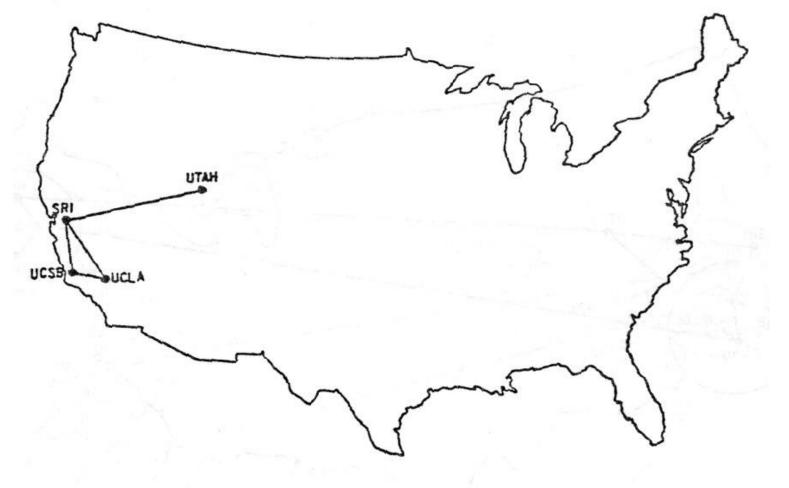
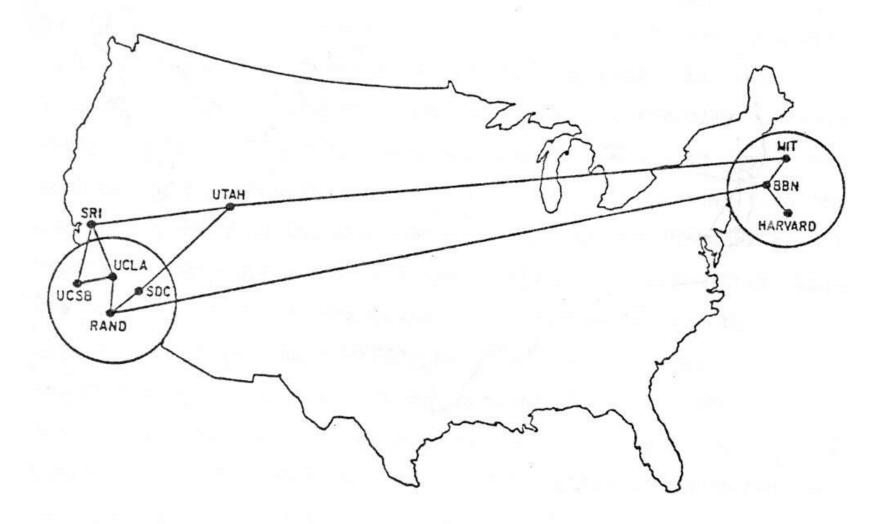
This is CS50

internet



The ARPANET in December 1969

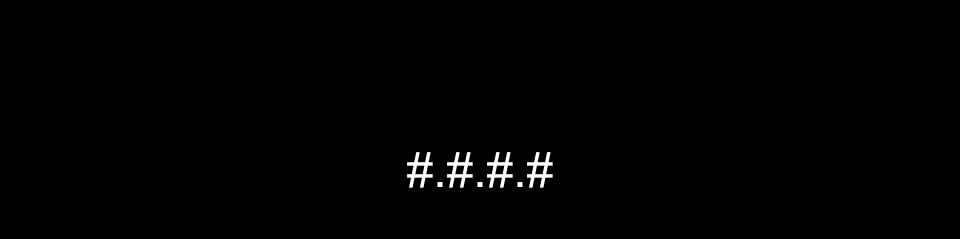


routers



TCP/IP

IP



TCP

80

HTTP

443 HTTPS

...

DNS

Domain Name	IP Address

Fully Qualified Domain Name	IP Address

HTTP

HTTPS

https://www.example.com

https://www.example.com/

https://www.example.com/path

https://www.example.com/folder/

GET

POST

• • •

Host: www.example.com

GET / HTTP/1.1

HTTP/1.1 200 OK
Content-Type: text/html

Host: www.harvard.edu

GET / HTTP/1.1

HTTP/1.1 301 Moved Permanently	
Location: https://www.harvard.edu/	
•••	

HTTP/1.1 404 Not Found

Content-Type: text/html

- 200 OK
 301 Moved Permanently
- 302 Found
- 304 Not Modified
- 307 Temporary Redirect
- 401 Unauthorized
- 403 Forbidden
- 404 Not Found
- 418 I'm a Teapot
- 500 Internal Server Error 503 Service Unavailable
- • •

GET / HTTP/1.1
Host: safetyschool.org

GET / HTTP/1.1
Host: www.harvardsucks.org



HTML

tags

attributes

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

http-server

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

<!DOCTYPE html>

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

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

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

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

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

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

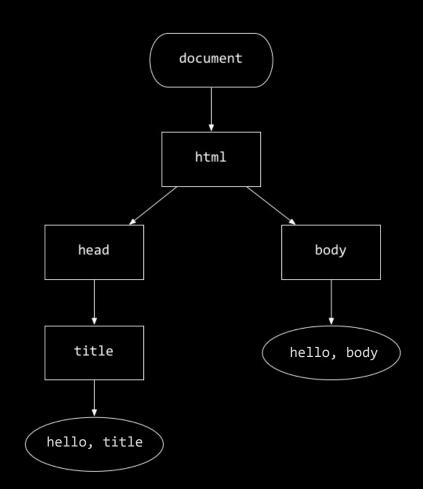
```
<!DOCTYPE html>
<html lang="en">
    <head>
        <title>
            hello, title
        </title>
    </head>
    <body>
        hello, body
    </body>
</html>
```

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

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

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

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



https://www.example.com/path

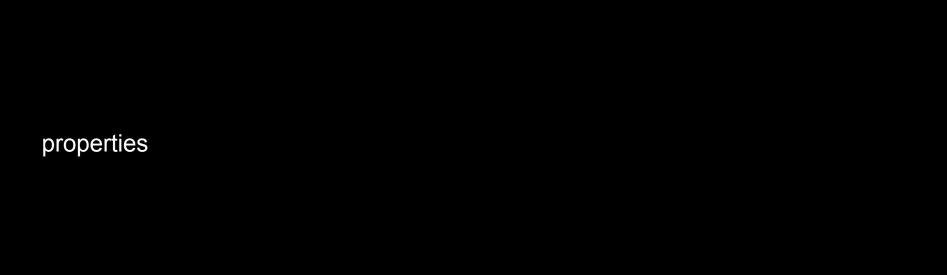
https://www.example.com/path?key=value

GET /search?q=cats HTTP/1.1

Host: www.google.com

validator.w3.org

CSS



type selector

class selector

ID selector

attribute selector

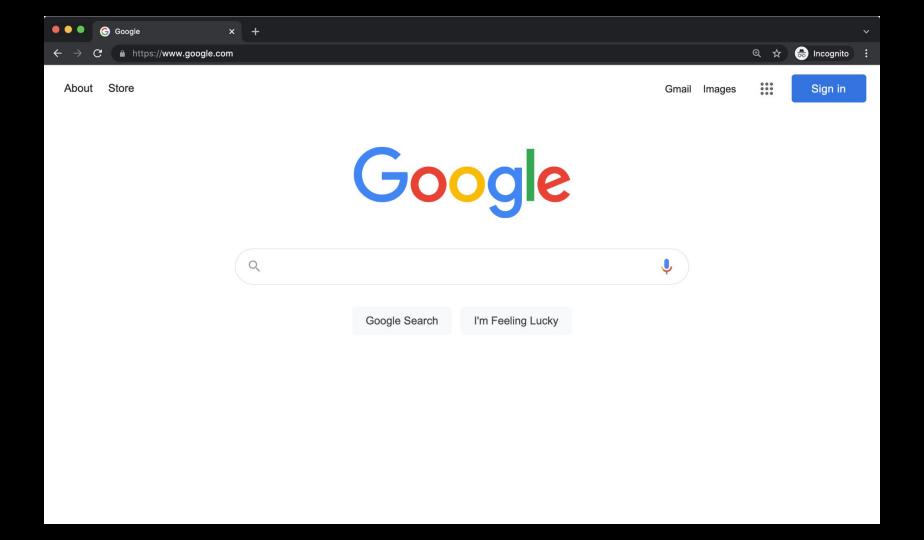
. . .

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

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

```
<!DOCTYPE html>
<html lang="en">
    <head>
        <link href="styles.css" rel="stylesheet">
        <title>
            hello, title
        </title>
    </head>
    <body>
        hello, body
    </body>
</html>
```

frameworks



JavaScript



set counter ▼ to 0

let counter = 0;



change counter ▼ by 1

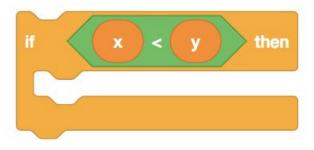
counter = counter + 1;

change counter ▼ by 1

counter += 1;

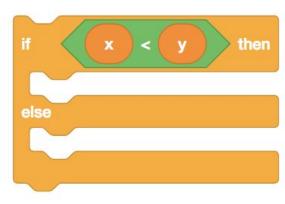
change counter ▼ by 1

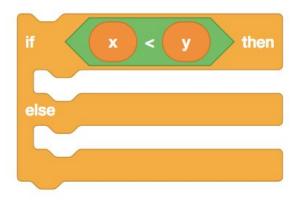
counter++;



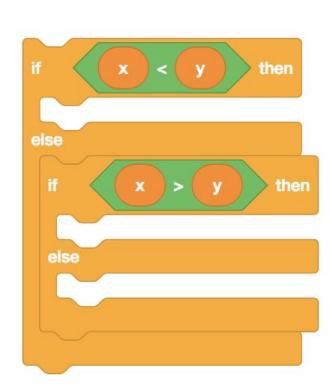


```
if (x < y)
{
```



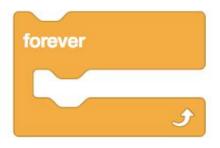


```
if (x < y)
{
}
else
{</pre>
```



```
then
else
                              then
  else
```

```
if (x < y)
else if (x > y)
else
```



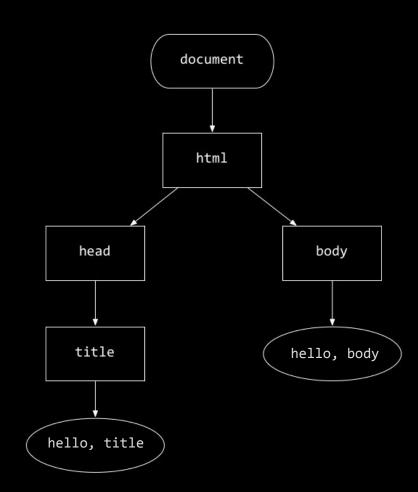
```
forever
```

```
while (true)
{
}
```

```
repeat 3
```

```
for (let i = 0; i < 3; i++)
{
}</pre>
```

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



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

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

```
<!DOCTYPE html>
<html lang="en">
    <head>
        <script src="scripts.js"></script>
        <title>
            hello, title
        </title>
    </head>
    <body>
        hello, body
    </body>
</html>
```

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

```
<!DOCTYPE html>
<html lang="en">
    <head>
        <title>
            hello, title
        </title>
    </head>
    <body>
        hello, body
        <script src="scripts.js"></script>
    </body>
</html>
```

blur change click drag focus keyup load mousedown mouseover mouseup submit touchmove unload • • •

This is CS50