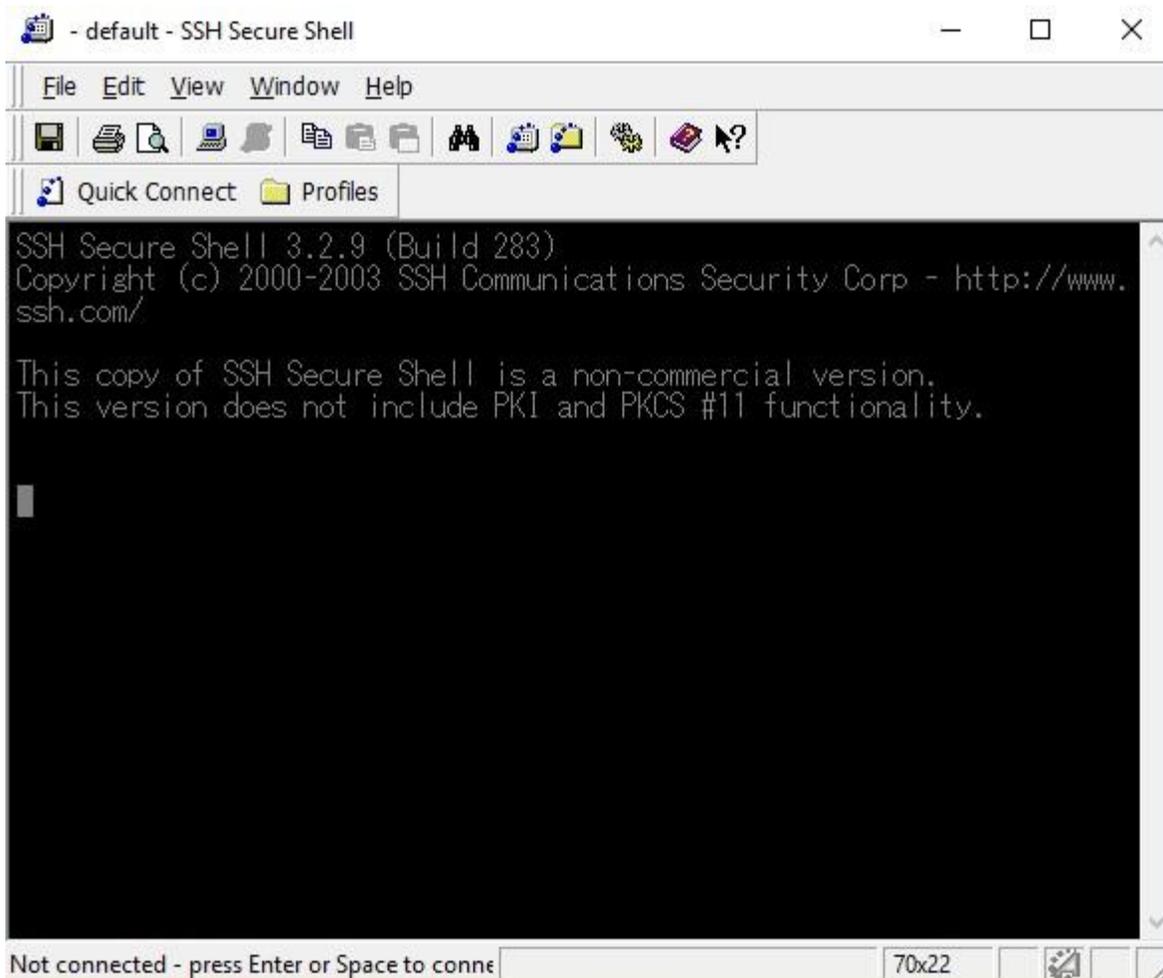
Disconnect by selecting this button.



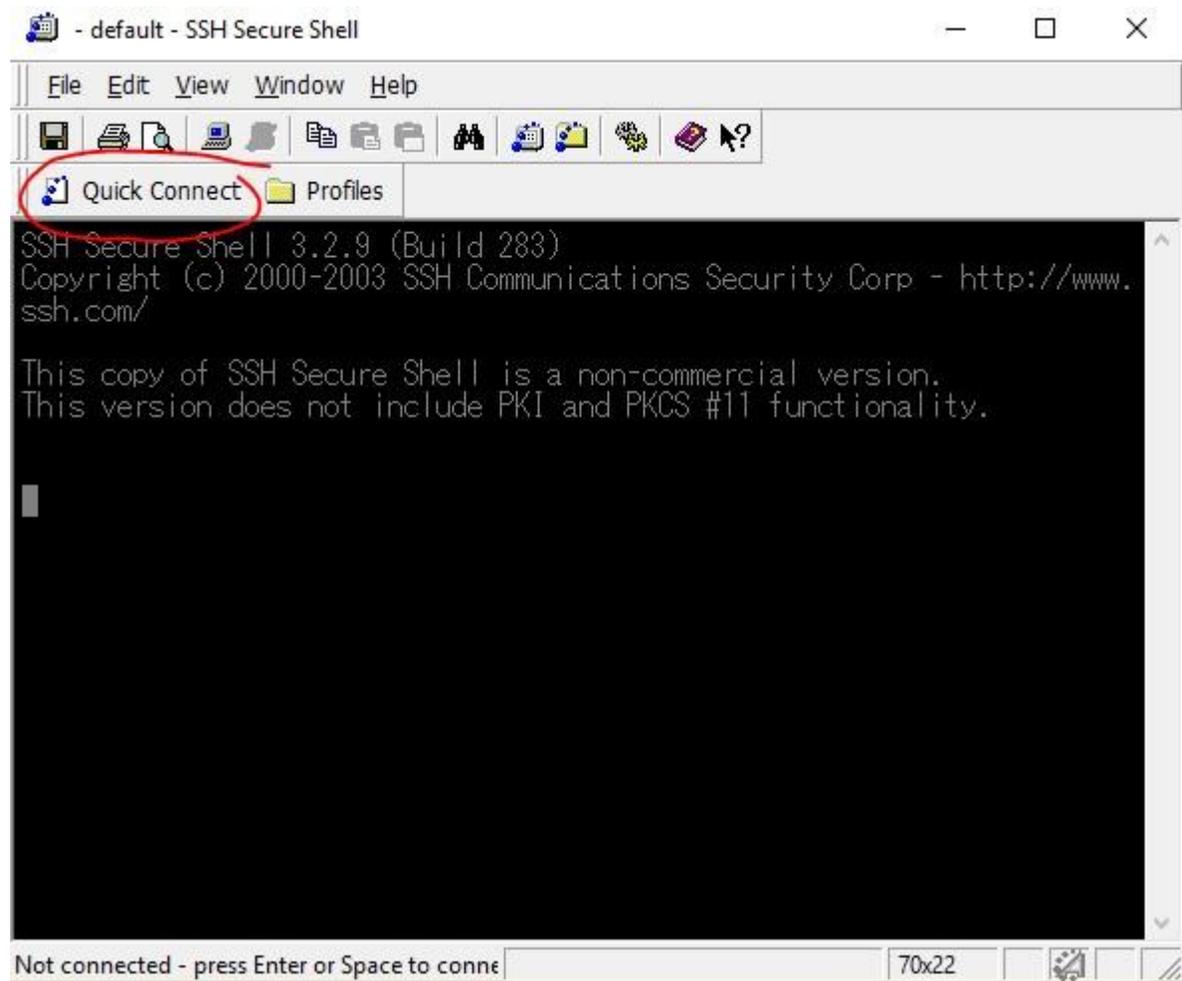
SSH Secure Shell

If you want to edit and create files directly through a terminal, use the SSH Secure Shell.

Double-click the first icon (SSH Secure Shell Client), and you should see this window pop up.



Click **Quick Connect**.



After you click **Quick Connect**, this window will pop up.

For your hostname, you can connect to one of these three servers:

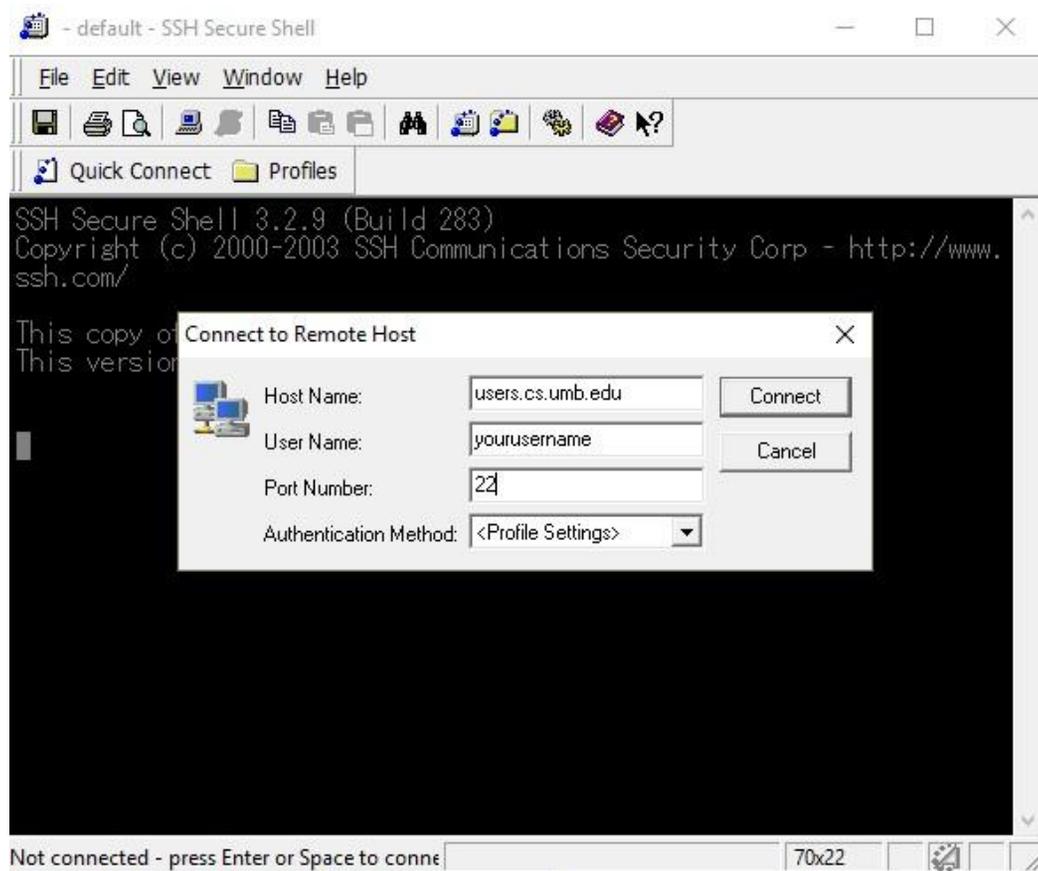
users.cs.umb.edu
users2.cs.umb.edu
users3.cs.umb.edu

In this case, I used **users.cs.umb.edu** Your username is your Unix account name.

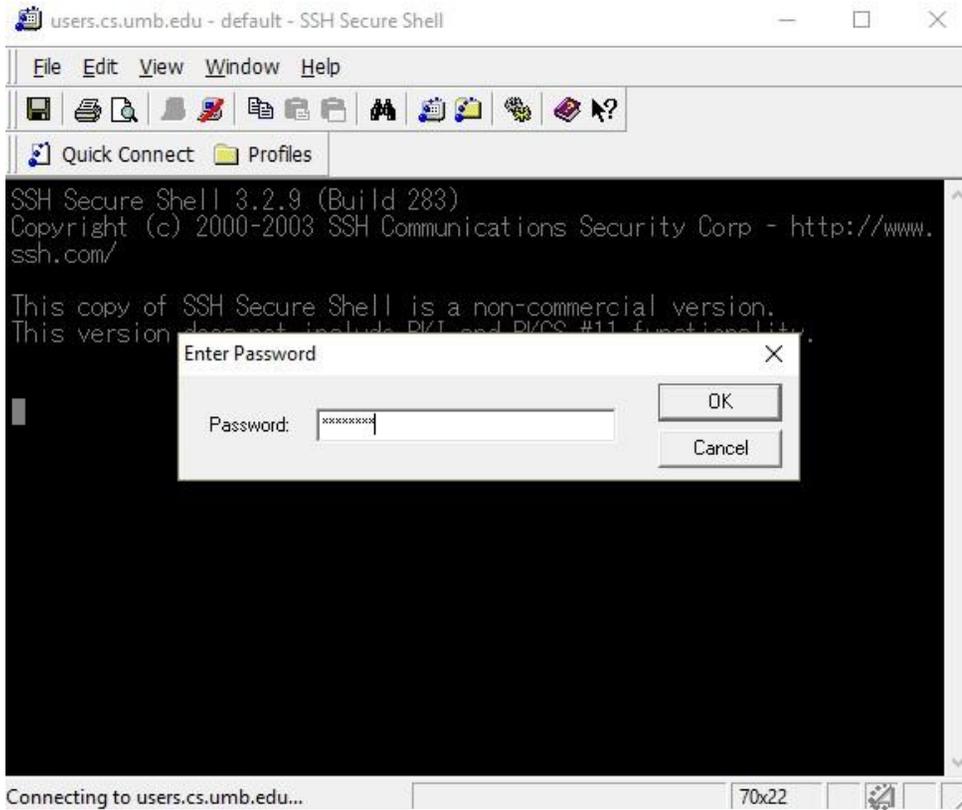
Do not enter anything for the port number.

Click **Connect**.

Note: you must have internet access to do this, otherwise you will get a 'the host users.cs.umb.edu is unknown' error.



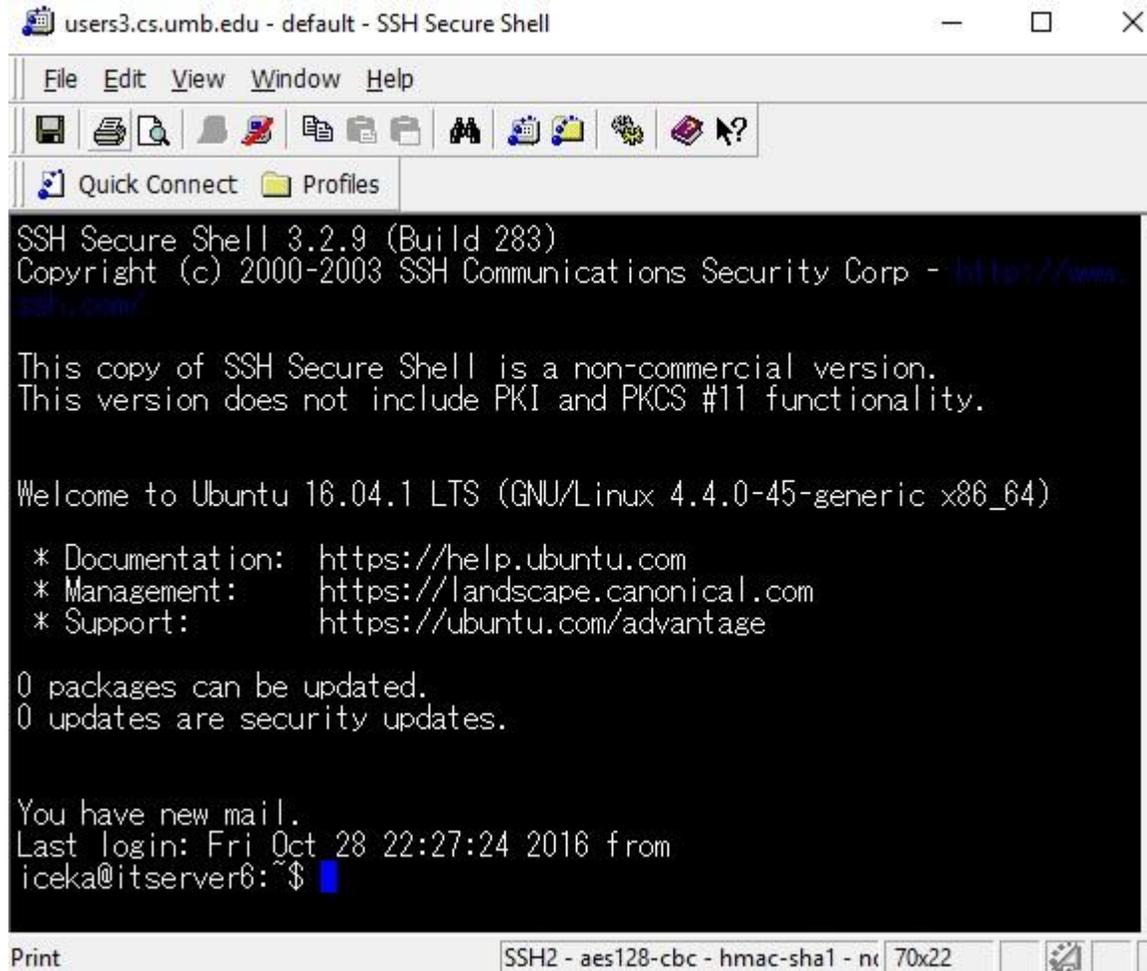
Once you hit Connect, you will be prompted to enter your password. Enter your **password**. Click **OK**.



Note: You might get an error like the one below. Click **No**. You will then be able to enter your password.



If you typed your password in correctly, you should see this screen. This means you're in the server and can now access/change your files.



The image shows a screenshot of an SSH Secure Shell terminal window. The window title is "users3.cs.umb.edu - default - SSH Secure Shell". The terminal displays the following text:

```
SSH Secure Shell 3.2.9 (Build 283)
Copyright (c) 2000-2003 SSH Communications Security Corp - http://www.ssh.com

This copy of SSH Secure Shell is a non-commercial version.
This version does not include PKI and PKCS #11 functionality.

Welcome to Ubuntu 16.04.1 LTS (GNU/Linux 4.4.0-45-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

0 packages can be updated.
0 updates are security updates.

You have new mail.
Last login: Fri Oct 28 22:27:24 2016 from
iceka@itserver6:~$
```

The terminal window also shows a menu bar with "File", "Edit", "View", "Window", and "Help". Below the menu bar is a toolbar with various icons. At the bottom of the window, there is a status bar with "Print", "SSH2 - aes128-cbc - hmac-sha1 - n", and "70x22".

To list what is contained in your current directory, use the command `ls`. What is listed will be the folders contained within your current working directory.

```
iceka@itserver6:~$ ls
algs4 a.out cs285 cs341 Desktop Documents Downloads Music other
```

Start by making a `public_html` folder. This is where your website stuff will go. To do this you use the command `mkdir foldername` To start building our website, we will use the command `mkdir public_html`

```
iceka@itserver6:~$ mkdir public_html
```

Move into the folder with the `cd` command.

```
iceka@itserver6:~$ cd public_html
iceka@itserver6:~/public_html$
```

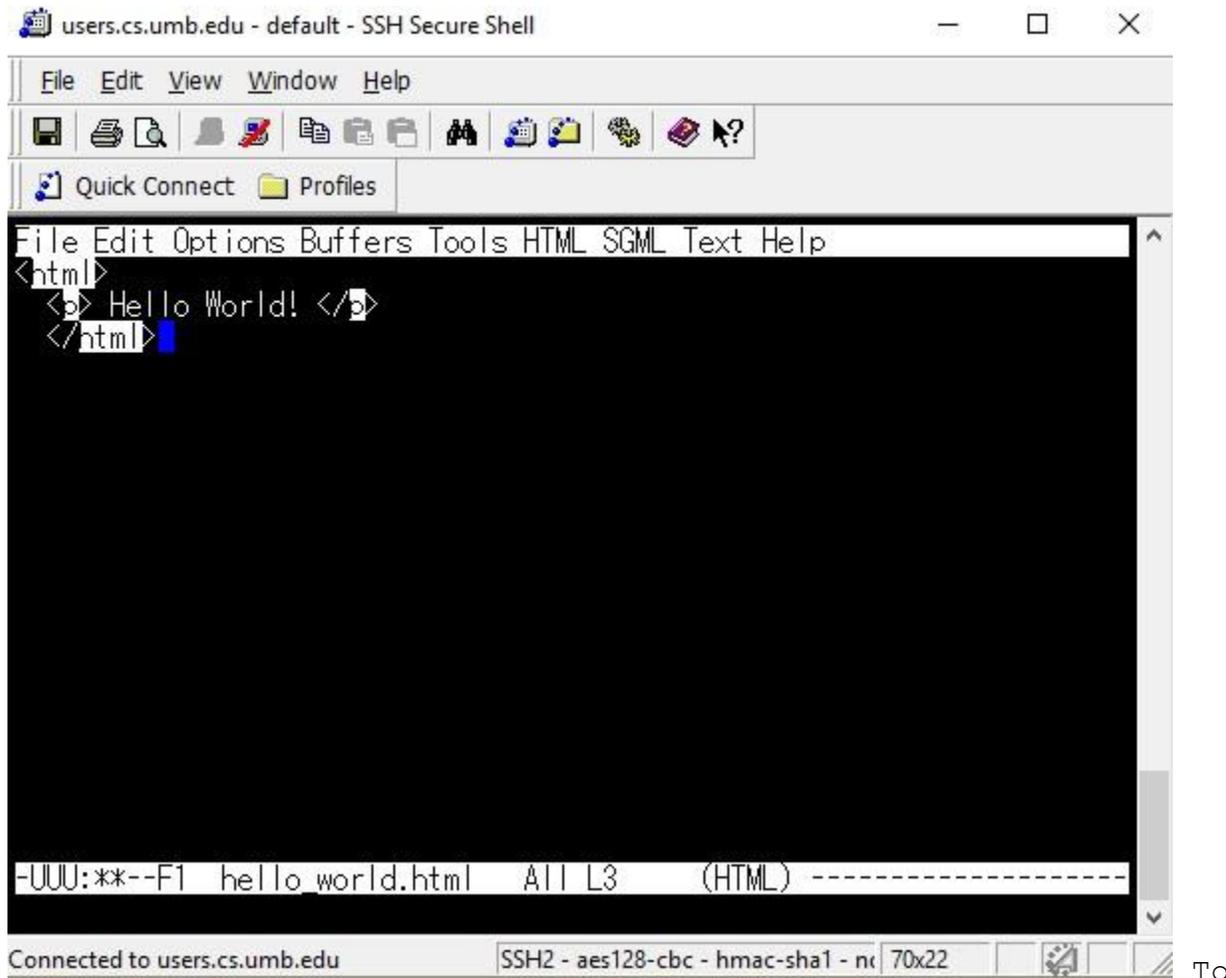
Let's say I want to create a file named `hello_world.html`. To accomplish this through the SSH terminal, I can use the `emacs` editor, as shown below. Write the command `emacs hello_world.html`. Press `enter`.

```
iceka@itserver6:~/public_html$ emacs hello_world.html
```

It will bring up this new file where you can edit the html. Start typing as you normally would in a text editor.

Note: Using `emacs` can take some getting used to, and it is at times frustrating. Be careful when you are trying to erase. Backspace will not work - you have to use Delete.

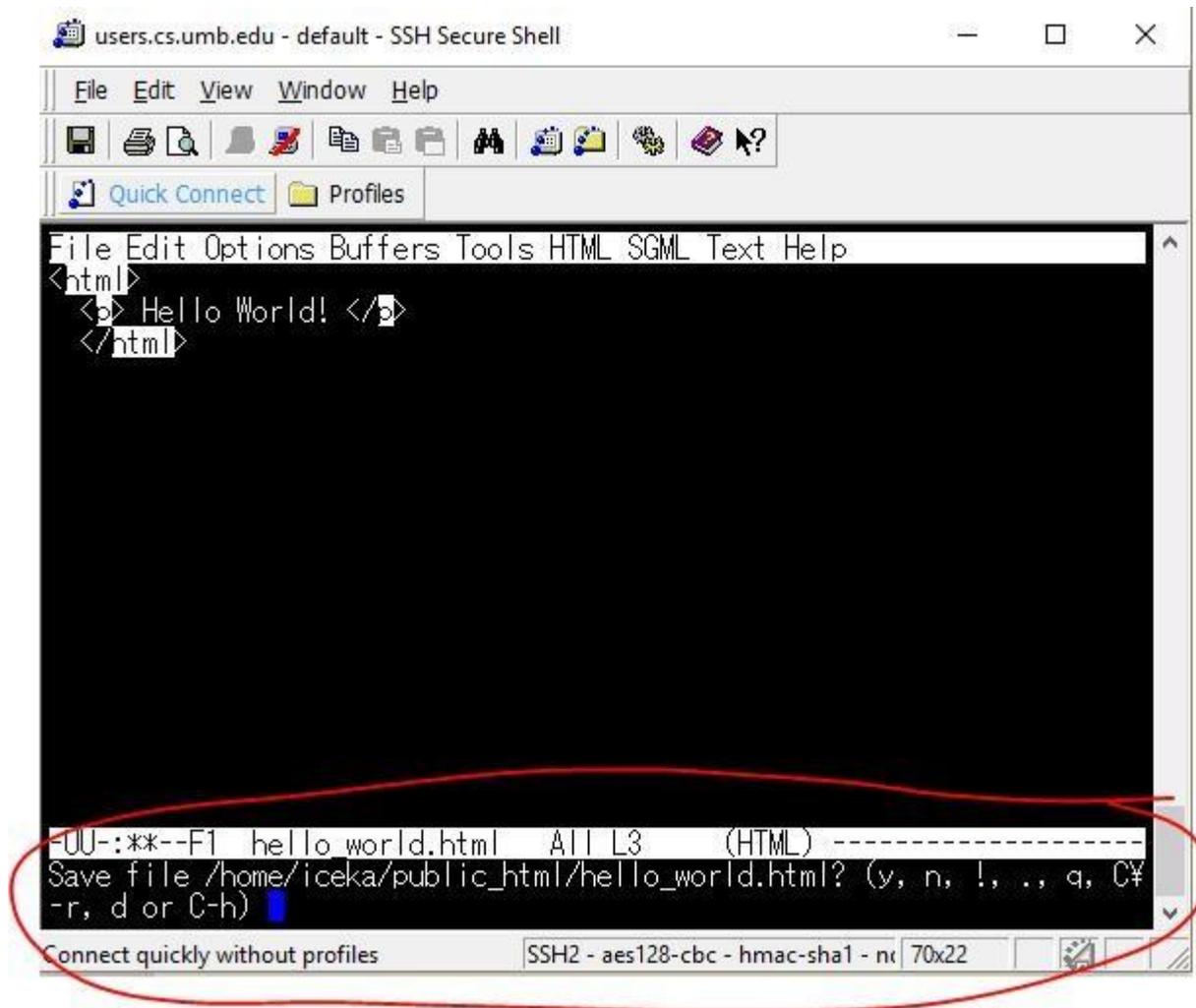
Note: There are other editors you can use. Many people also use `vi`. You can use this with the command `vi hello_world.html`



To

save your work, use `Ctrl-X Ctrl-C!`

Then, this will pop up at the bottom of the screen. Type `Y` for yes.



You will be brought back to the command line.

Note: Sometimes, the editor view still stays in place. To clear it, type the command `clear`.

Now that you've created and saved your file in the `public_html` folder, you can logout.

Disconnect with this command:

```
iceka@itsserver6:~$ logout
```

Now, if you go online to www.cs.umb.edu/~yourusername/hello_world.html, you will see the HTML in action. This is the webpage!

For me, it looks like this:

