Public Data, Data Publics - Week 3 Local Server for Macs and PCs

In this short tutorial you will familiarize yourself with the terminal, text editor, and local server.

Local server

1. A local server is a server that is managed and hosted locally. Meaning that it is operated by using the command line(Terminal for Macs, Command Prompt for PCs) and runs on your computer without being connected to the internet.
2. We need to use the local server in cases where we are loading external files via javascript. For security reasons, browsers will not render elements of web pages locally without having a server running.
3. We use the local server to quickly develop code projects, we can see what we are making live without uploading to the web. Most projects are made locally before deploying to the web.

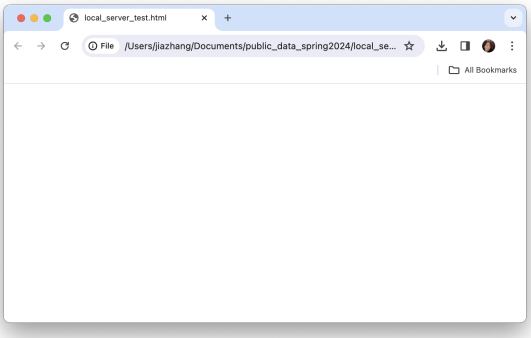
1. Download test file

Download 2 local server test files:
local_server_test.html
d3.js

from:https://drive.google.com/drive/folders/1JAUp0Cc9usxsiWBORZGfqEOAZK2pTqkF?usp=sharing

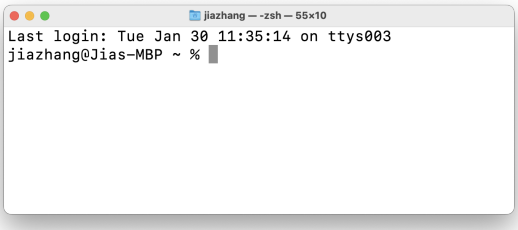
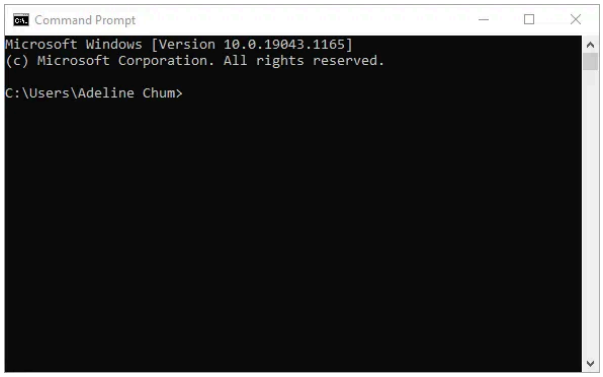
Make a folder on your desktop or in documents to save your files. I have saved my 2 files to a folder called “public_data_spring2024” inside Documents.

Go to the file local_server_test.html and open in the browser. (right click>open with>chrome)
I am using chrome here, but safari and firefox as well as any browser that is not Internet Explorer will work for our purposes.



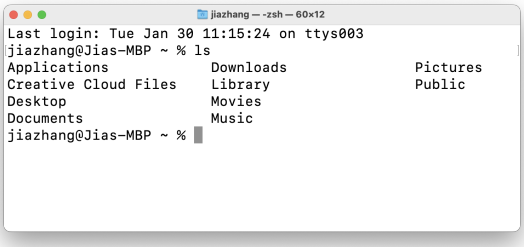
You will see a blank page. This is because the content could not be loaded without a server.

2. Open terminal

Mac	PC
Open Terminal Click the magnifying glass icon on the upper right corner of your desktop and search for Termina. You will see this new terminal window below. Notice that the last line where the cursor is always indicates where you are in terms of your file structure. Now, upon opening the terminal for the first time, I am in my user account jiazhang, and my computer is called Jia. 	Open Command Prompt Type “Command Prompt” in the start menu search bar and open up this app. You will see this new window below. Notice the last line where the cursor is always indicates where you are in terms of your file structure. Here, the default is in the C:\Users\Adeline Chum because this image is provided by Adeline who is a PC user. 

3. Navigating in the terminal

Mac	PC
When you first open the terminal, you are likely in the home directory of your computer. (A directory is just a folder) Here are 2 basic commands for navigating your terminal. **ls** means list directory shows you all the files in your current directory, here is what is shown when I type ‘ls’ into my home directory. You will see something similar if not identical.	You will be in your home drive. Here are 2 basic commands for navigating your Command Prompt **dir** (or **ls** in Powershell) means list directory, and shows you all the files in your current directory. **cd** means change directory Changes your current directory to which ever you name after the command

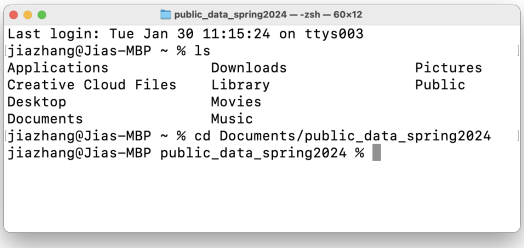


cd means change directory
Changes your current directory to which ever you name after the command

Let's navigate to the directory where we stored our downloaded files. For me this is the 'public_data_spring2024' folder inside Documents. So my command from my home folder would be

cd Documents/public_data_spring2024

And I this would be my result:



To change to the correct drive and navigate to where you have saved your class folder, type "cd" meaning change directory followed by "/d" to change the drive, then type the drive you want to go to.

Then repeating this process to go to the class folder, type "cd" and the location of your folder within the drive.

If you have saved the 2 files inside a folder called as I did "public_data_spring2024" in drive g for example, navigate to that directory by typing first

Cd /d g:

And then cd again with the location of your folder within the drive:

cd My Drive\public_data_spring2024

4. Starting your local server

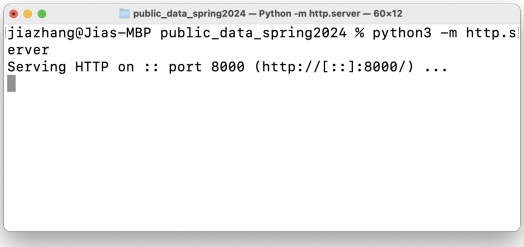
In our directory that contains the 2 files, we will start our local server. This will vary depending on your python installation.

Type in the command for python 3
python3 -m http.server

Or for python 2
python -m SimpleHTTPServer

Here is the result, you can see that the server has started and is serving on port 8000 which is the default. In the future, if necessary, we can specify other ports by adding a number at the

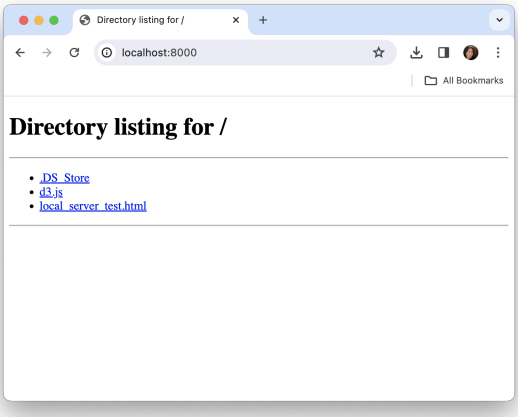
end of our server command.



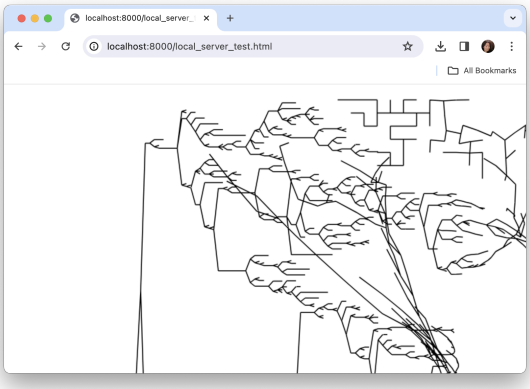
We have our simple server up and running

5. Test it out

Let's now open the page on our server through the browser to see our pages. Open your browser and go to this address.
http://localhost:8000/



Click on the .html file and you will see that the file is not blank, it will show an animated maze to tree visualization.



You are now ready to use your local server!

Supplemental reading
You can also watch https://scrapism.lav.io/intro-to-the-command-line/ by Sam Lavigne to learn more about the terminal.