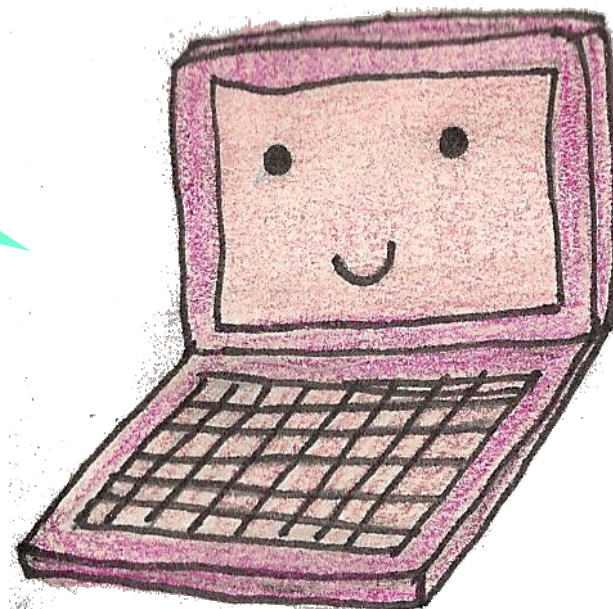


# Some Fantastic Front-End Performance Tricks and Why We Do Them

# Some Fantastic Front-End Performance Tricks and Why We Do Them

whEEEEEEEE!

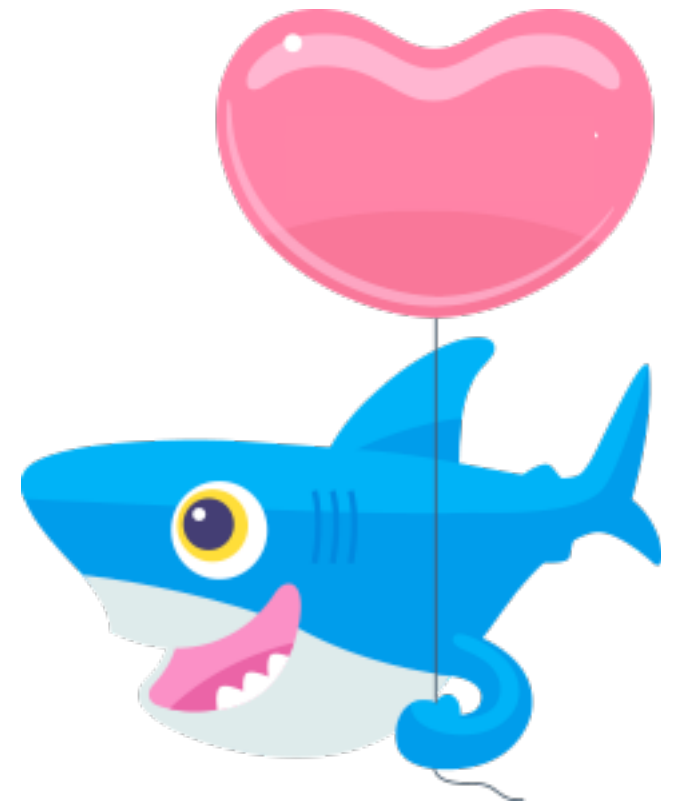


Jenna Zeigen  
QueensJS  
2/3/16  
@zeigenvector

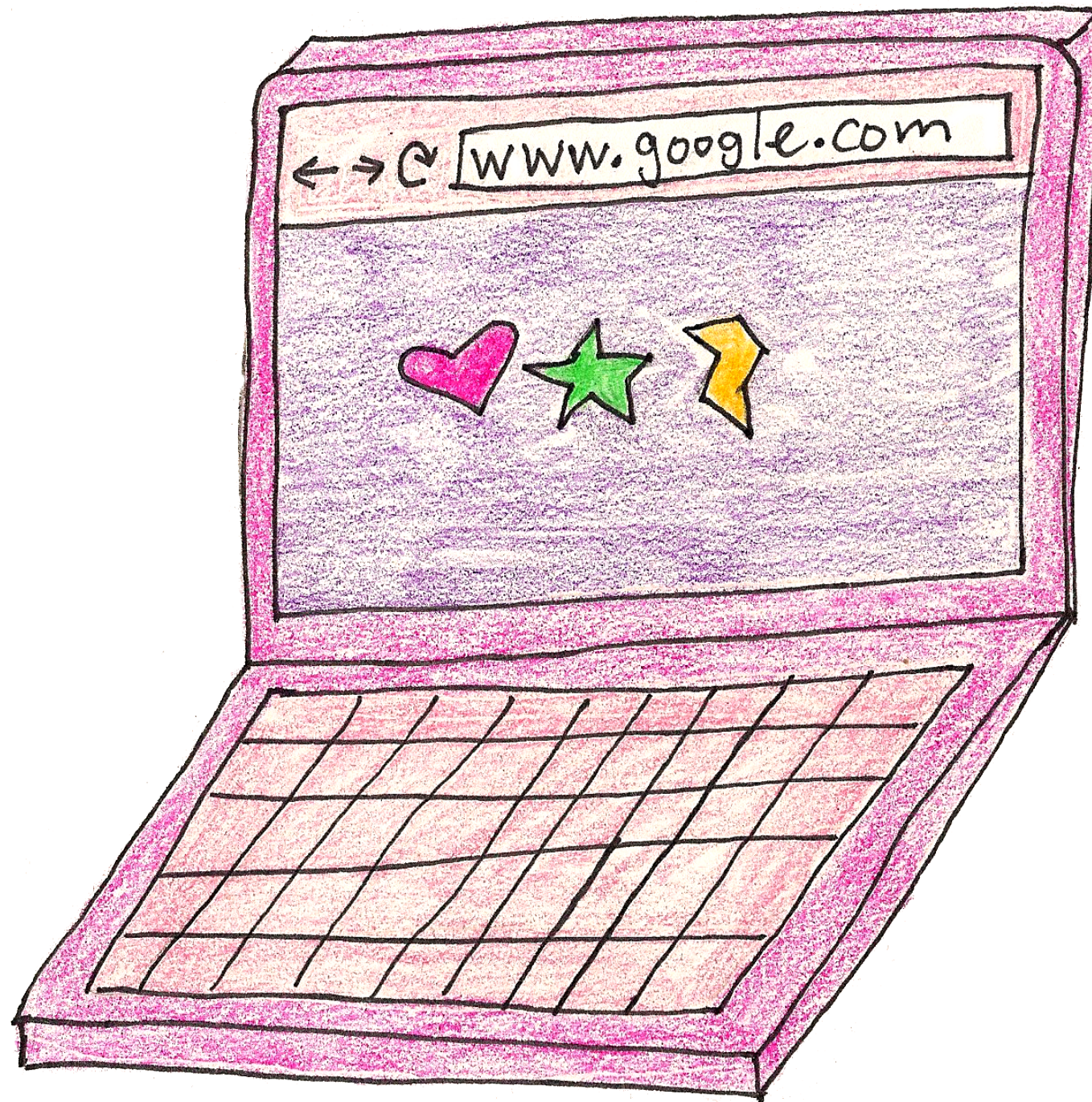
Engineering Manager  
@ DigitalOcean



zeigenvector

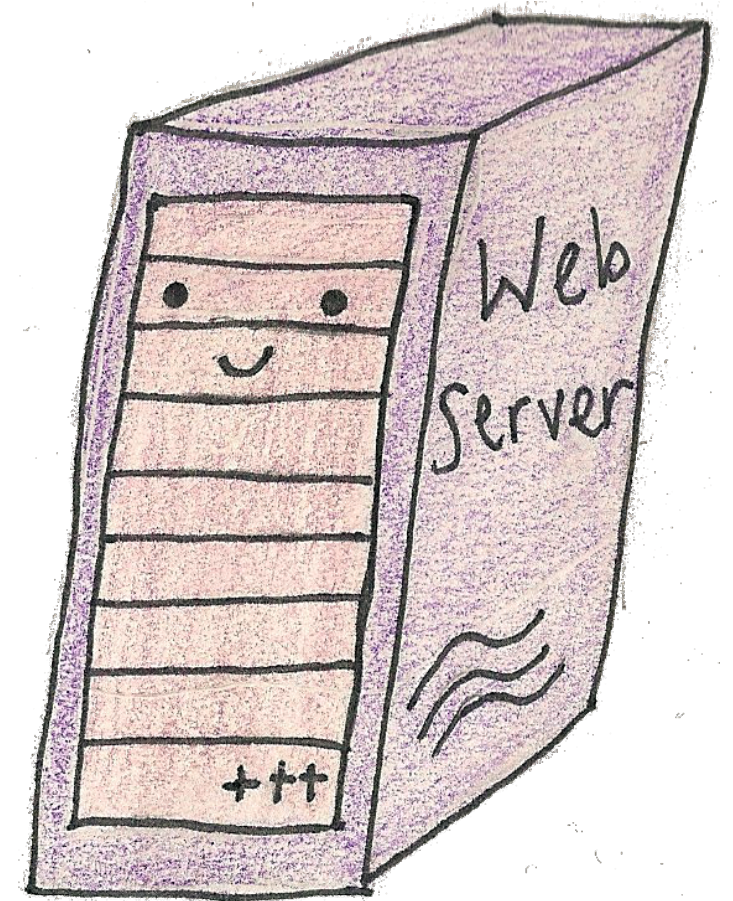
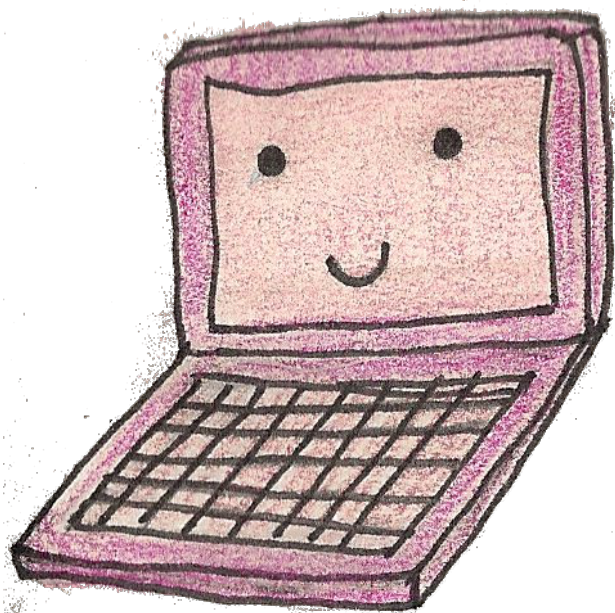






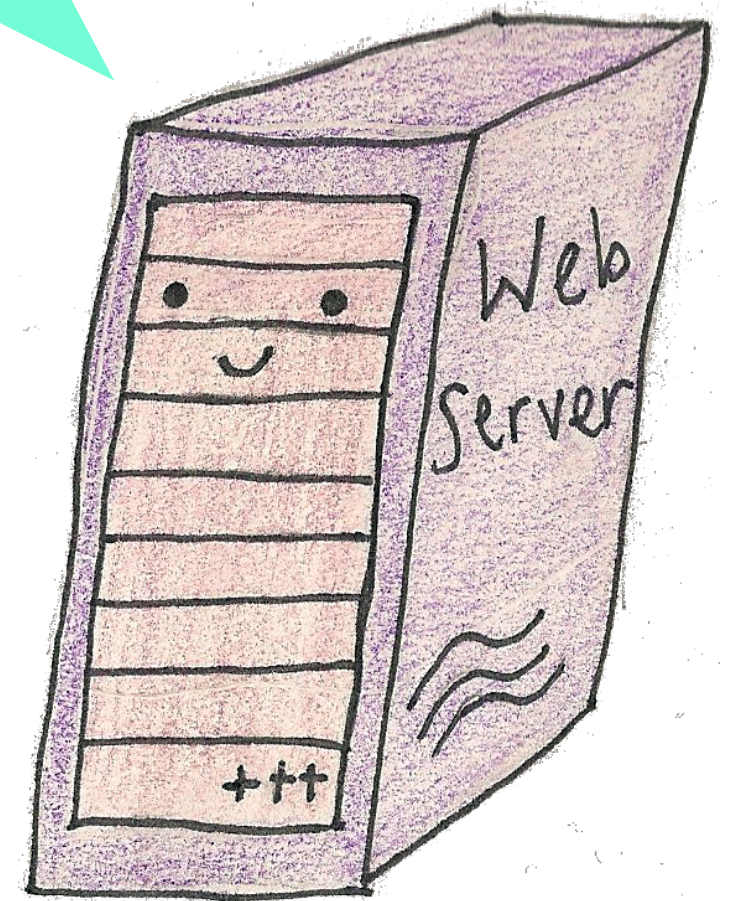
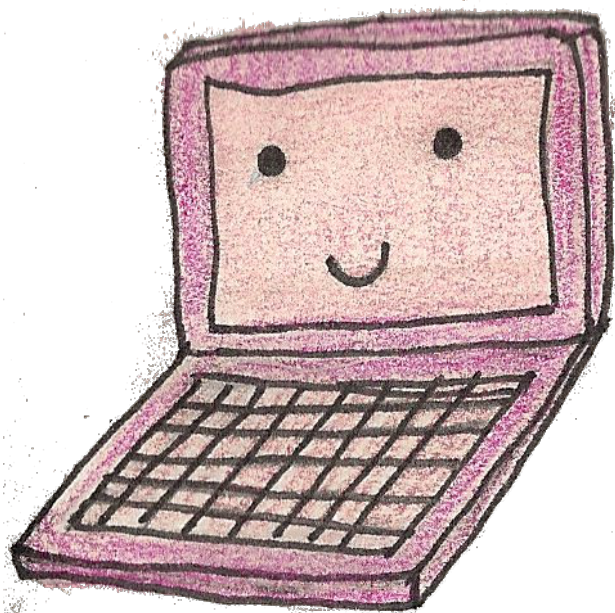


# A Short Summary of How the Internet Works!



# The Internet.

You know my name  
Look up the number  
♪ ♪ ♪

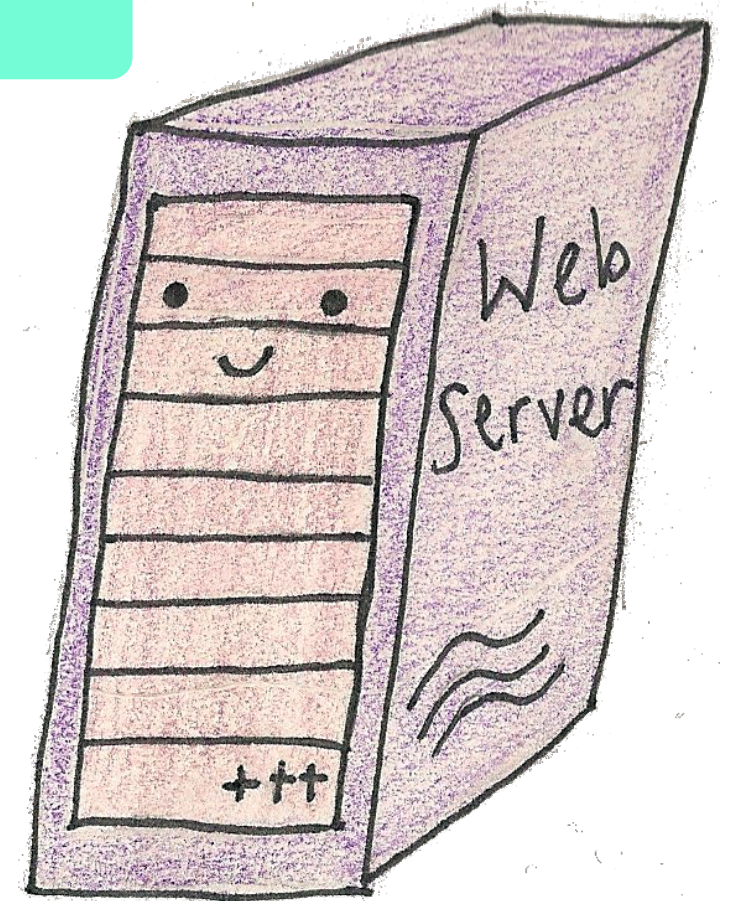
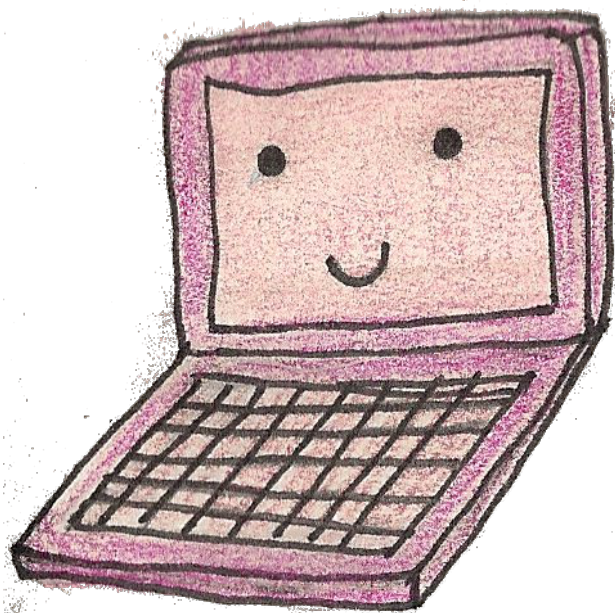




# The Internet.

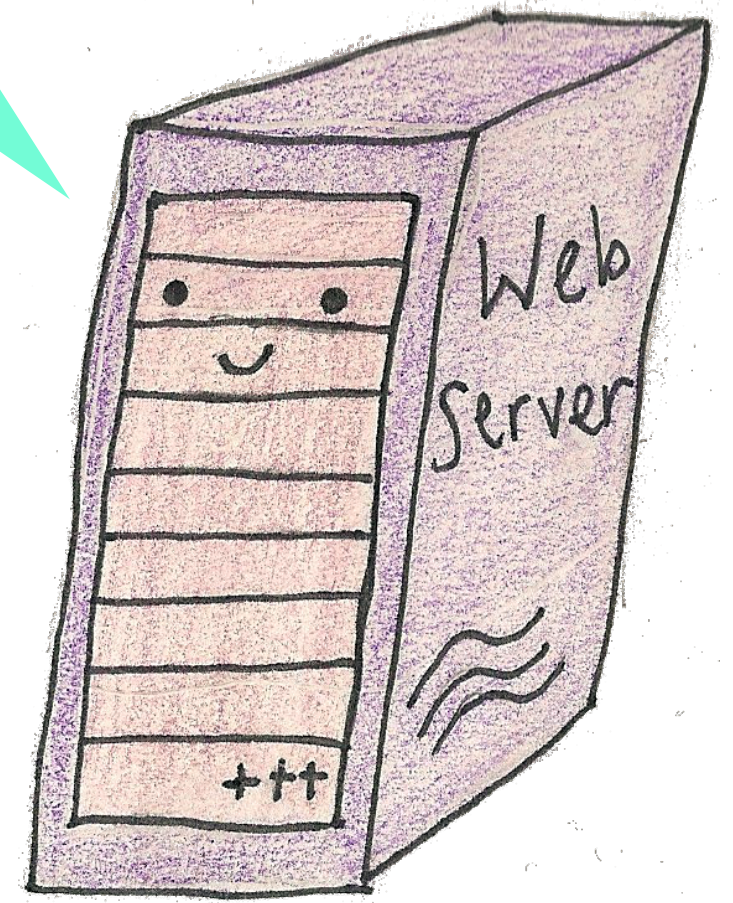
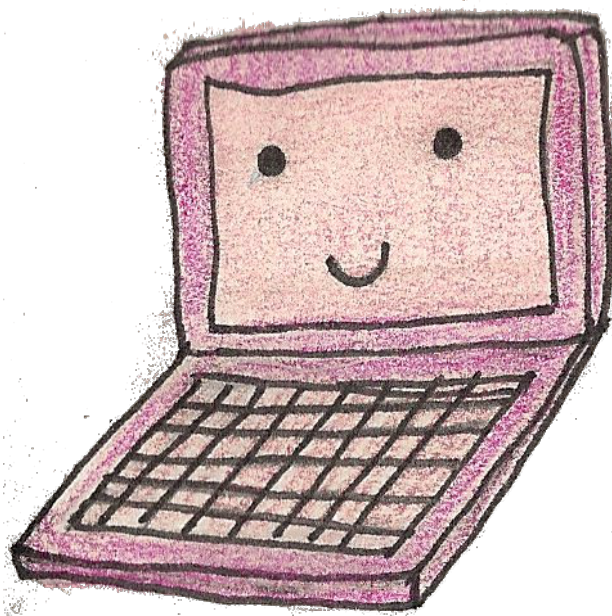
You, you got what I need,  
It's that page, hey, can you send?  
It's that page, hey, can you send?  
Maybe?

♪ ♪ ♪



# The Internet.

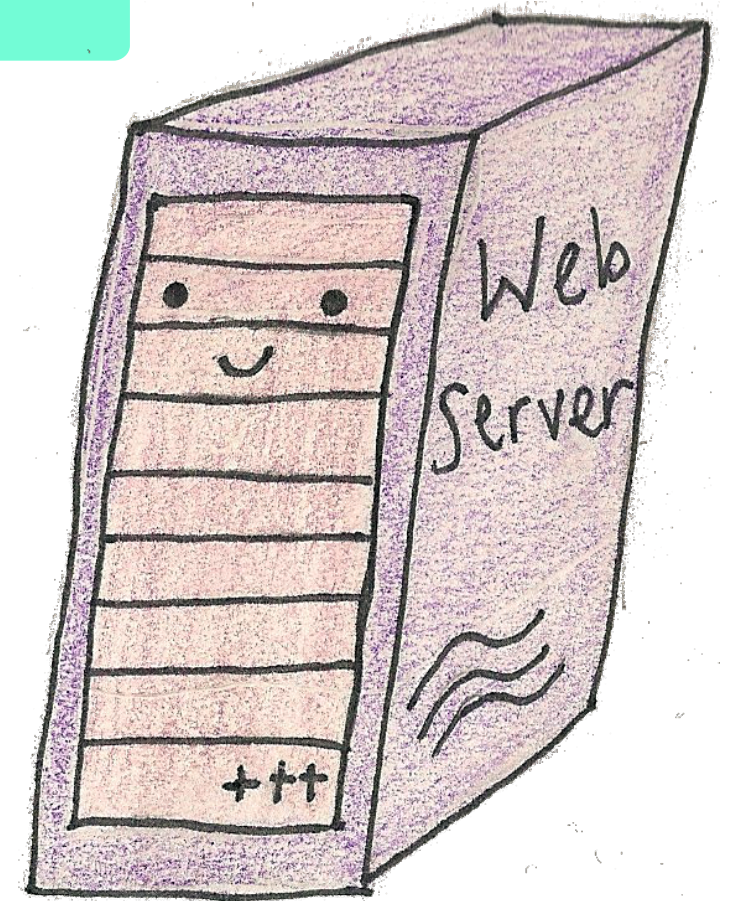
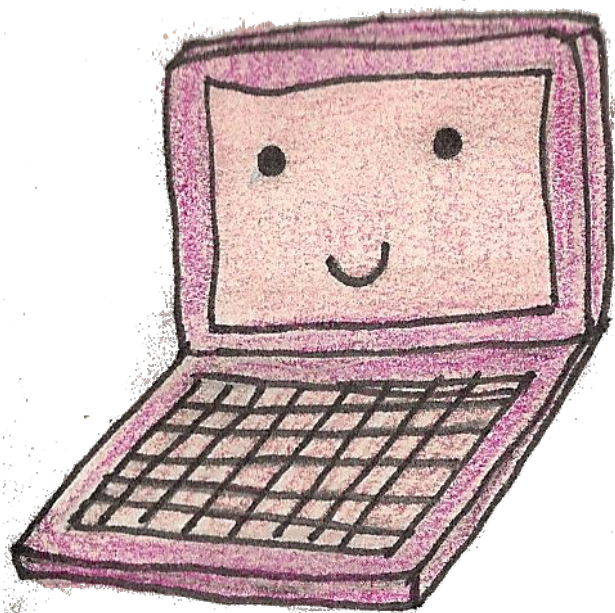
All this HTML  
I will send to you  
All this HTML  
You'll know what to do  
♪ ♪ ♪





# The Internet.

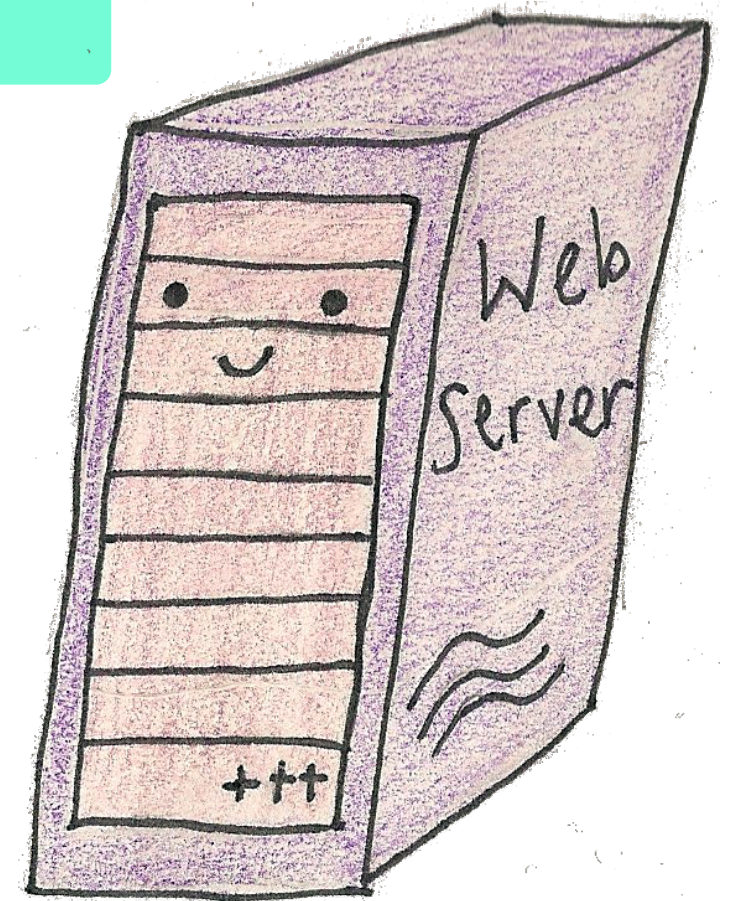
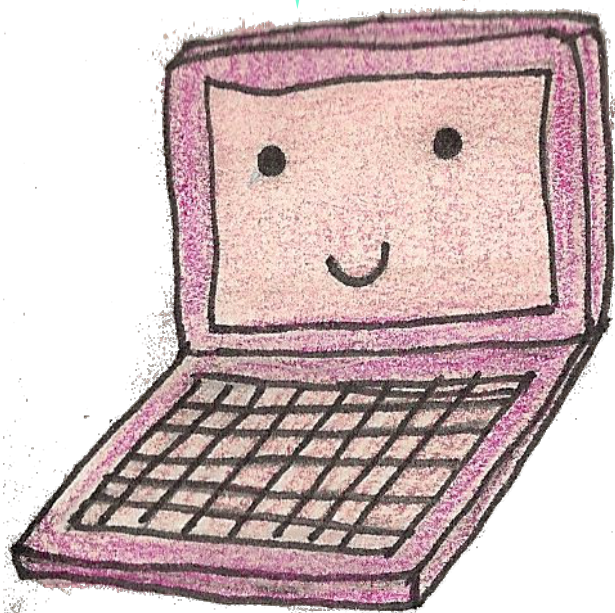
We did everything right,  
Bytes are on the client side  
♪♪♪



# The Internet.

I begin to parse,  
To split the text apart  
Break it down into sections  
Tokens into selectors

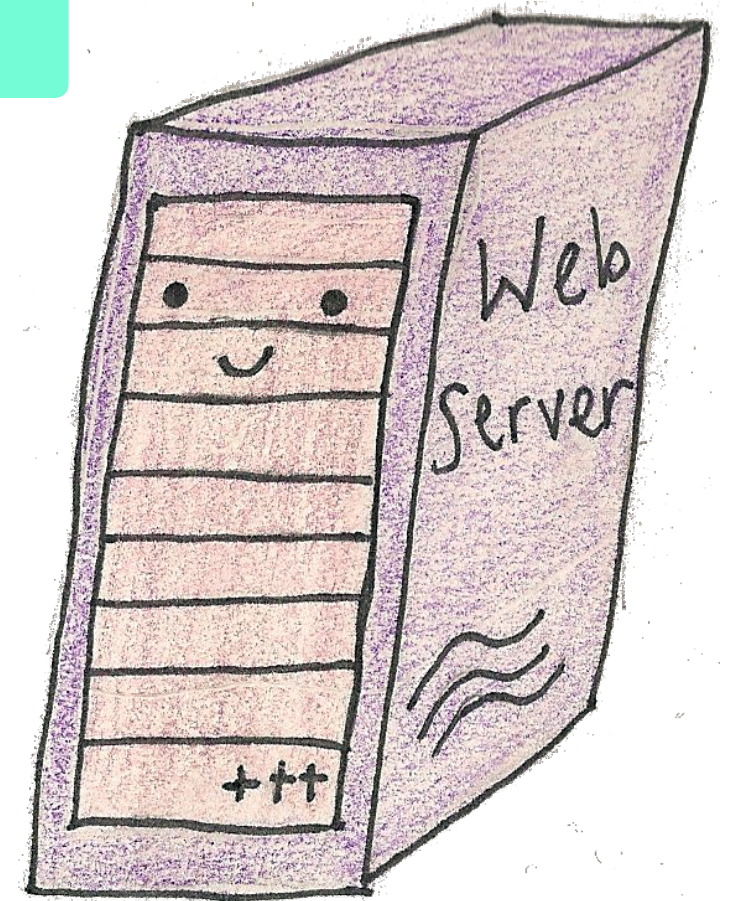
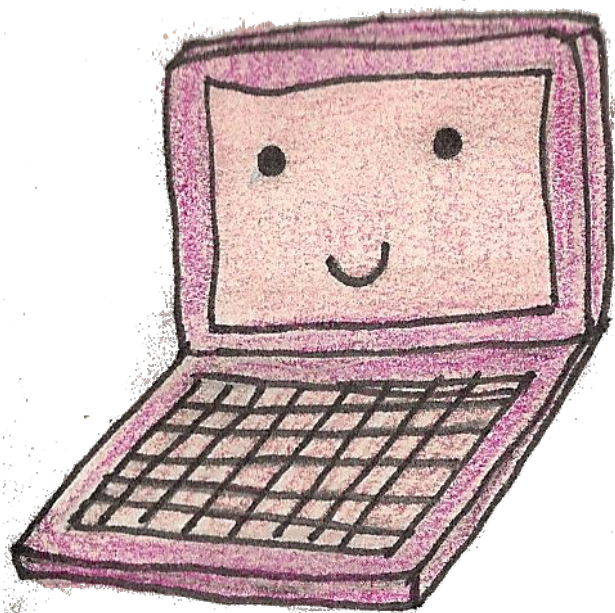
♪ ♪ ♪





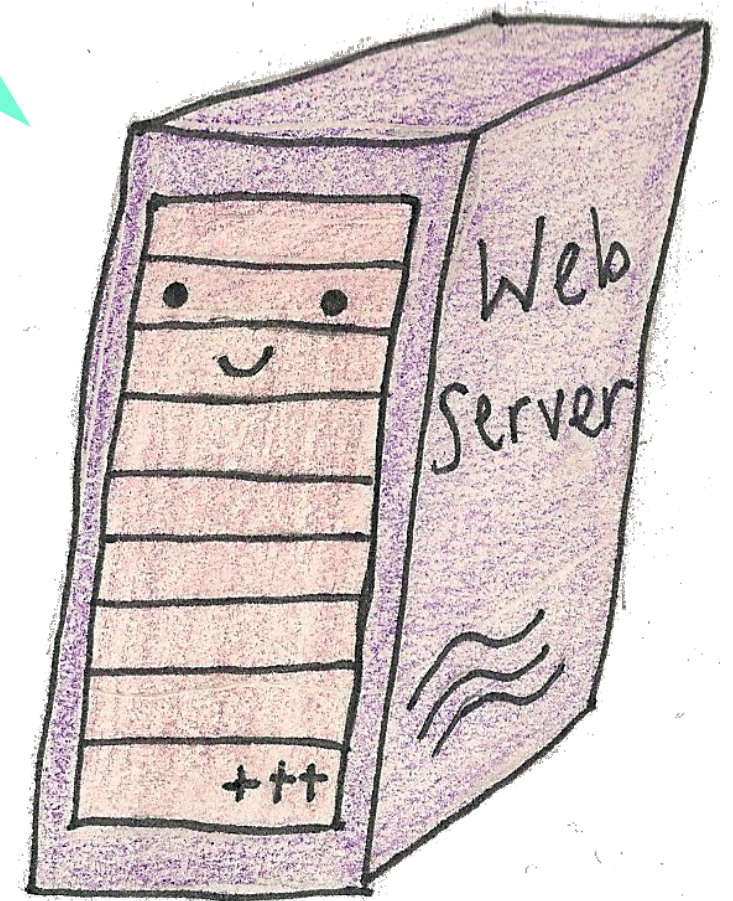
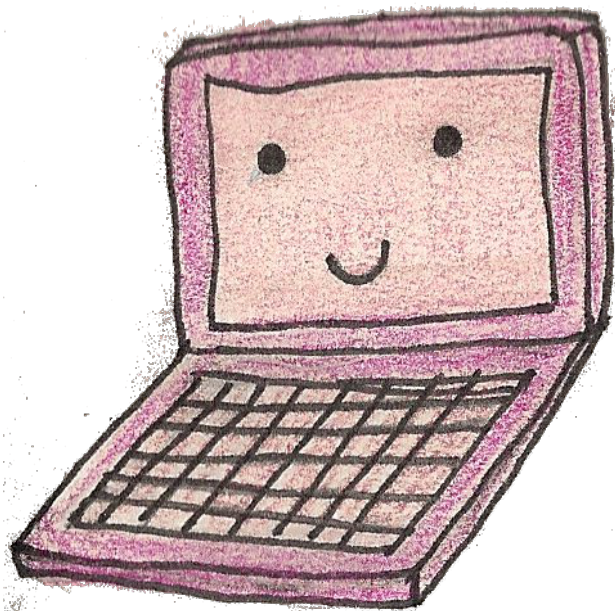
# The Internet.

Are you listening? (Whoa-oh-oh-oh-oh)  
Please come back. (Whoa-oh-oh-oh-oh)  
I'll tell you what do I need  
I'll tell you what do I need  
Whoa-oh, whoa-oh  
♪ ♪ ♪



# The Internet.

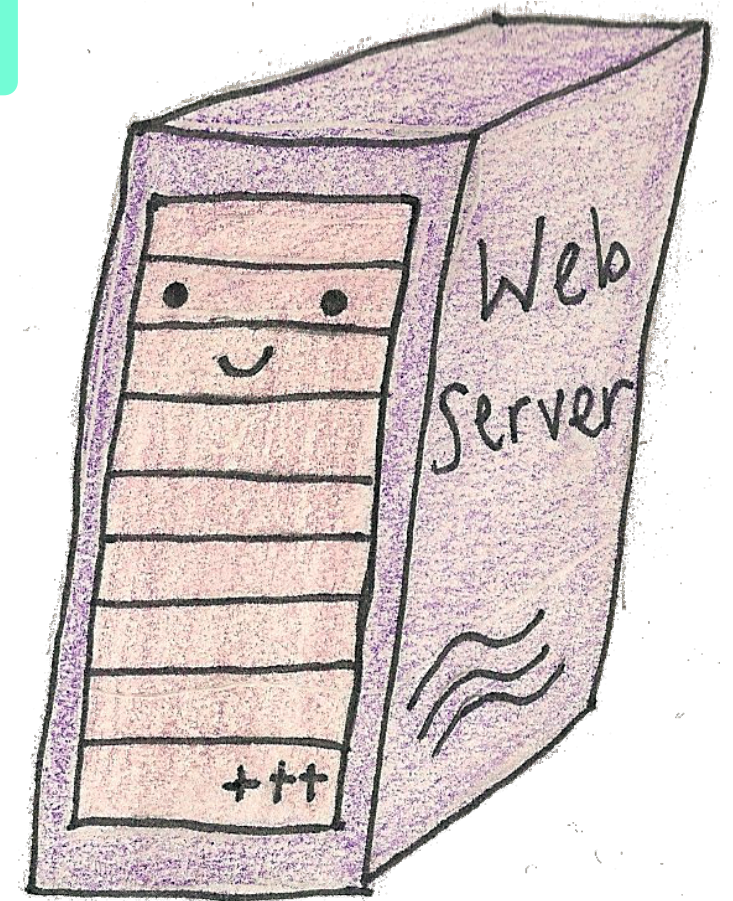
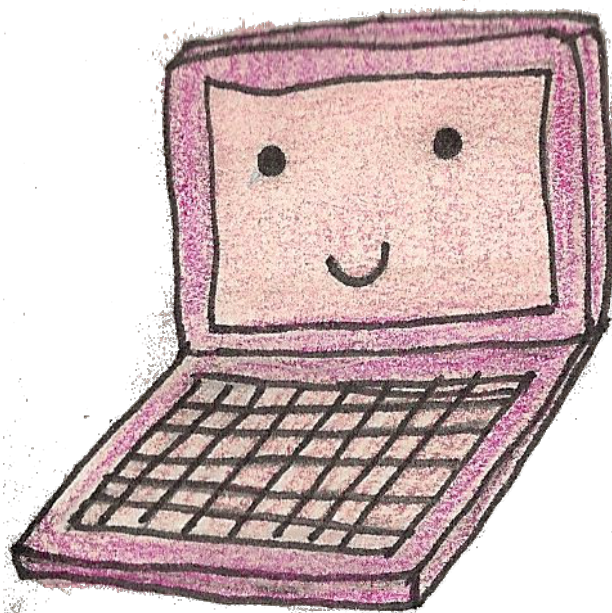
Sending out some CSS  
Sending out some CSS  
♪ ♪ ♪





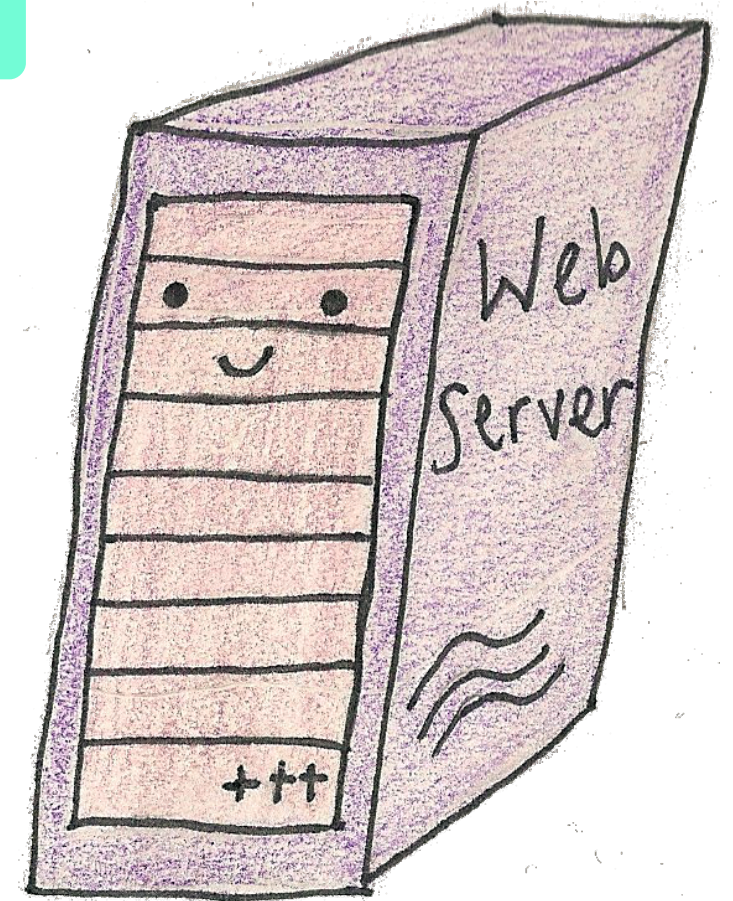
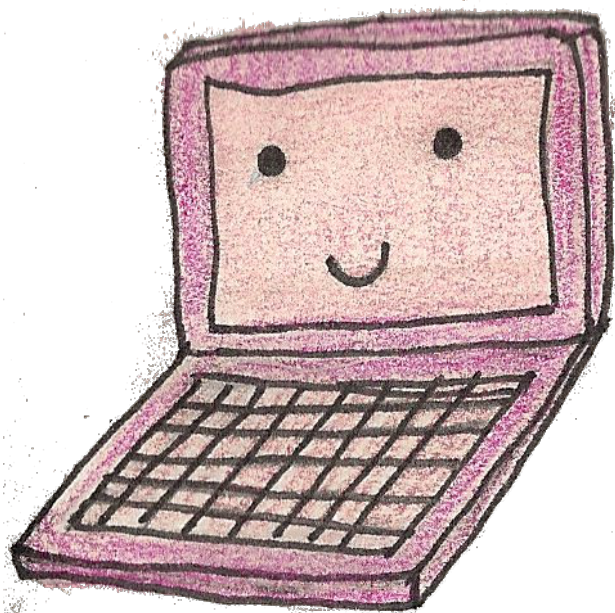
# The Internet.

Assets came quickly,  
The execution of all things  
♪ ♪ ♪



# The Internet.

Cause the render's gonna...  
rend, rend, rend?  
♪ ♪ ♪



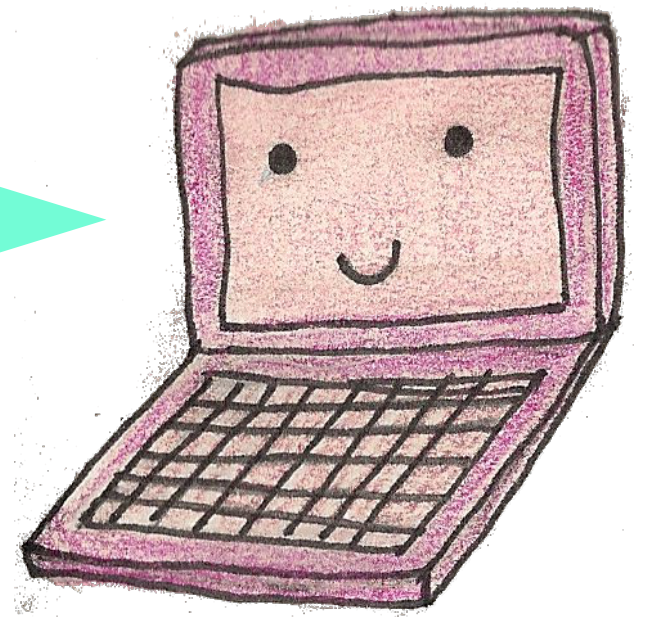


# Overview

1. Scripts at the Bottom
2. Styles at the Top
3. Make Fewer Requests
4. Caching
5. Small Files

# Put your scripts at the bottom!

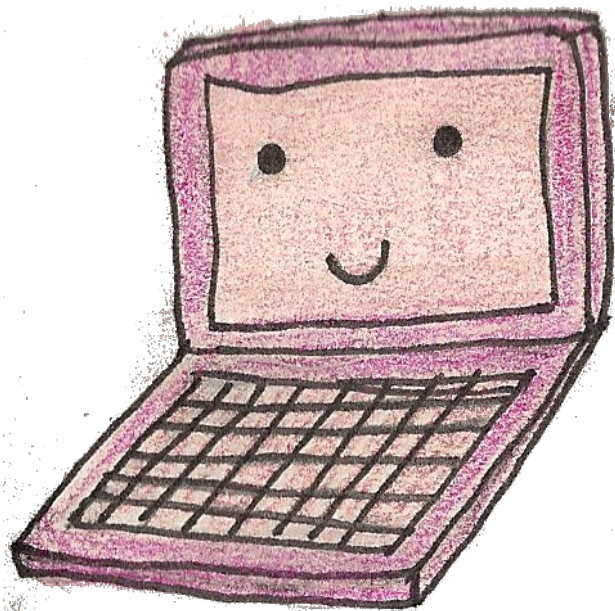
Scripts go at the bottom  
Not up here  
Scripts go at the bottom  
So the whole page freakin' here  
♪ ♪ ♪





# Scripts at the Bottom

```
1 <html>
2   <head>
3     <meta charset="utf-8">
4     <title>yay internet</title>
5     <link href="css.css" rel="stylesheet" type="text/css" />
6   </head>
7
8   <body>
9     <div>yay internet</div>
10    <script src="js.js" type="text/javascript"></script>
11  </body>
12 </html>
```

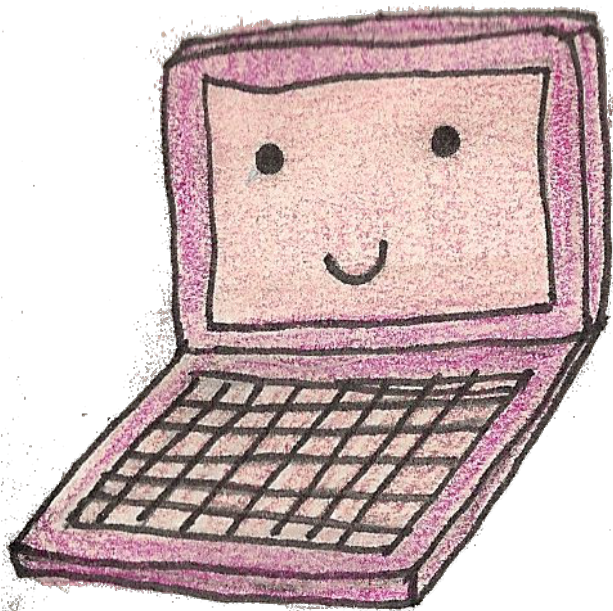


Closing tag...



# Scripts at the Bottom

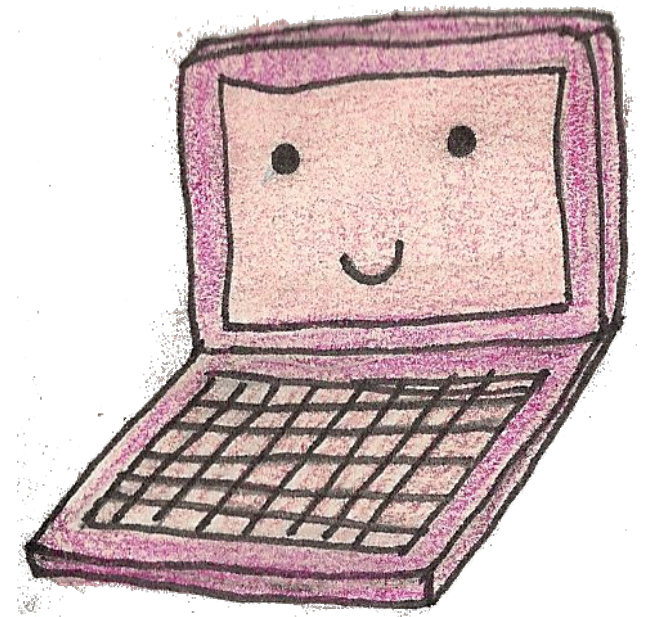
Stop, JavaScript time!  
♪ ♪ ♪





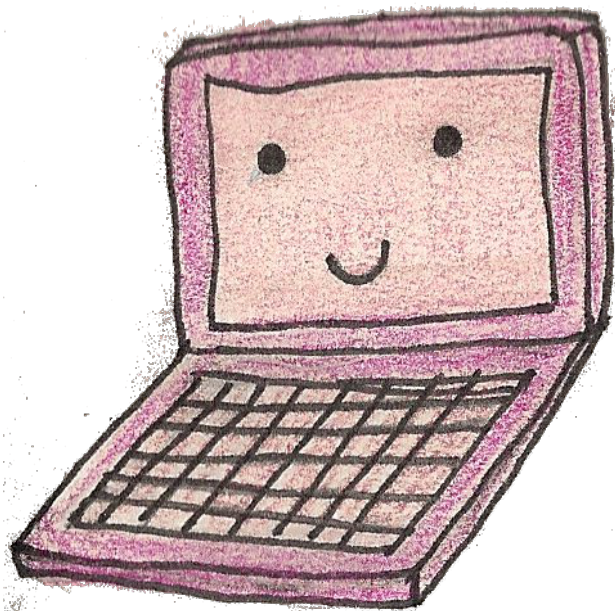
# Put your styles at the top!

Go `'head`  
Switch your styles up  
♪ ♪ ♪



# Styles at the Top

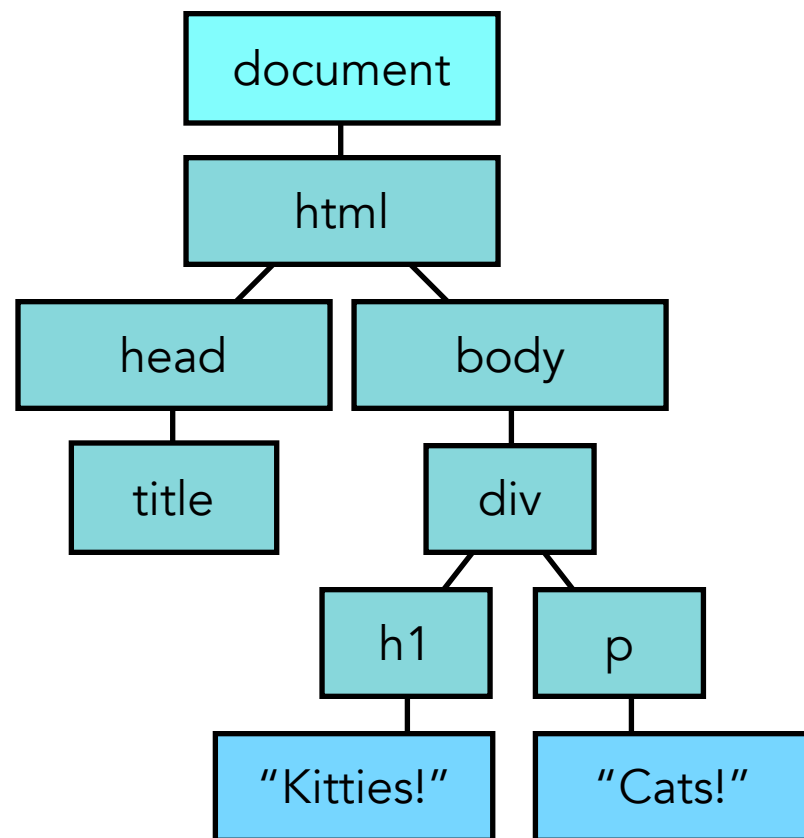
```
1 <html>
2   <head>
3     <meta charset="utf-8">
4     <title>yay internet</title>
5     <link href="css.css" rel="stylesheet" type="text/css" />
6   </head>
7
8   <body>
9     <div>yay internet</div>
10    <script src="js.js" type="text/javascript"></script>
11  </body>
12 </html>
```



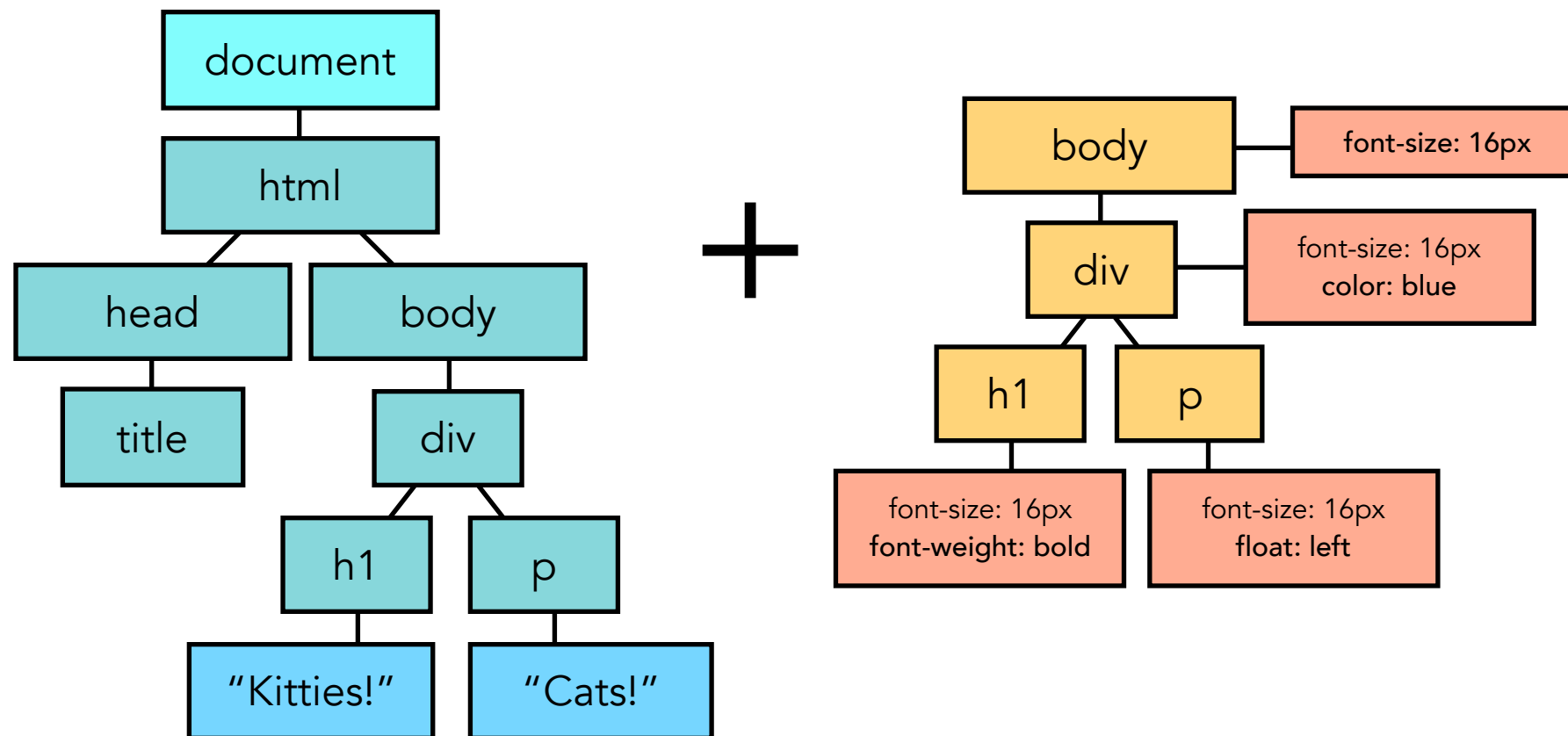
In your <head>  
In your <head>  
Stylesheet, stylesheet,  
eet, eet, eet  
♪ ♪ ♪



# Styles at the Top

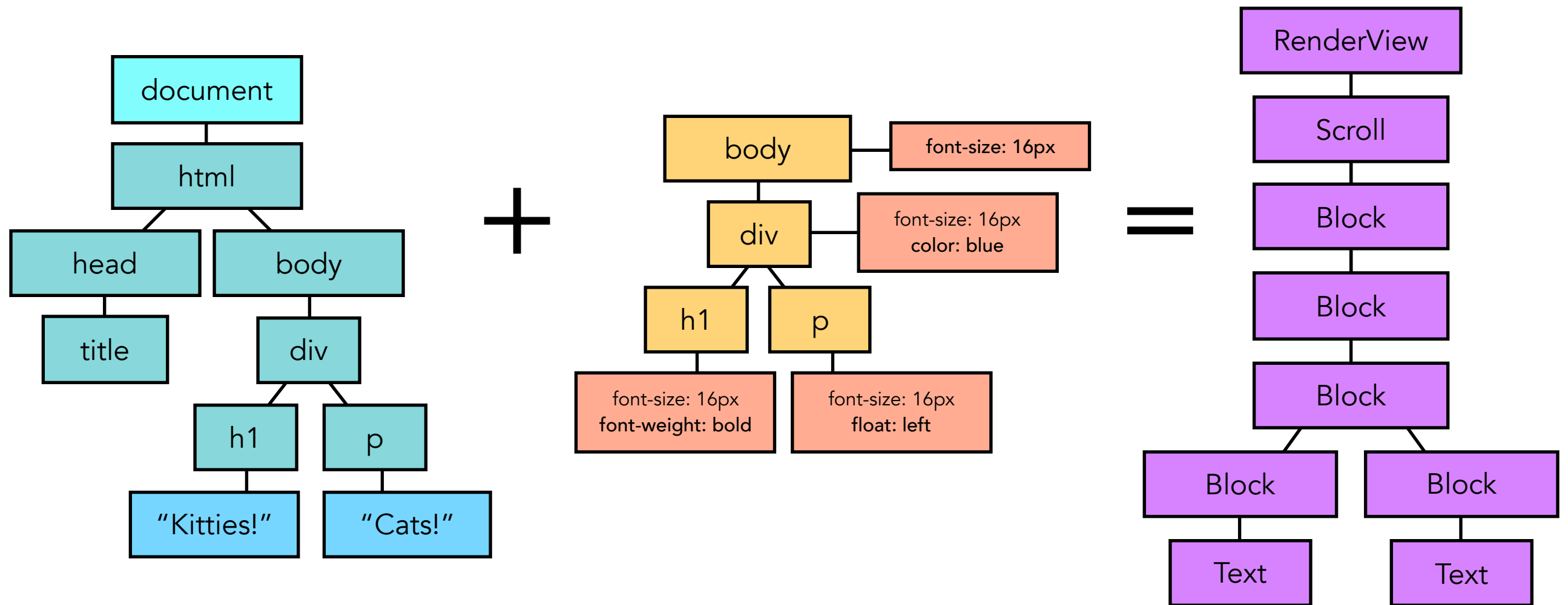


# Styles at the Top



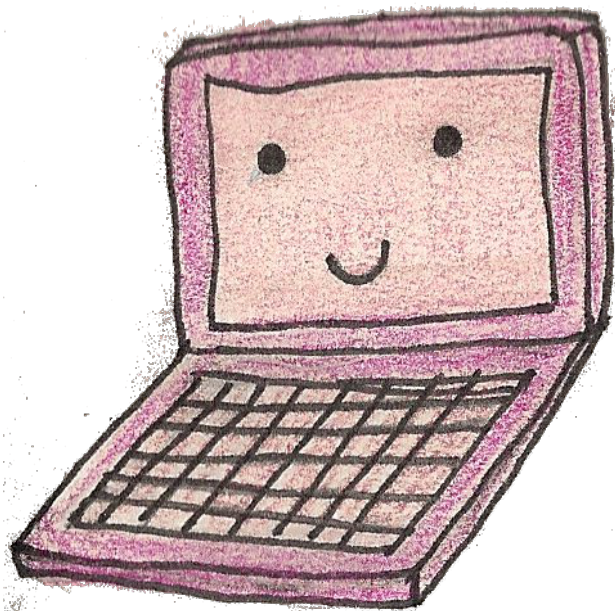


# Styles at the Top



# Styles at the Top

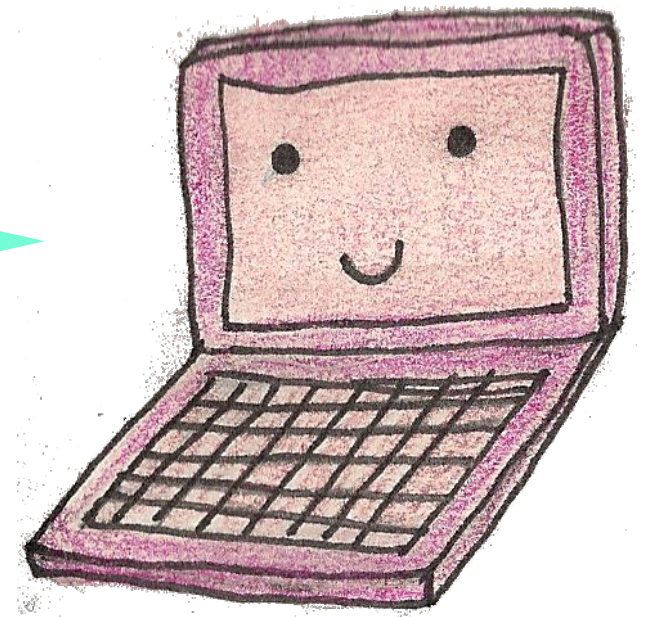
'Cause we know how to style  
We know how to style  
♪ ♪ ♪





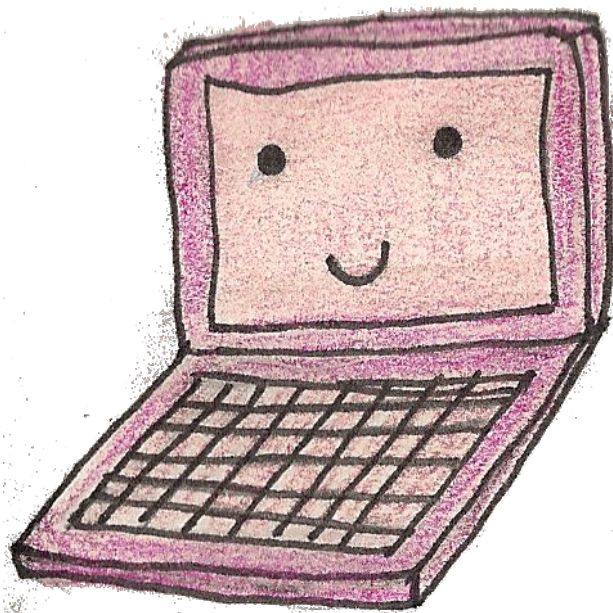
# Make Fewer Requests!

Come together, right now  
Up the speed



# Make Fewer Requests

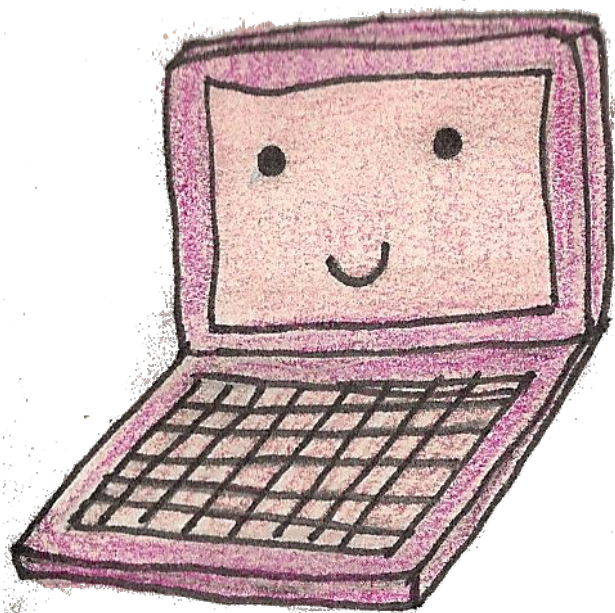
There's only so much I can do  
All else goes in the queue  
♪ ♪ ♪





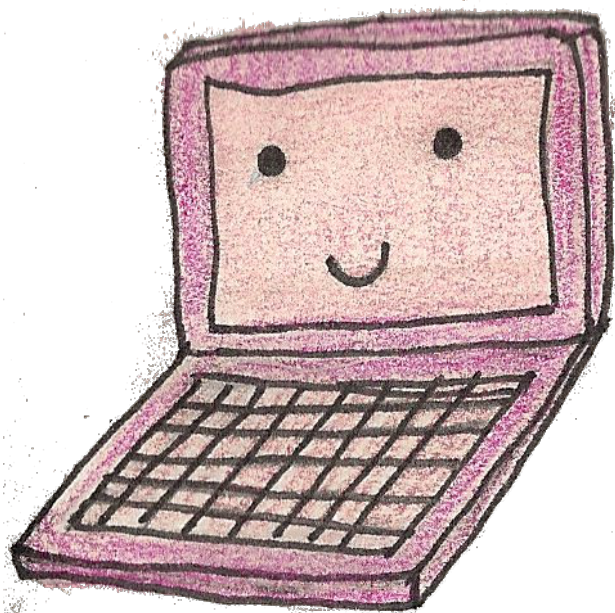
# Make Fewer Requests

Yeah, it's always better  
when they're together  
♪ ♪ ♪



# Make Fewer Requests

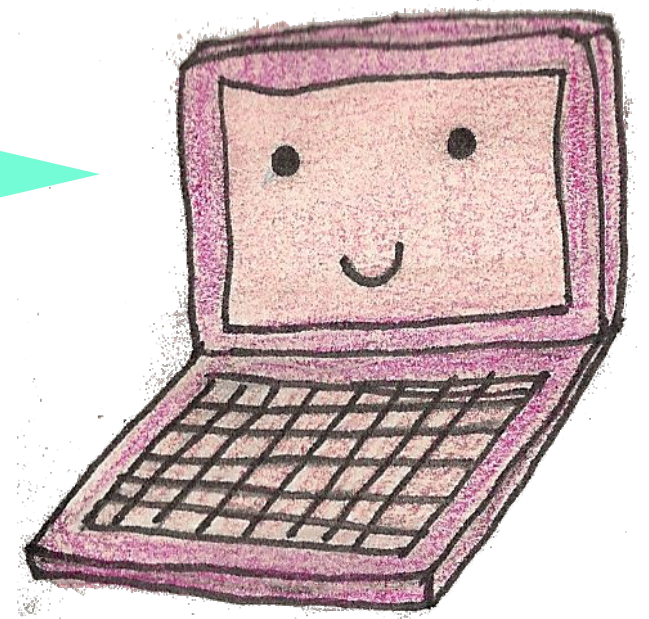
Got to keep you inlined  
To make this page load streamlined  
♪ ♪ ♪



# Cache is queen!

Pull it down, I'm yelling timber  
Unless it moves or gets enhanced  
This data, I'm told to remember  
Until it tells me to forget

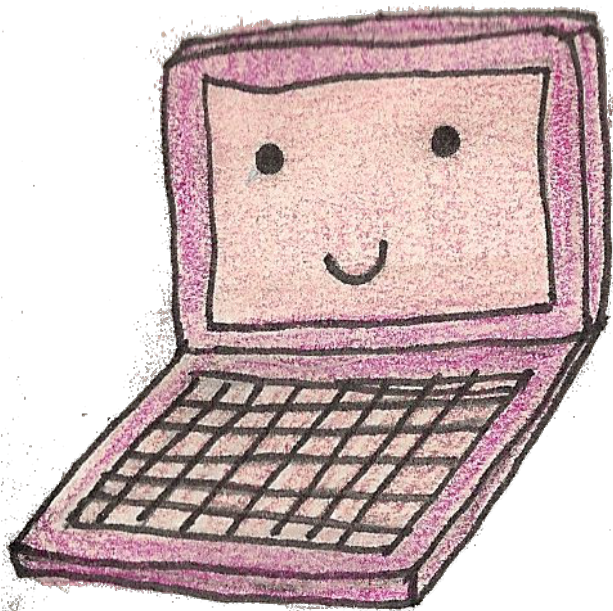
♪ ♪ ♪





# Caching

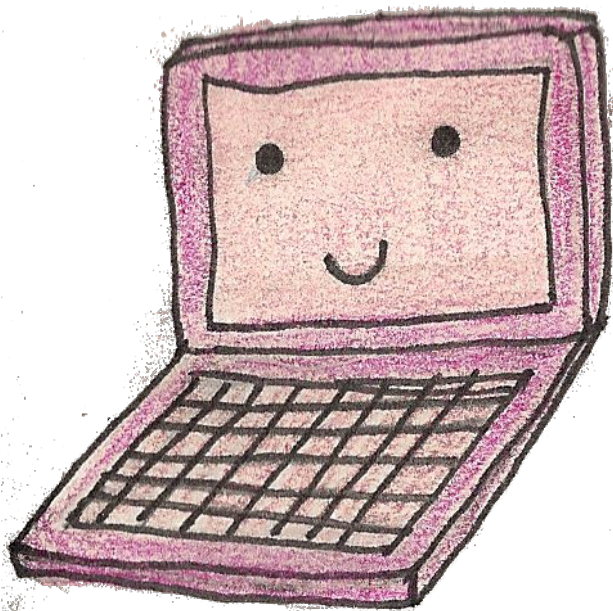
Cache moneyyy.



# Caching

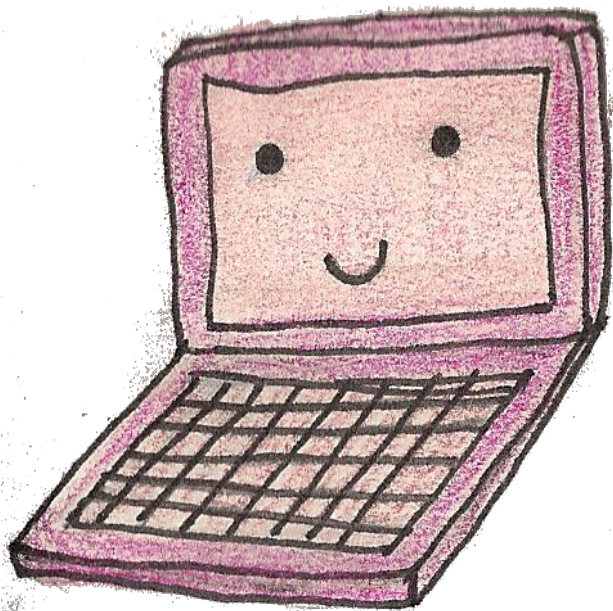
Hey, I just met you  
This is easy  
I still know your number  
Super breezy!

♪ ♪ ♪



# Caching

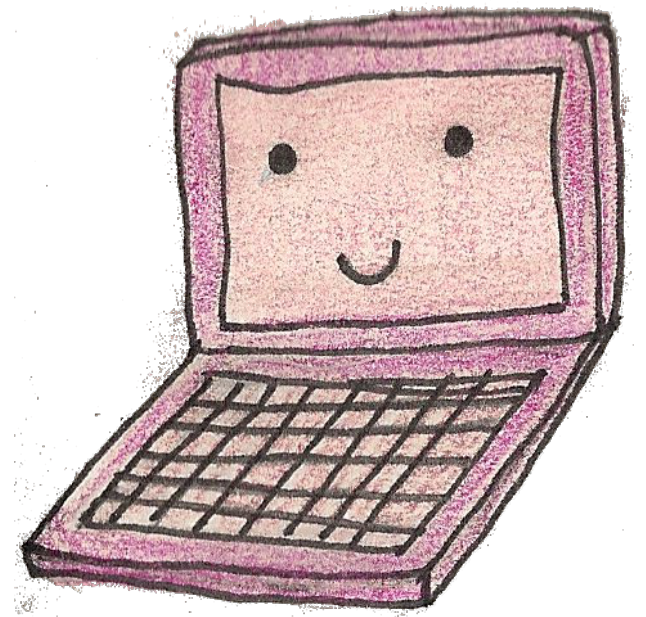
I will remember youuuu...  
♪ ♪ ♪





# Make your files as small as possible.

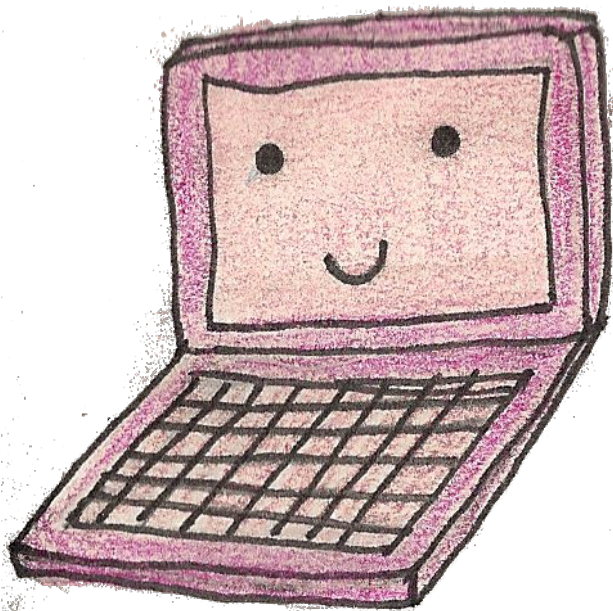
Go shorty, it's your  
birthday  
♪ ♪ ♪



# Small Files

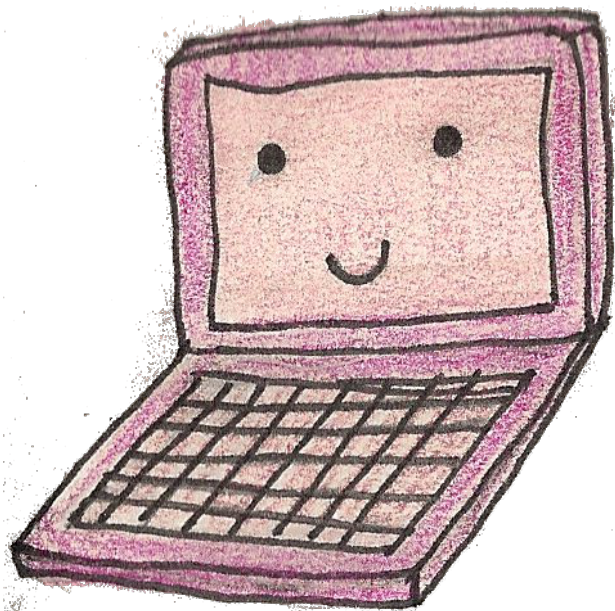
All the small things  
What speed this brings!

♪ ♪ ♪



# Minification

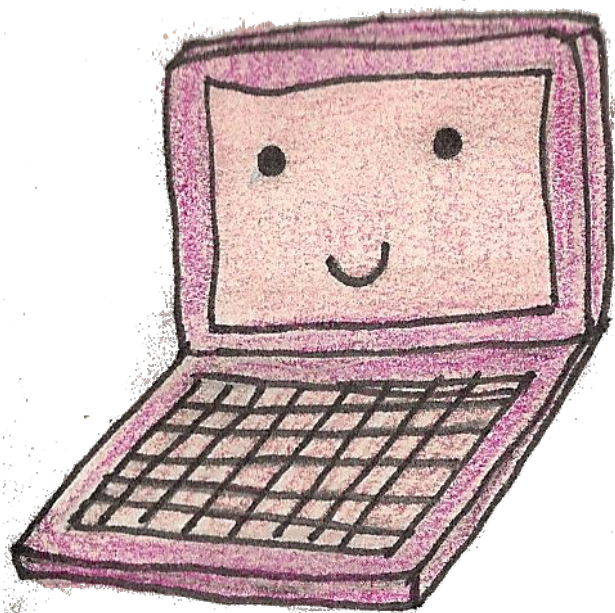
Got some files to send over  
And their length's insane  
Remove the whitespace, baby  
It'll up your game  
♪ ♪ ♪





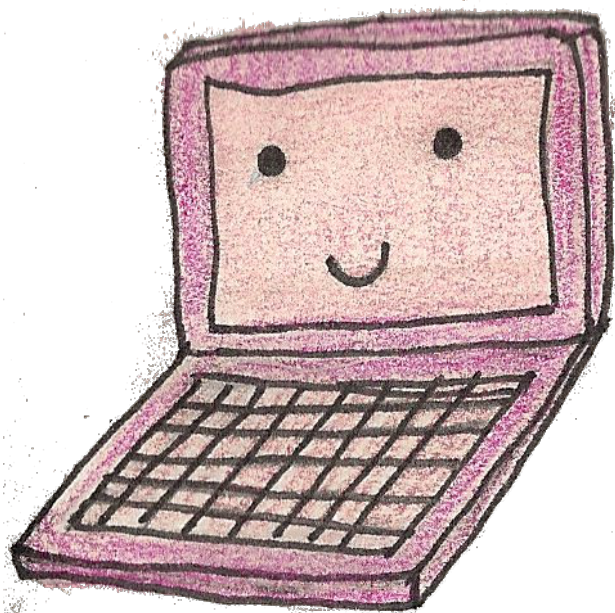
# Compression

Shrink it down,  
gzip it  
(Don't reverse it...)  
♪ ♪ ♪



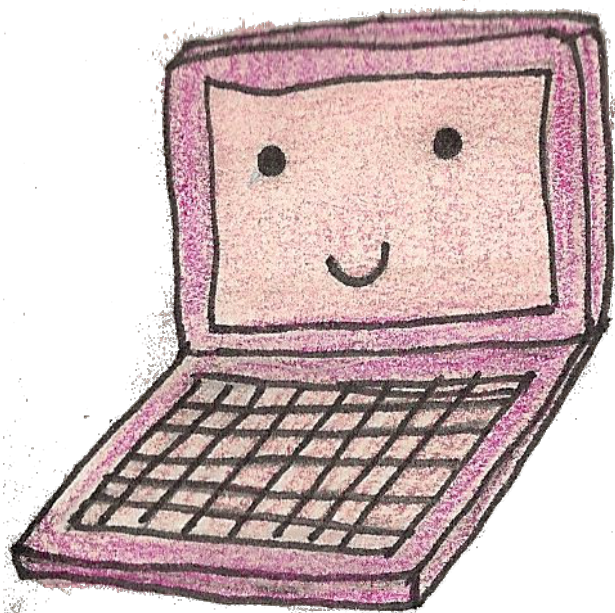
# Compression

These are my compressions  
♪ ♪ ♪



# Image Optimization

Harder, Better,  
Faster, Smaller  
♪ ♪ ♪

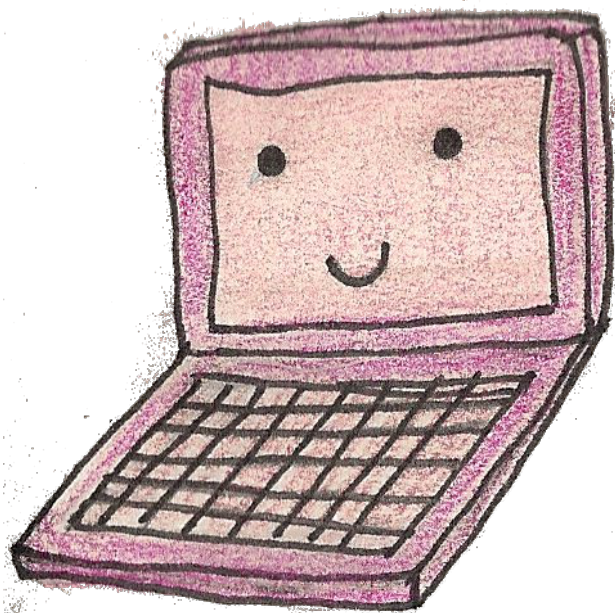




# HTTP/2

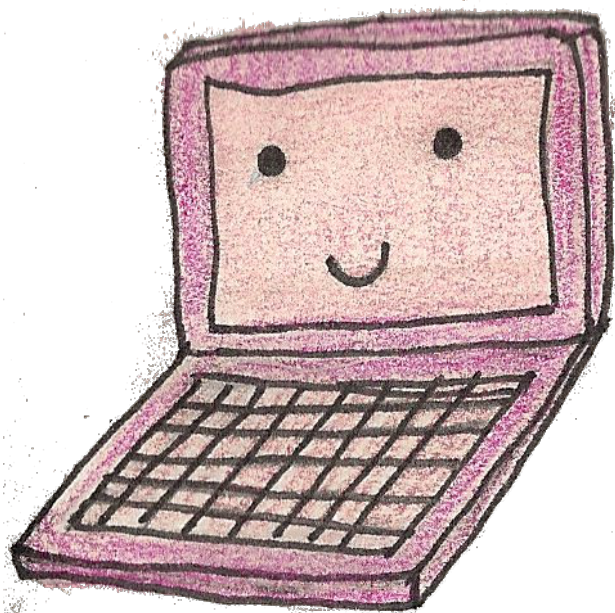
How you gonna upgrade me?  
What's higher than one point one?

♪ ♪ ♪



# HTTP/2

You taught me 'bout your past  
But there's a future HTTP  
♪ ♪ ♪



# Overview

1. Scripts at the Bottom
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# Resources

## How the Internet works

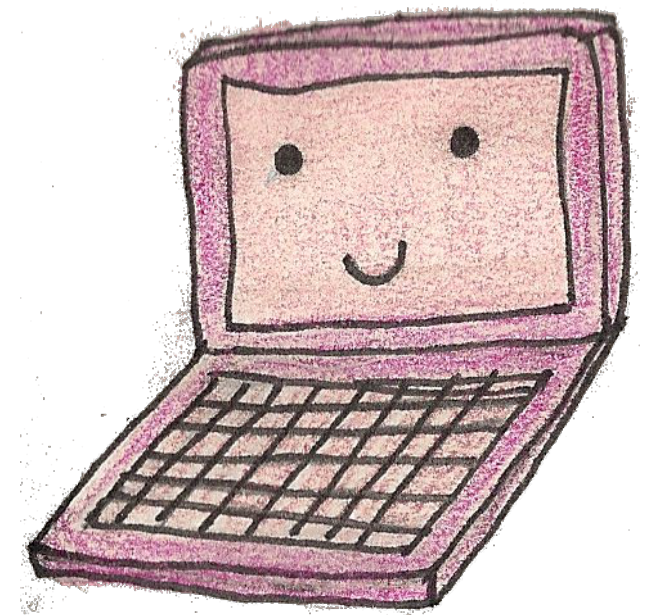
- [What Happens When \(Github\)](#)
- [Server Farm to Table, and Annotated Version](#)

## Performance

- [Best Practices for Speeding Up Your Web Site \(Yahoo Developer Network\)](#)
- [Front-end Performance for Web Designers and Front-end Developers \(CSS Wizardry\)](#)
- [Raul Fraile: How GZIP compression works \(JSConfEU 2014\)](#)
- [Image Optimization \(Google Developers\)](#)
- [High Performance Web Sites \(Steve Souders\)](#)
- [Even Faster Websites \(Steve Souders\)](#)

## HTTP/2

- [Andy Davies: The Case for HTTP/2 \(TXJS 2015\)](#)



# Complete Tracklist

The Beatles - You Know My Name (Look Up The Number)

Biz Markie - Just A Friend

The Beatles - All My Loving

Ellie Goulding - Outside

The Notorious B.I.G. – Sky's The Limit

Jimmy Eat World - Sweetness

The Police - Message in a Bottle

Rilo Kiley - The Execution of All Things

Taylor Swift - Shake it Off

Drake - Started from the Bottom

Semisonic - Closing Time

MC Hammer - U Can't Touch This

Kanye West - Good Life

The Cranberries - Zombie

Taylor Swift - Style

The Beatles - Come Together

Mary J Blige - Not Loving You

Jack Johnson - Better Together

Taking Back Sunday - Cute Without the E

Pitbull ft. Ke\$ha - Timber

Carly Rae Jepsen - Call Me Maybe

Sarah McLachlan - I Will Remember You

50 Cent - In Da Club

Blink 182 - All The Small Things

Taylor Swift - Blank Space

Missy Elliot - Work It

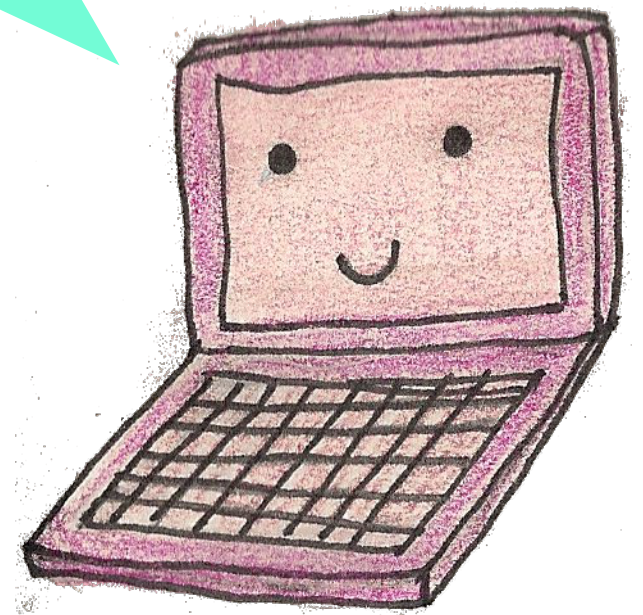
Usher - Confessions, Pt. II

Daft Punk - Harder, Better, Faster, Stronger

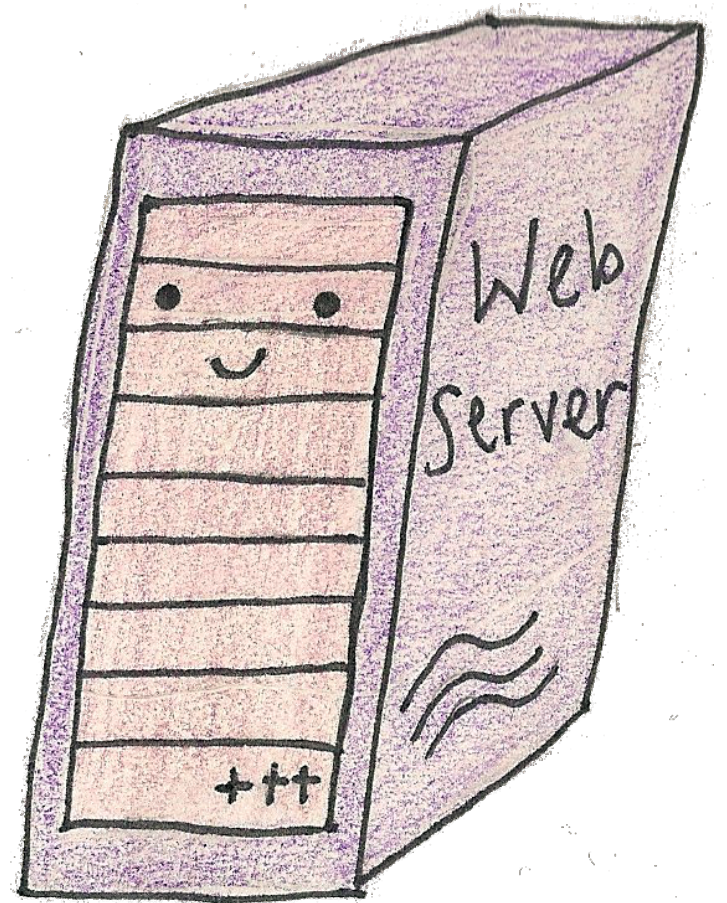
Beyoncé - Upgrade U

Taylor Swift - All Too Well

\*something  
witty about a  
POP server...\*



[jenna.is/feperf-queensjs](https://jenna.is/feperf-queensjs)





# Thanks!

