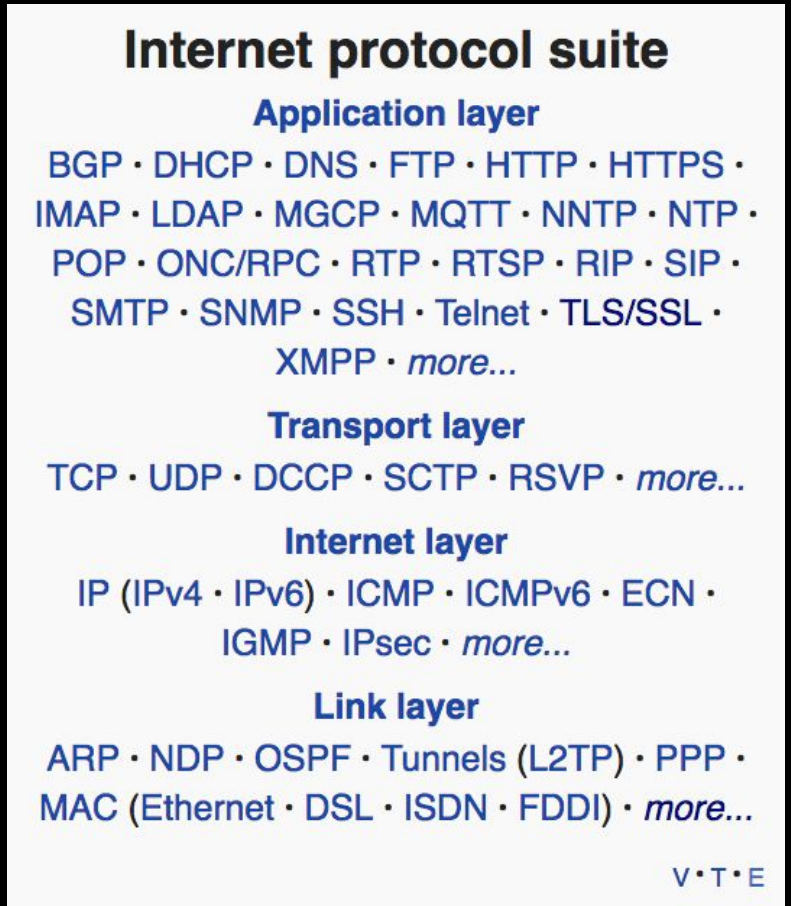
hello, section!

week 5

sandbox: http://bit.ly/2yEPKog

pset 4 recap

the land of acronyms...



the land of acronyms...

TCP/IP

HTTP

HTML

CSS

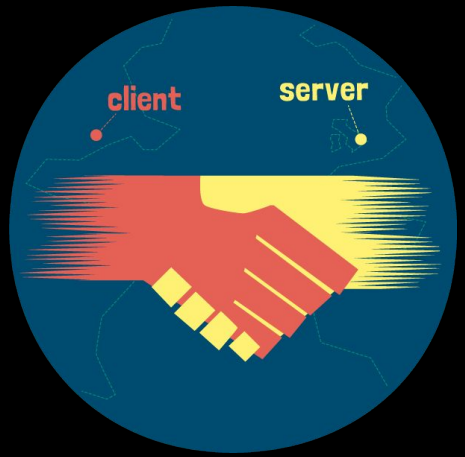
DOM

...

TCP/IP

TCP/IP

how do I get information from one computer to another?



TCP/IP

transmission control protocol

/

internet protocol

TCP/IP

TCP

how to send and transport packages

IP

where to send and transport packages

TCP/IP

IP

where to send and transport packages

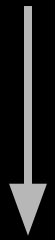
HTTP

HTTP

hypertext transfer protocol

HTTP

hypertext transfer protocol



a set of rules for handling requests for data

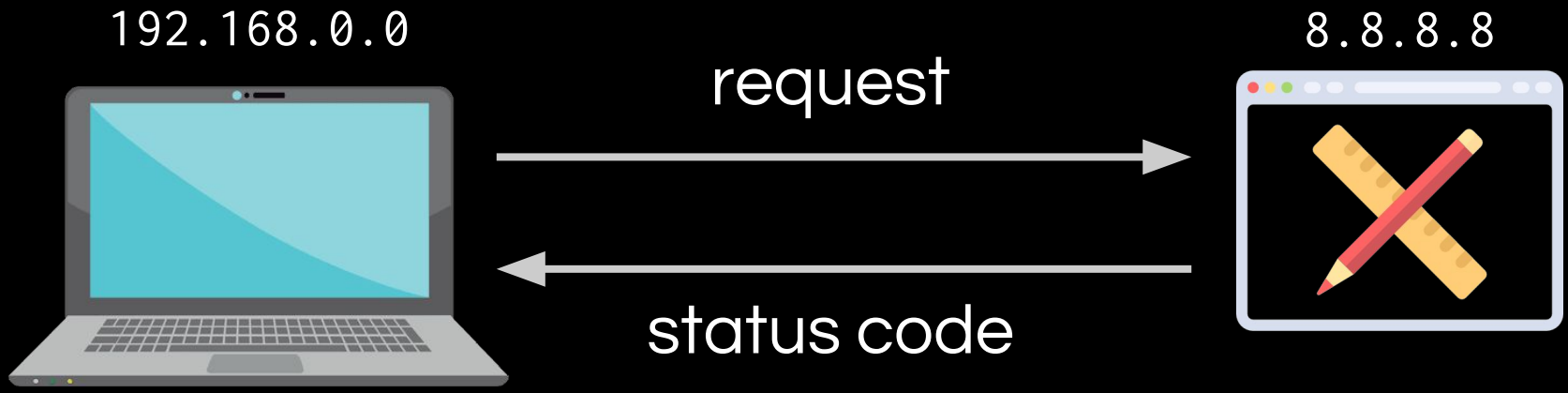
HTTP

```
GET / HTTP/1.1
Host: www.google.com
```

HTTP

page
request method
HTTP version
GET / HTTP/1.1
Host: www.google.com
domain name

HTTP



HTTP

200: OK

301: moved permanently

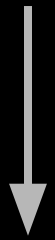
404: not found

500: server order

HTML

HTML

hyper text markup language



put (different kinds of) content on a webpage

HTML

<tag> [content] </tag>

HTML

```
<!DOCTYPE html>
<html lang="en">
    <head>
        <title>hello, world</title>
    </head>
    <body>
        hello!
    </body>
</html>
```

HTML

```
<img src="smiley.gif"
     alt="Smiley face"
     width="42"
     height="42">
```

HTML

```
<a href="https://cs50.harvard.edu/">CS50</a>
```

CS50

HTML

```
<ul>
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ul>
```

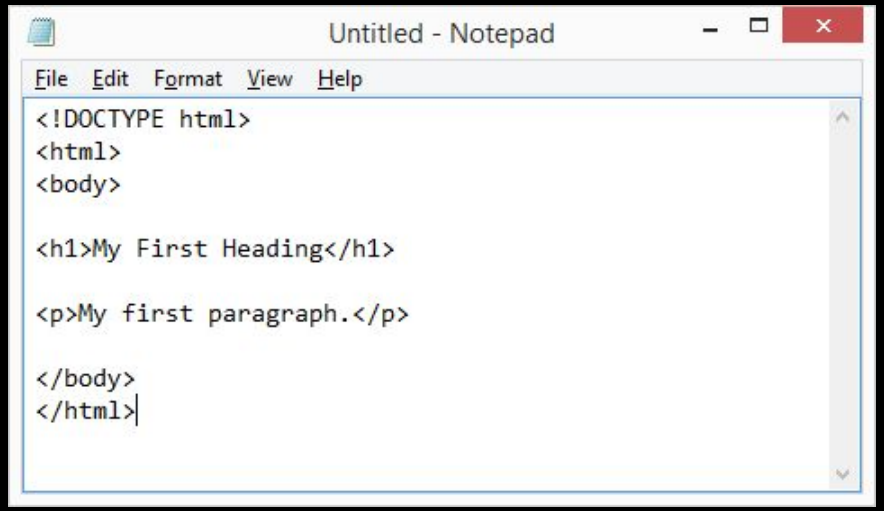
- Coffee
- Tea
- Milk

HTML

```
<ol>
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ol>
```

1. Coffee
2. Tea
3. Milk

HTML

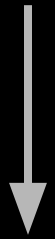

Untitled - Notepad
File Edit Format View Help
<!DOCTYPE html>
<html>
<body>
<h1>My First Heading</h1>
My first paragraph.
</body>
</html>

index.htm
file:///C:/Users/myuser/Desktop/index.htm
My First Heading
My first paragraph.

CSS

CSS

cascading style sheets



make your website look cool & groovy

CSS

My first styled page - Konqueror
Location Edit View Go Bookmarks Tools Settings Window Help
Home page
Musings
My town
Links
My first styled page
Welcome to my styled page!
It lacks images, but at least it has style. And it has links, even if they don't go anywhere...
There should be more here, but I don't know what yet.
Made 5 April 2004
by myself.
Page loaded.

CSS

```
<p style="color:blue;">
    Hello, world!
</p>
```

CSS

CSS style attribute

```
<p style="color:blue;">
    Hello, world!
</p>
```

CSS

CSS property

```
<p style="color:blue;">
    Hello, world!
</p>
```

CSS

CSS value

```
<p style="color:blue;">
    Hello, world!
</p>
```

CSS

```
<style>
    p
    {
        color: blue;
    }
</style>
```

CSS

text.html

```
<head>
    <link rel="stylesheet" href="styles.css">
</head>
<body>
    <p>hello!</p>
</body>
```

styles.css

```
p {
    color: blue;
}
```

CSS

text.html

```
<head>
    <link rel="stylesheet" href="styles.css">
</head>
<body>
    <p id="para1">hello!</p>
</body>
```

styles.css

```
#para1 {
    color: blue;
}
```

CSS

text.html

```
<head>
    <link rel="stylesheet" href="styles.css">
</head>
<body>
    <p class="center">hello!</p>
</body>
```

styles.css

```
.center {
    color: blue;
}
```

HTML/CSS seem tedious...

Bootstrap

B Home Documentation Examples Themes Expo Blog v4.1 Download

Bootstrap

Build responsive, mobile-first projects on the web with the world's most popular front-end component library.

Bootstrap is an open source toolkit for developing with HTML, CSS, and JS. Quickly prototype your ideas or build your entire app with our Sass variables and mixins, responsive grid system, extensive prebuilt components, and powerful plugins built on jQuery.

Get started Download

Currently v4.1.3

Examples

Bootstrap includes several predefined button styles, each serving its own semantic purpose, with a few extras thrown in for more control.

Copy

```
<button type="button" class="btn btn-primary">Primary</button>
<button type="button" class="btn btn-secondary">Secondary</button>
<button type="button" class="btn btn-success">Success</button>
<button type="button" class="btn btn-danger">Danger</button>
<button type="button" class="btn btn-warning">Warning</button>
<button type="button" class="btn btn-info">Info</button>
<button type="button" class="btn btn-light">Light</button>
<button type="button" class="btn btn-dark">Dark</button>

<button type="button" class="btn btn-link">Link</button>
```

JavaScript

JavaScript

- language for web programming
- client side
- runs in web browser
  (Safari, Chrome, Firefox, etc)

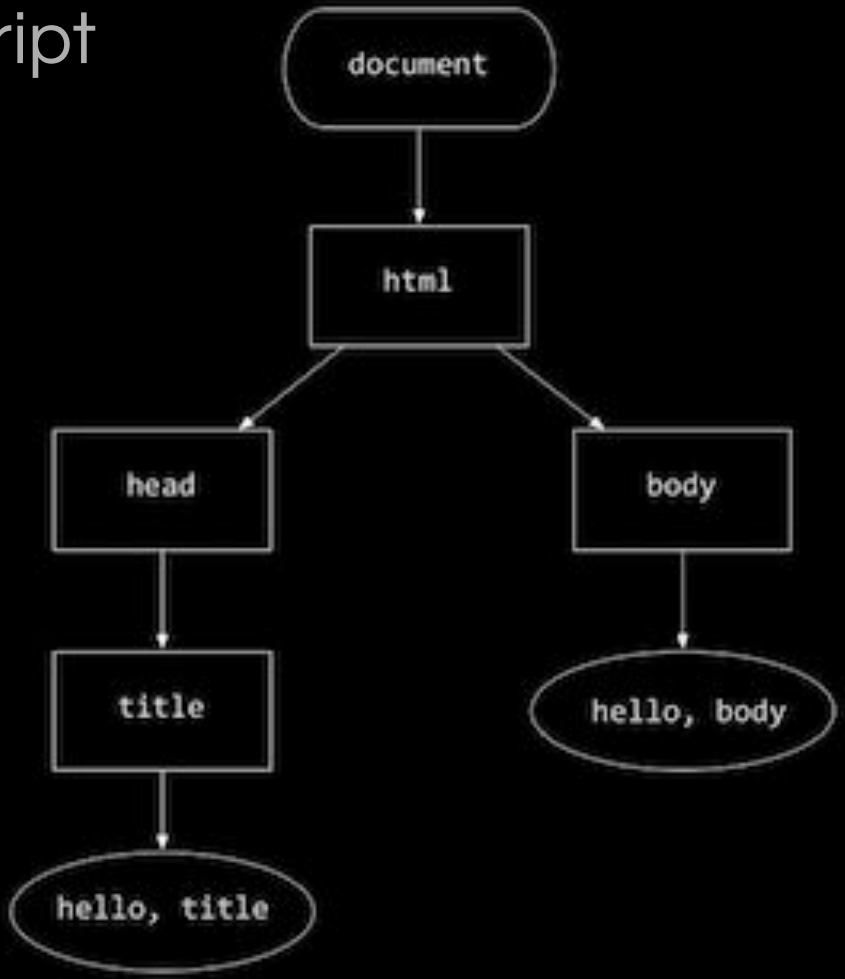
JavaScript

<script> [JavaScript] </script>

JavaScript

```
<!DOCTYPE html>

<html lang="en">
    <head>
        <title>
            hello, title
        </title>
    </head>
    <body>
        hello, body
    </body>
</html>
```



JavaScript

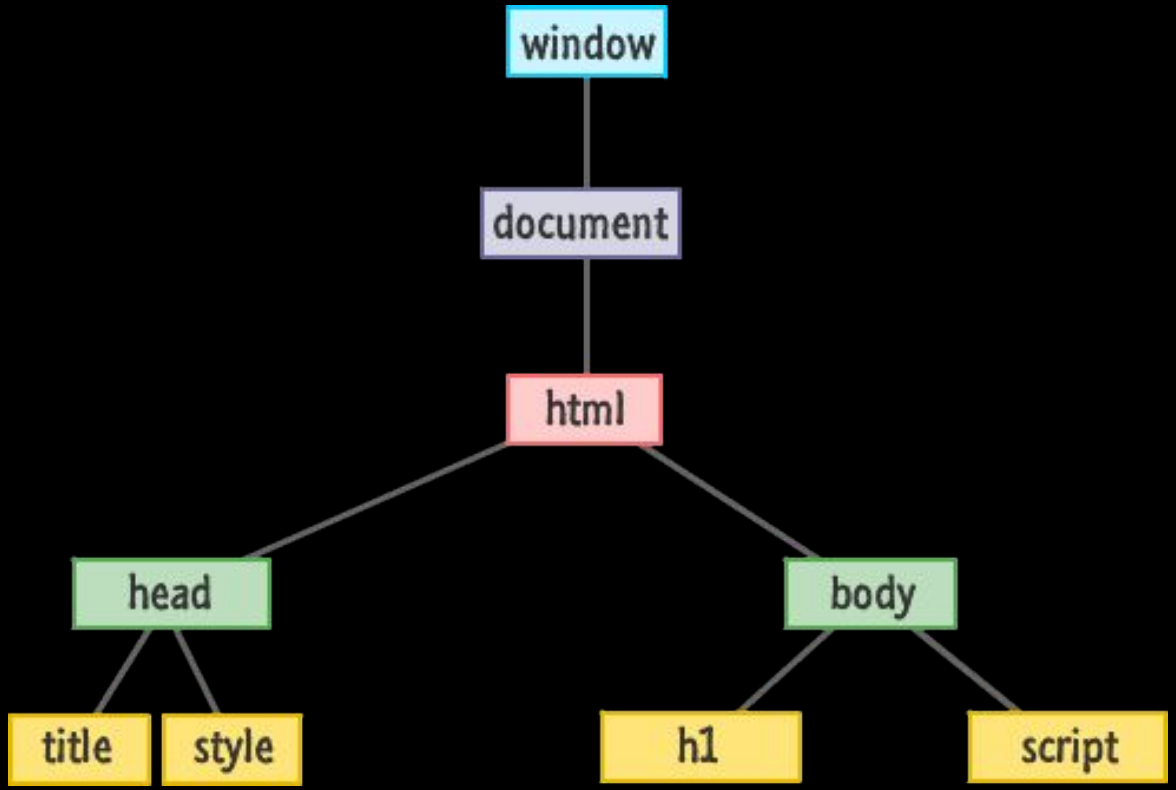


image from Kirupa.com

JavaScript

```
// a simple variable
let age = 19;

// an array
let array = [1, 2, 3, 4, 5];

// string
let str = "Happy birthday, Maria!";

// an object
let teacher = {name: "David", course: 50};
```

JavaScript

```
while (true)
{
    [do-something]
}

for (initialization; condition; update)
{
    [do-something]
}

if (true)
{
    [do-something]
}
```

JavaScript

```
<button onclick="foo()">Click Here!</button>
```

JavaScript

```
let p = document.querySelector('#foo');

p.innerHTML = "New paragraph contents.";
```

JavaScript

```
let body = document.querySelector('body');

document.querySelector('#red').onclick =

function() {

    body.style.backgroundColor = 'red';

}
```

JavaScript

getElementsByTagName(html)

```
<html>
    <head>
        <title>Hello, world</title>
    </head>
    <body>
        <h2>Here's my page</h2>
        <p>World, hello</p>
        <a href="test.html">Link</a>
    </body>
</html>
```

JavaScript

getElementsByTagName(head)

```
<html>
    <head>
        <title>Hello, world</title>
    </head>
    <body>
        <h2>Here's my page</h2>
        <p>World, hello</p>
        <a href="test.html">Link</a>
    </body>
</html>
```

JavaScript

getElementsByTagName(title)

```
<html>
    <head>
        <title>Hello, world</title>
    </head>
    <body>
        <h2>Here's my page</h2>
        <p>World, hello</p>
        <a href="test.html">Link</a>
    </body>
</html>
```

JavaScript

getElementsByTagName(body)

```
<html>
    <head>
        <title>Hello, world</title>
    </head>
    <body>
        <h2>Here's my page</h2>
        <p>World, hello</p>
        <a href="test.html">Link</a>
    </body>
</html>
```

pset 5 tips & tricks

google everything