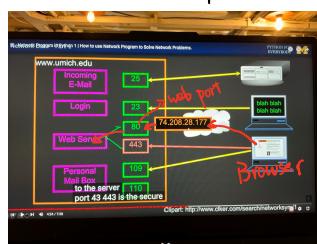


Python Programming - Network Architecture.

- **Socket**: an endpoint of a bidirectional inter-process communication flow across an IP-based computer network.

连接 computers 的媒介



80 : web port, "Http"

- If you want connect to the Internet, you should "import" something first. Obviously, you should import "Socket".
- **HTTP** - Hypertext Transfer Protocol (超文本传输协议)

URL basic structure:

e.g. `http://www.dr-chuck.com/page1.htm`

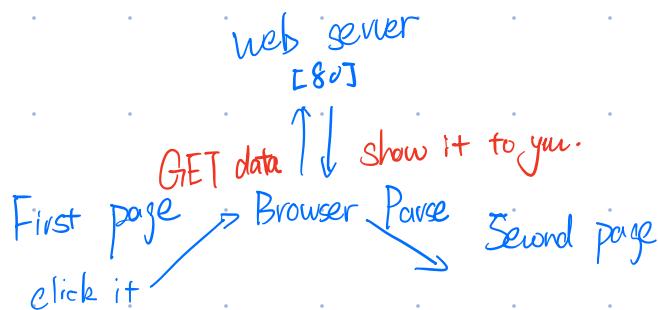
protocol host
(协议) (主机)

document
(文档)
The specific documents
in the web servers.

Http is using This is the
to require document IP address of
from the web server the host servers.

In conclusion, through this URL
⇒ structure, you've connecting the
"host" IP address by "protocol" http
and request to browse the specific
page "/page1.htm"

- request response cycle



Software : telnet

- How we use these things in Python?

```

import socket

mysock = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
mysock.connect(('data.pr4e.org', 80))
cmd = 'GET http://data.pr4e.org/romeo.txt HTTP/1.0\n\n'.encode()
mysock.send(cmd)

while True:
    data = mysock.recv(512)
    if len(data) < 1:
        break
    print(data.decode())
    mysock.close()

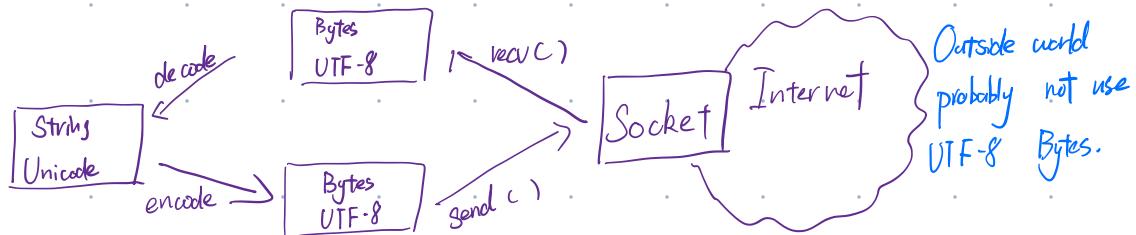
```

- There is a new function called "ord()" tells us the numeric value of a single ASCII character

Like `print(ord('H'))`
⇒ 72

- UTF-8 is the solution that can switch all the code from different region into single sheet.

All the different characters can be analyzed by unicod in Python and the function is "decode"



- Using urllib in Python (Way of getting data from web)

This function can switch website to likely a file.

`import urllib.request, urllib.parse, urllib.error`

Easy way of searching data called BeautifulSoup from www.crummy.com

