Our Web Application

How do computers talk to each other?

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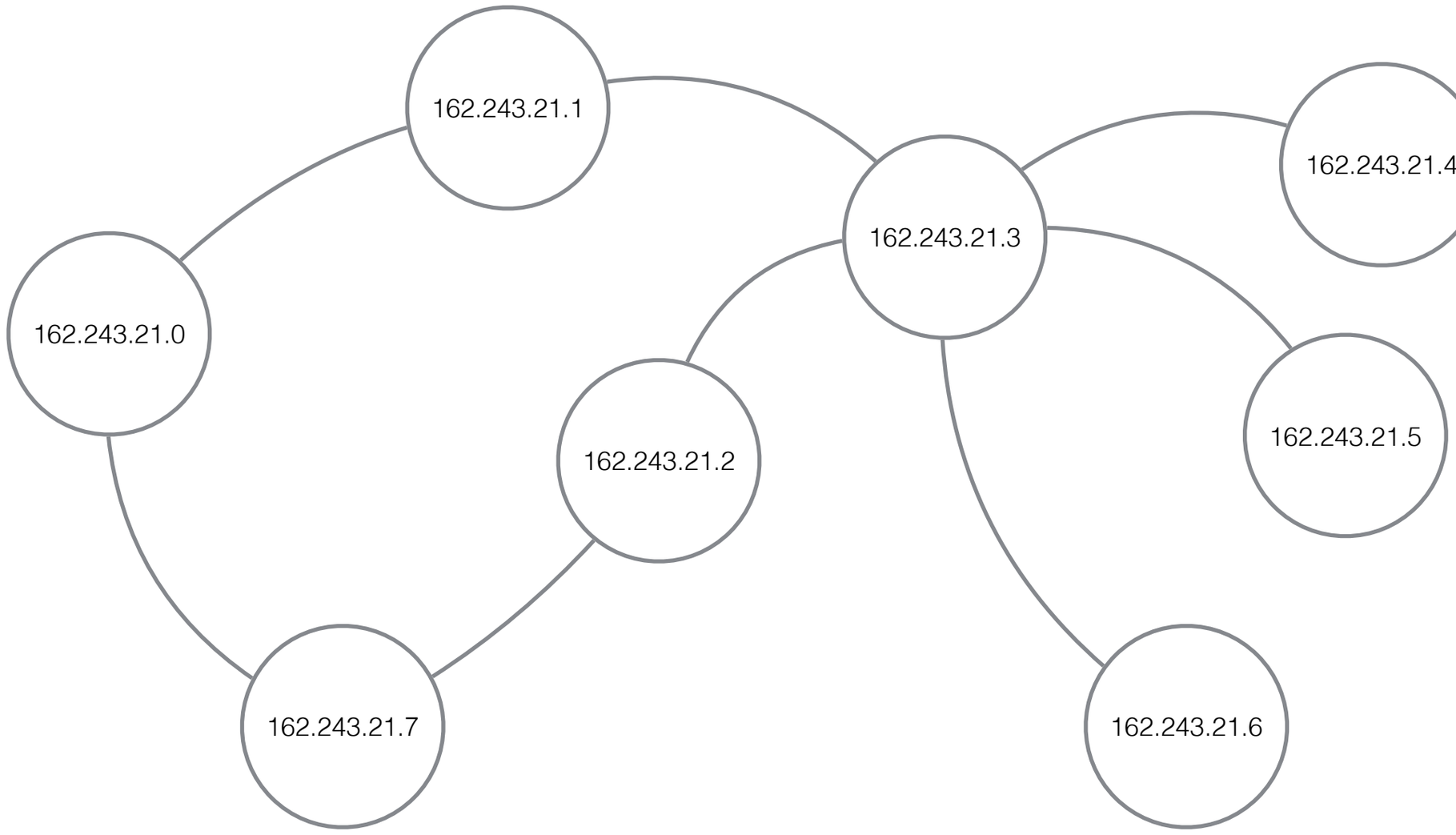
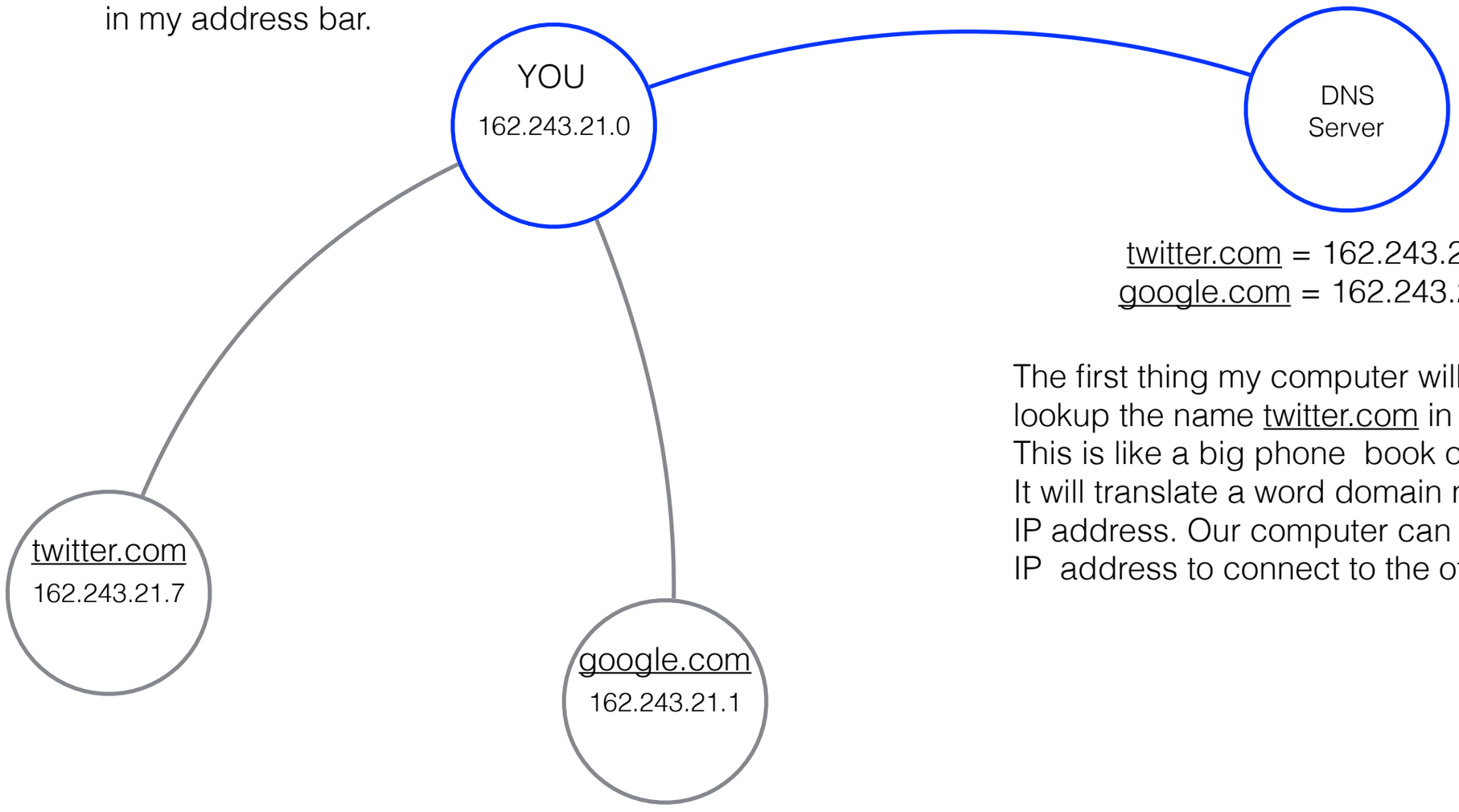


https://youtu.be/C3sr7_0FyPA

How do we find other computers?

I want to go to twtter.com
So I type the URL http://twitter.com
in my address bar.

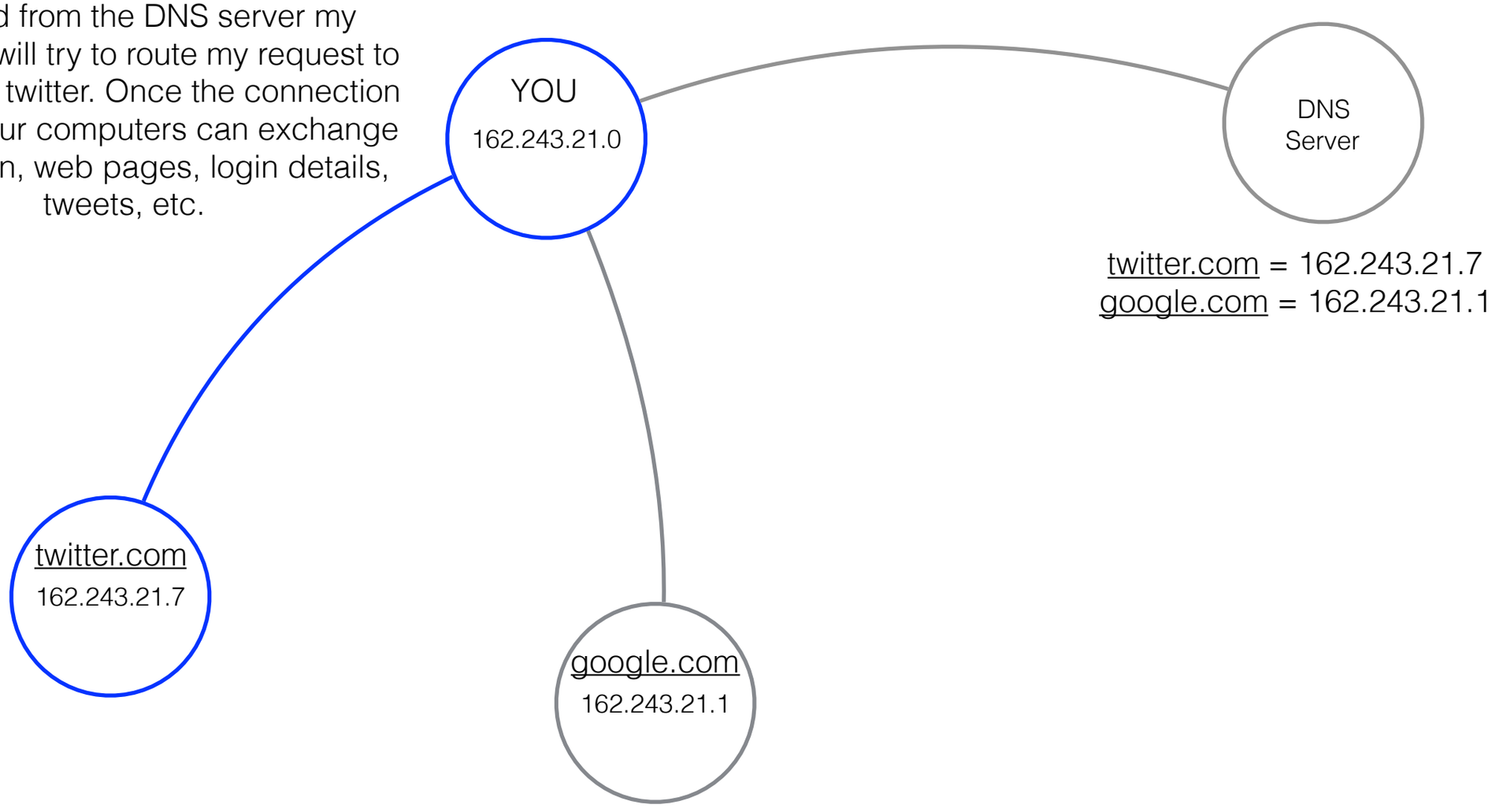


twitter.com = 162.243.21.7
google.com = 162.243.21.1

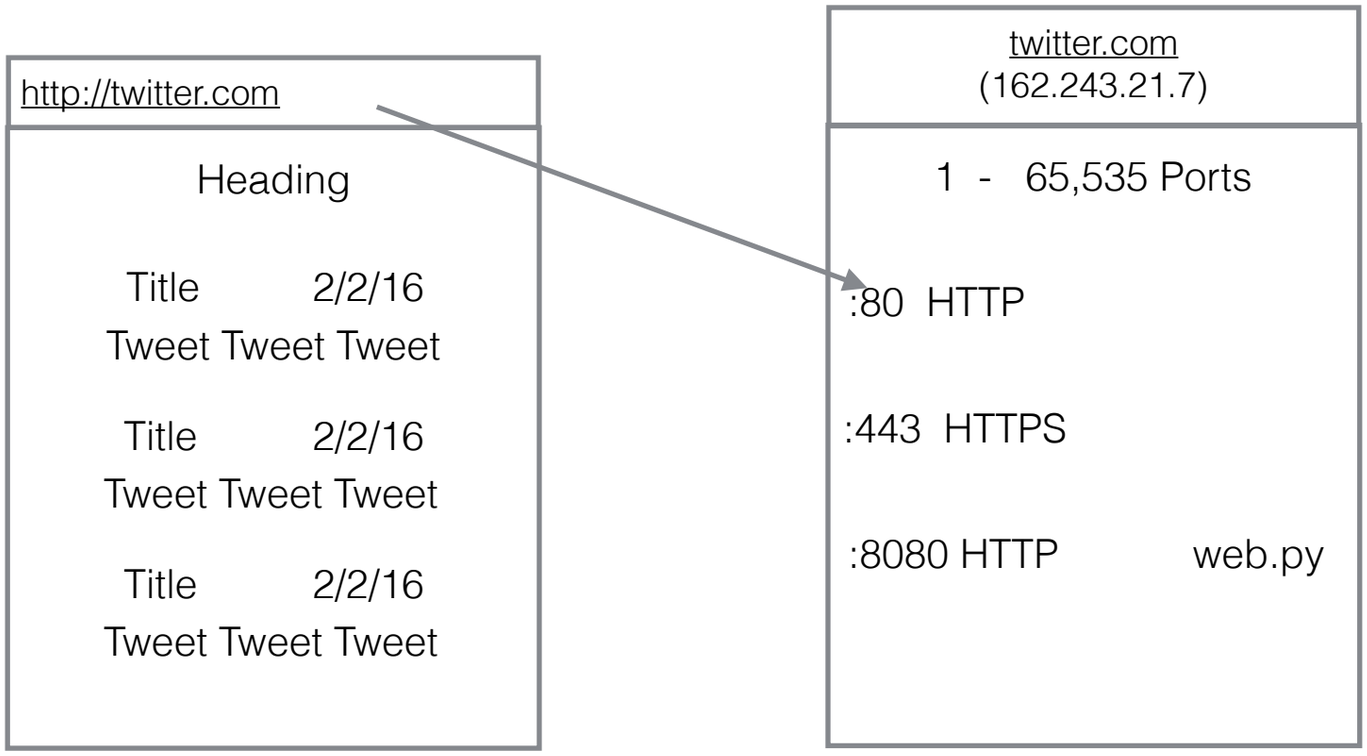
The first thing my computer will do is
lookup the name twitter.com in a DNS server.
This is like a big phone book of the internet.
It will translate a word domain name to an
IP address. Our computer can use this
IP address to connect to the other computer.

How do we find other computers?

Using the IP address 162.243.21.7 returned from the DNS server my computer will try to route my request to connect to twitter. Once the connection is made, our computers can exchange information, web pages, login details, tweets, etc.



I found and connected to a computer, now what?
How do I get a web page?



On every computer you connect to there are a set of ports that programs **listen** on for connections.

Where an IP address can be thought of as a phone number. A port can be thought of as an office extension.

Some of these ports are predefined for specific types of connections.

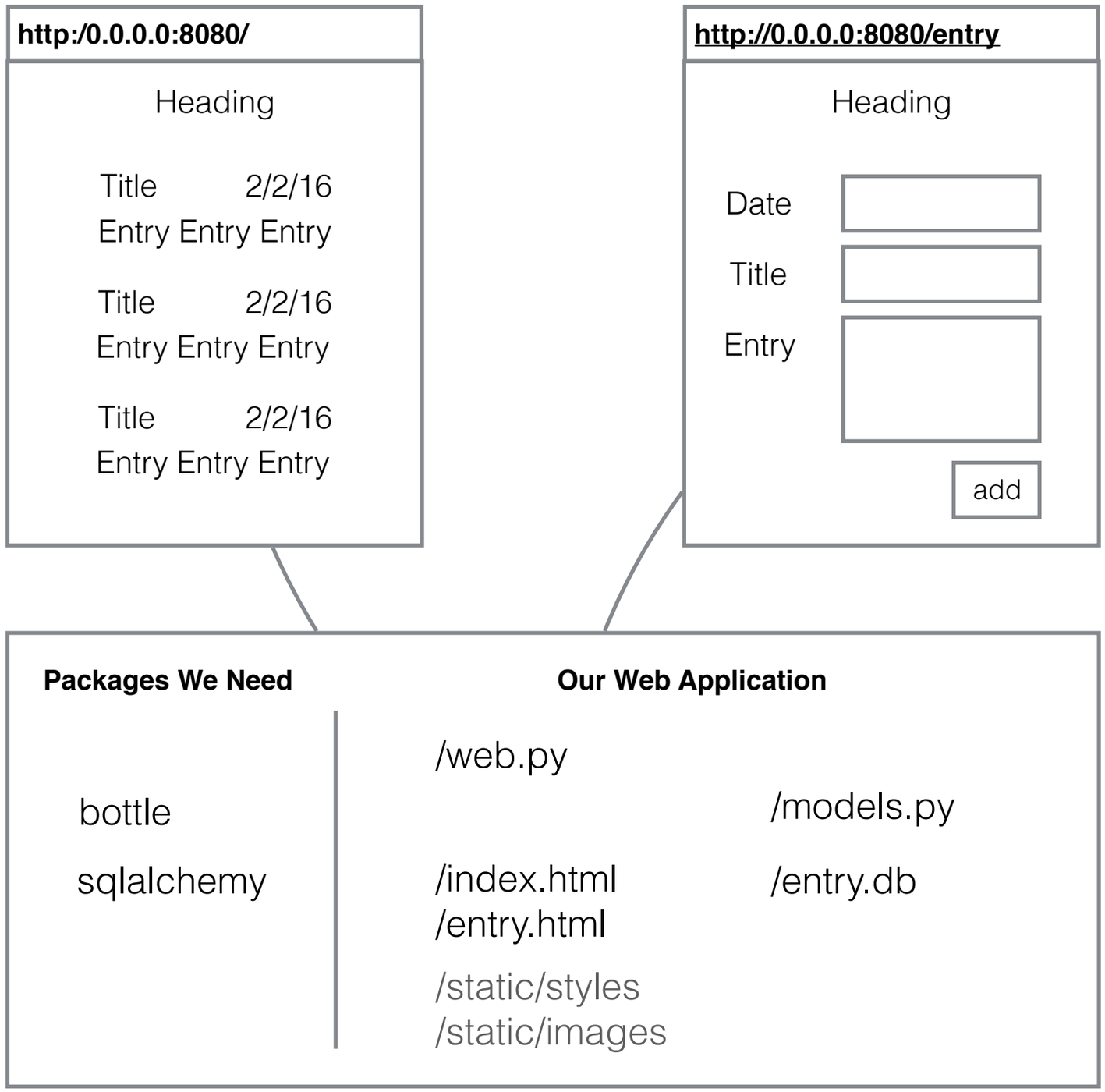
Port 80 is typically used for web pages.
Port 443 is used for secure web pages.
Port 22 is for SSH
/etc/services has a list of common ports

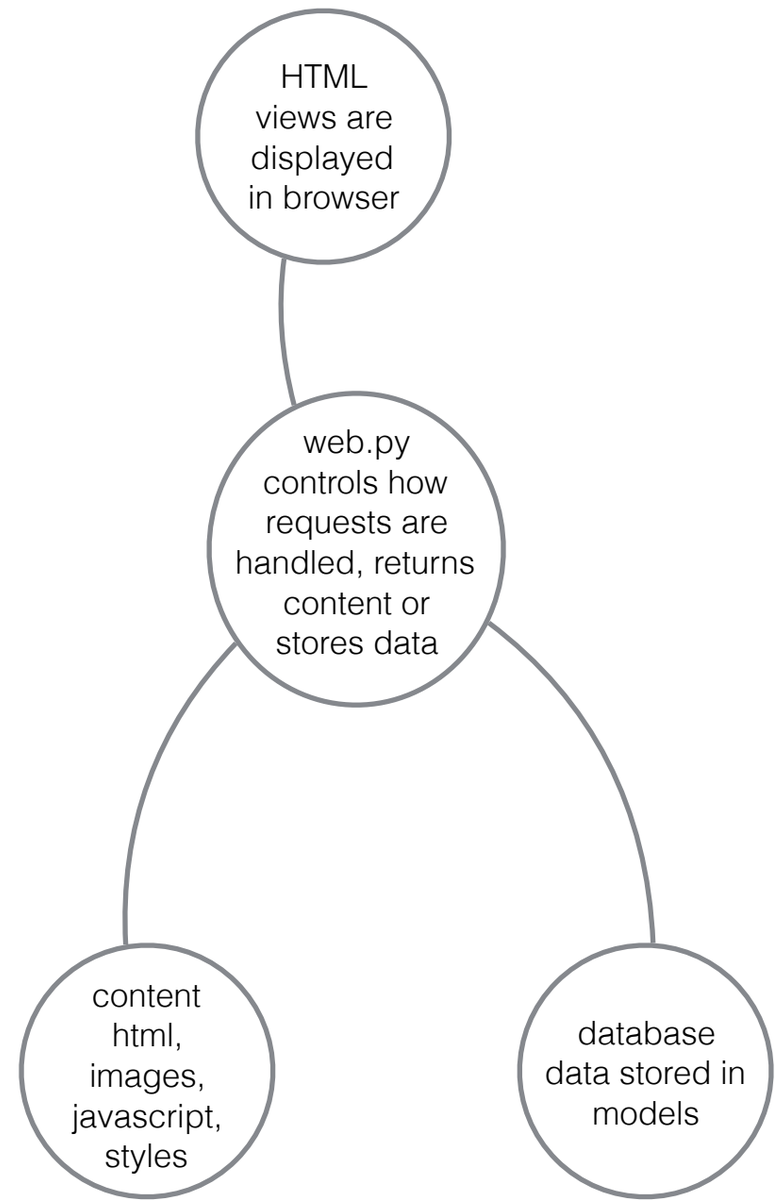
Once your browser connects to a port, the program or web application listening on that port will send you content. Content could be a webpage, images, code, and other things needed to show you a website.

You can write programs that listen on ports not already being used.

We're going to write a web application that listens in on port 8080.

Our Web Application





The steps we'll take

1. Create pages to display and collect entries
    - web.py - three routes **/** and **/entry** and **/static**, using bottle
    - create HTML files - index.html and entry.html
    - add our /static content
2. Store entries in a database
    - create models.py
    - update web.py
    - update entry.html with a new form
3. Display all of our entries
    - update web.py
    - update index.html