Lab 4

Objectives

- Use a CSS grid for the layout of a webpage
- Learn how to upload files to a webserver so your webpage can be viewed online

Associated Lecture Videos

- Grid Introduction
- Uploading to a server (Windows)
- Uploading to a server (Mac)

Additional References / Resources

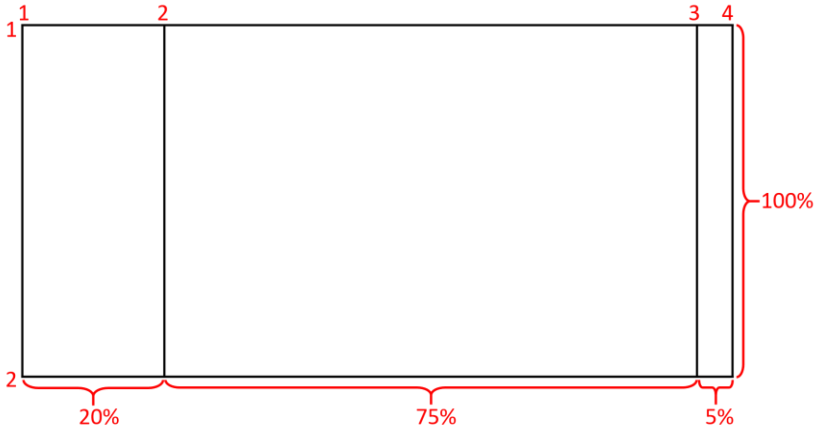
- Grid Garden: a fun game to practice grid: https://cssgridgarden.com/

SETUP – Download the necessary files

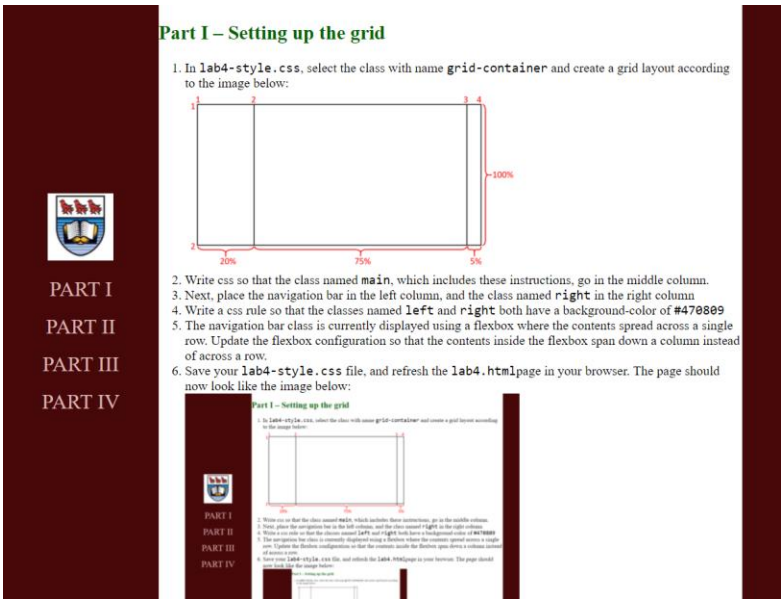
1. Make a lab 4 folder to save the files for this lab into.
2. Go to the BrightSpace page, and in **Resources > labs > lab4** folder download the **lab4.html** file and **lab4-style.css** save it into your lab 4 folder
3. You should now be able to open up the **lab4.html** file in a text editor to edit the HTML, and also open it in a browser to view the web page. The rest of the instructions for the lab can be found on the lab4.html webpage, or on the following pages of this document.

Part I – Setting up the grid

1. In `lab4-style.css`, select the class with name `grid-container` and create a grid layout according to the image below:



2. Write CSS so that the class named `main`, which includes these instructions, goes in the middle column.
3. Next, place the navigation bar in the left column, and the class named `right` in the right column
4. Write a css rule so that the classes named `left` and `right` both have a background-color of `#470809`.
5. The navigation bar class is currently displayed using a flexbox where the contents spread across a single row. Update the flexbox configuration so that the contents inside the flexbox span down a column instead of across a row.
6. Save your `lab4-style.css` file, and refresh the `lab4.html` page in your browser. The page should now look like the image below:



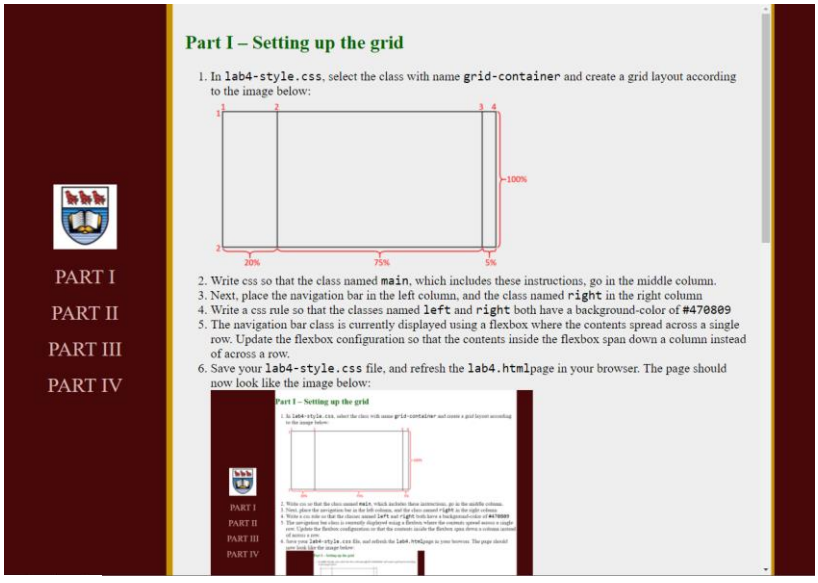
CHECK POINT 1

Part II – Fixing the Grid

1. At this point, you have likely noticed that the instructions on the page go below where the grid box ends. That is because the grid box is defined to only span 100% of the height and width of your browser. There are two ways to fix this: (1) Set it so that column and/or row sizes sum to beyond 100%. (2) Set it so that specific elements in the grid box have a scroll bar if their contents exceed their allocated grid lines. We will implement te second option for this lab. In the rule-set for the class with name main there should currently be rules to place the main class in the center column of the grid. Add the following rules to the declaration block:

```
max-height:100%;
overflow-y: auto;
```

   The `max-height` allows us to set a max-height for the selected element. In this case, we are saying the content in the `main` class cannot exceed `100%` of the height we have specified for it in the grid. The `overflow-y` allows us to specify what happens if it overflows the maximum height, the `default` makes it so that a scroll bar appears. If you save and refresh the page, the navigation bar on the left should stay positioned in the center of the browser, but you should be able to scroll up and down the lab instructions in the `main` part of the page (or click the links on the navigation bar).
2. Make a few more touch-ups to the main class.
   a. Give the `main` class a background color (I went with a light grey, which you will see below)
   b. Add 20px of padding
   c. Add a border to the left and right side of the `main` class
3. The image below shows my page after adding some side borders and a background color to the main class:



CHECK POINT 2

Part III – Uploading to UVic Servers

1. If you are using a lab machine click the Windows icon on the bottom-left-corner of the screen, and then type in WinSCP to open up the WinSCP program. WinSCP is a program that allows you to connect to a web server from your computer and transfer files between your device and the server.

   If you are not working on a lab machine, and are using a Windows computer, you can download WinSCP for free here: https://winscp.net/eng/download.php

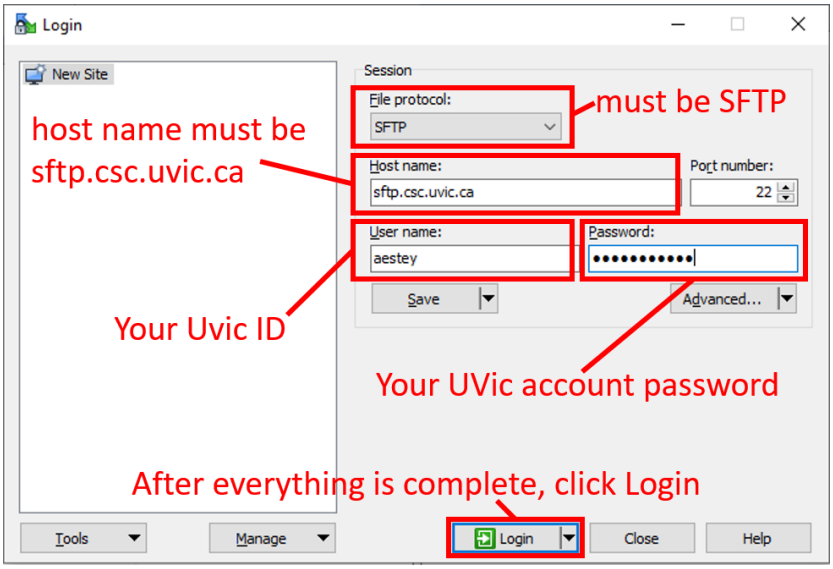
   There are other alternatives if you would prefer to use a different program. The following two also work for non-Windows users:

   - CyberDuck (https://cyberduck.io/download/) and
   - FileZilla (https://filezilla-project.org/download.php?show_all=1)

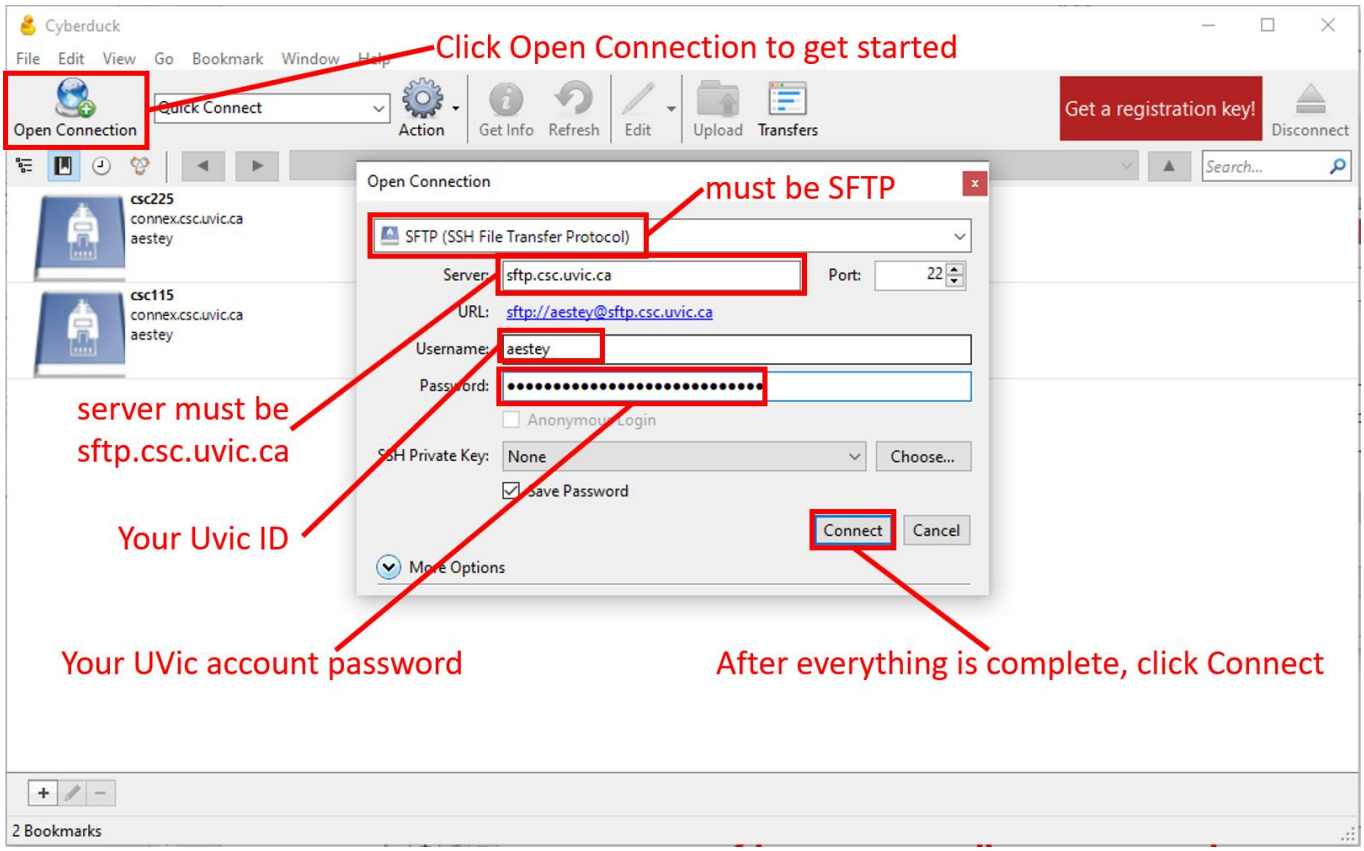
2. Once you have one of the programs from Step 1 running, the next step is to connect to a web server. UVic provides free web hosting, and so we will send out files to the UVic servers. There are many other hosts out there, and you are free to use other web servers outside of UVic was well. The following steps will lead you through how to connect to the UVic web servers:
   a. Make sure the protocol you have selected is SFTP (SSH File Transfer Protocol)
   b. There should be a box where you can enter a server or host name. In that box, fill in the following: sftp.csc.uvic.ca
   c. Next, enter your user name and password (this should be the same username and password you use to login to BrightSpace or the lab computers)
   d. Click Login (or Connect, or something similar!)

   The two images on the next page highlight the important things to remember when connecting to the UVic servers through WinSCP or Cyberduck.

WinSCP setup:

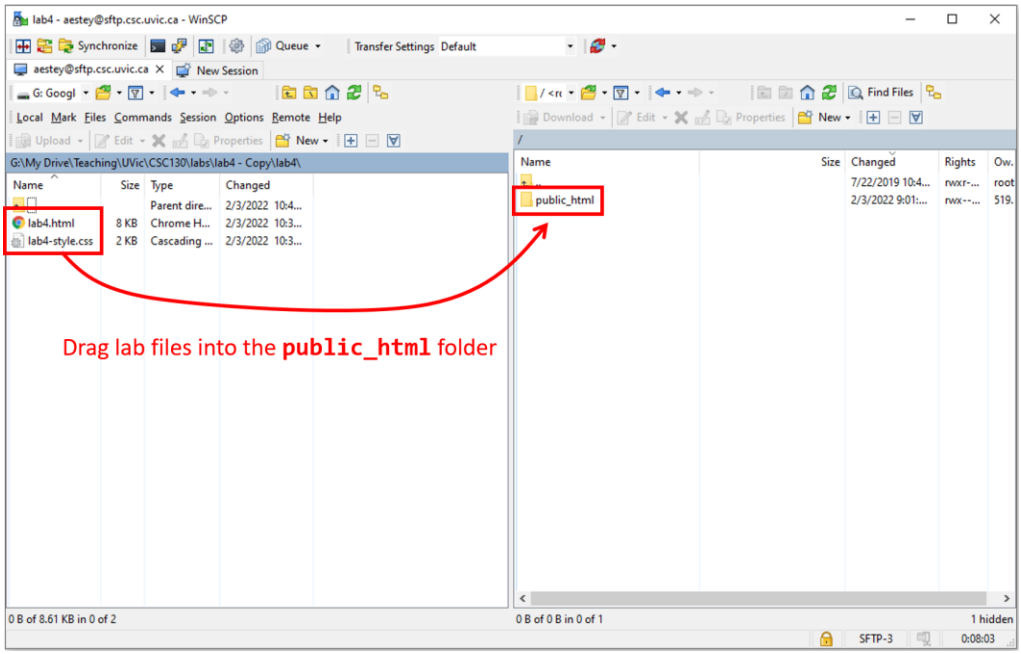


Cyberduck setup:



3. If the login was successful, you should see a screen similar to what is shown below. The window is split into two parts: the left half is the files on your machine, and the right half is files on the web server. In Cyberduck, only the files on the web server are shown (which right now is just a folder called `public_html`)

   You can drag files from one window to another, and WinSCP (and other similar programs) will copy the file from the source to the destination. For example, if I drag `lab4.html` from my computer's lab4 folder on the left, into the `public_html` folder on the web server on the right, the file will be copied onto the web server **(NOTE:** You must drag the file into the public_html folder on the web server)



Part IV – Viewing your page online

1. Go to `https://webhome.csc.uvic.ca/~userID/lab4.html` where `userID` is replaced your login name (the one you use to login to BrightSpace and the lab computers. For example, my webpage would be `http://webhome.csc.uvic.ca/~aestey/lab4.html`
2. Try viewing the page on your mobile phone. Depending on the resolution, the layout of the page may be different that when viewing it at full-screen on a computer monitor.

CHECK POINT 3 (lab complete)