Web101 Intro

Members

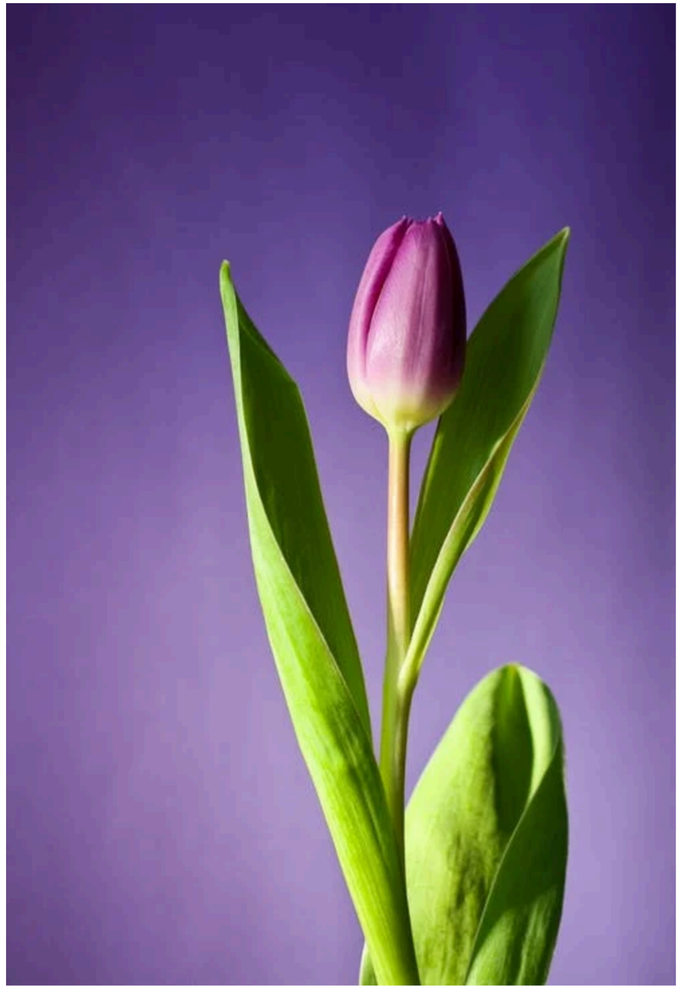
HTML

CSS

Javascript

什么是HTML

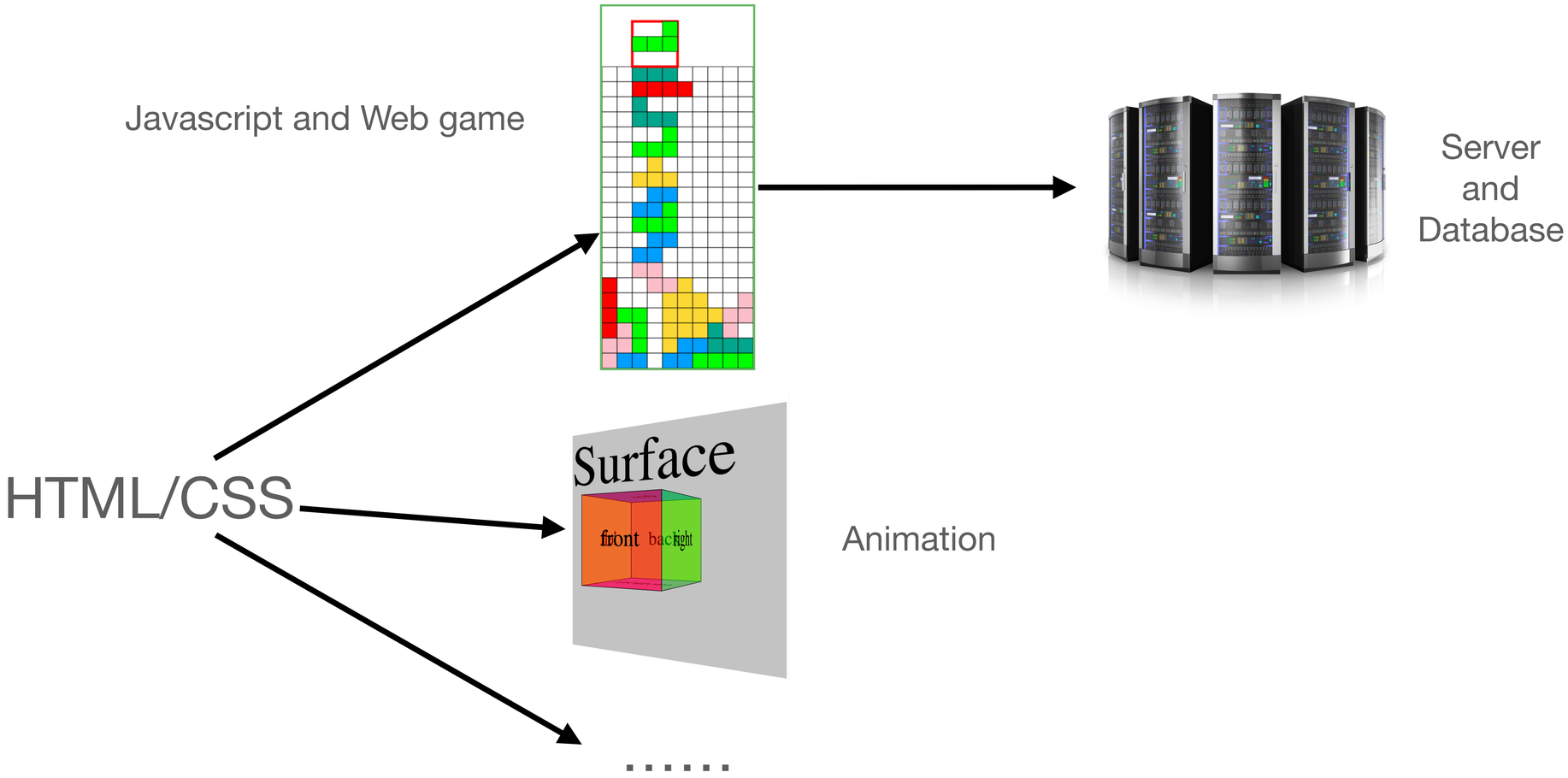
什么是CSS



HTML is for data
CSS is for styling

HTML is for data
and its meaning

HTML/CSS is base



Demo

- Styling:
    - List to navigation
    - Text shadow
- Position
- Layout
- Responsive
- Animation

- Redesign/Recreate a webpage

Including

- 2 languages：HTML，CSS
- Write a lot of files
- 1 personal website
- recreate 2 webpages
- if you complete well, you get a certification

What to do with Web101?

- Personal website

23 of the Best Personal Websites to Inspire Your Own
https://blog.hubspot.com/marketing/best-personal-websites
http://www.garysheng.com
https://blog.hubspot.com/marketing/best-personal-websites

- Your business website
- Other websites for people
- Co-ops
- Jobs

Summary

Web101 = Coding + Art

(Web user interface)

Web101

Download

- Brackets  https://brackets.io

- Chrome  https://www.google.com/chrome/

- ZOOM

How to learn

- Type code and discuss in class

- Spend 1-2 hour practice after class

- do practice in a group

Learn from me	practice at home

Brackets extensions

- emmet

- beautify (edit -> beautify on save)

- Display shortcut

- Confetti

File structure

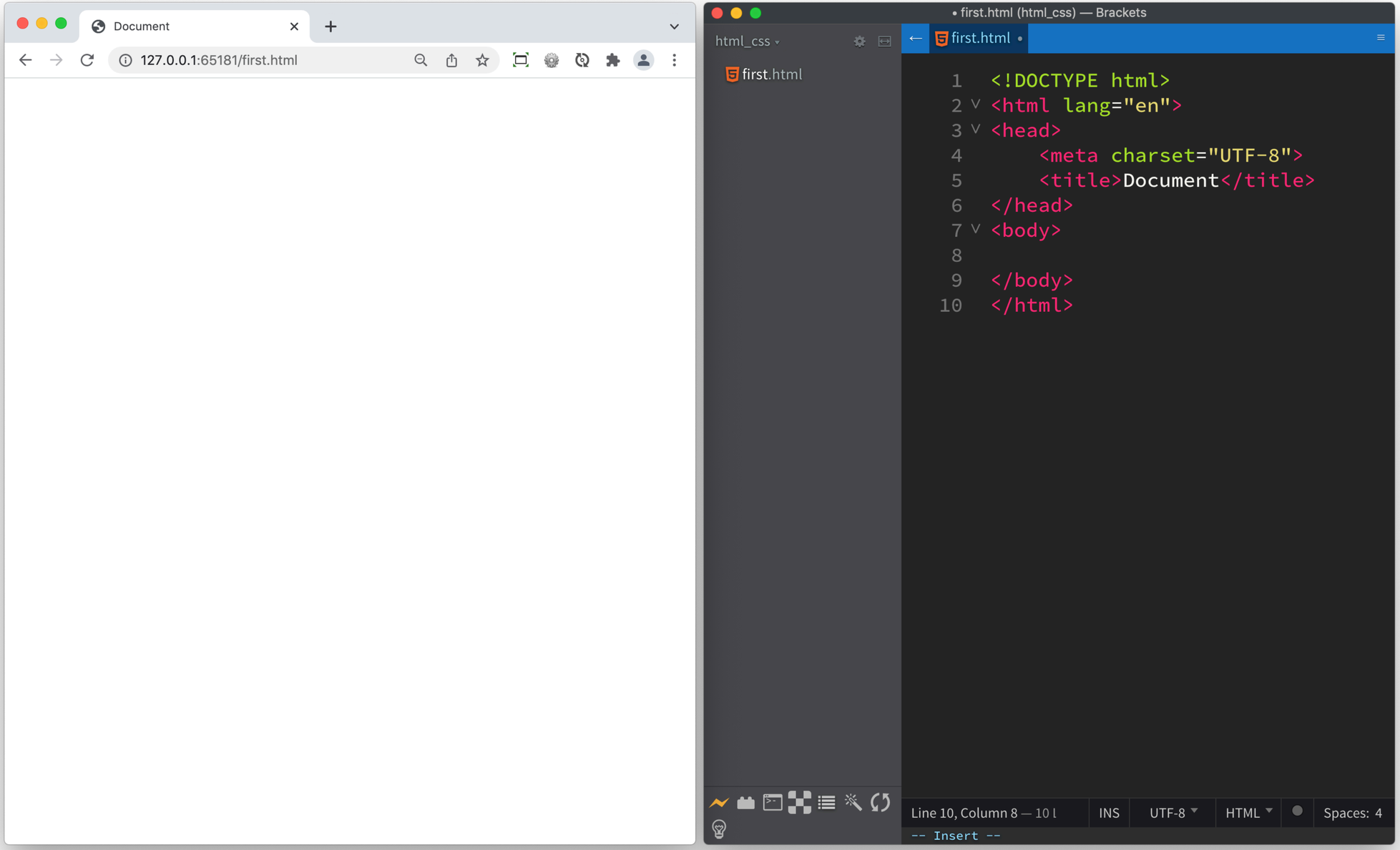
- C:_a\html_css

or

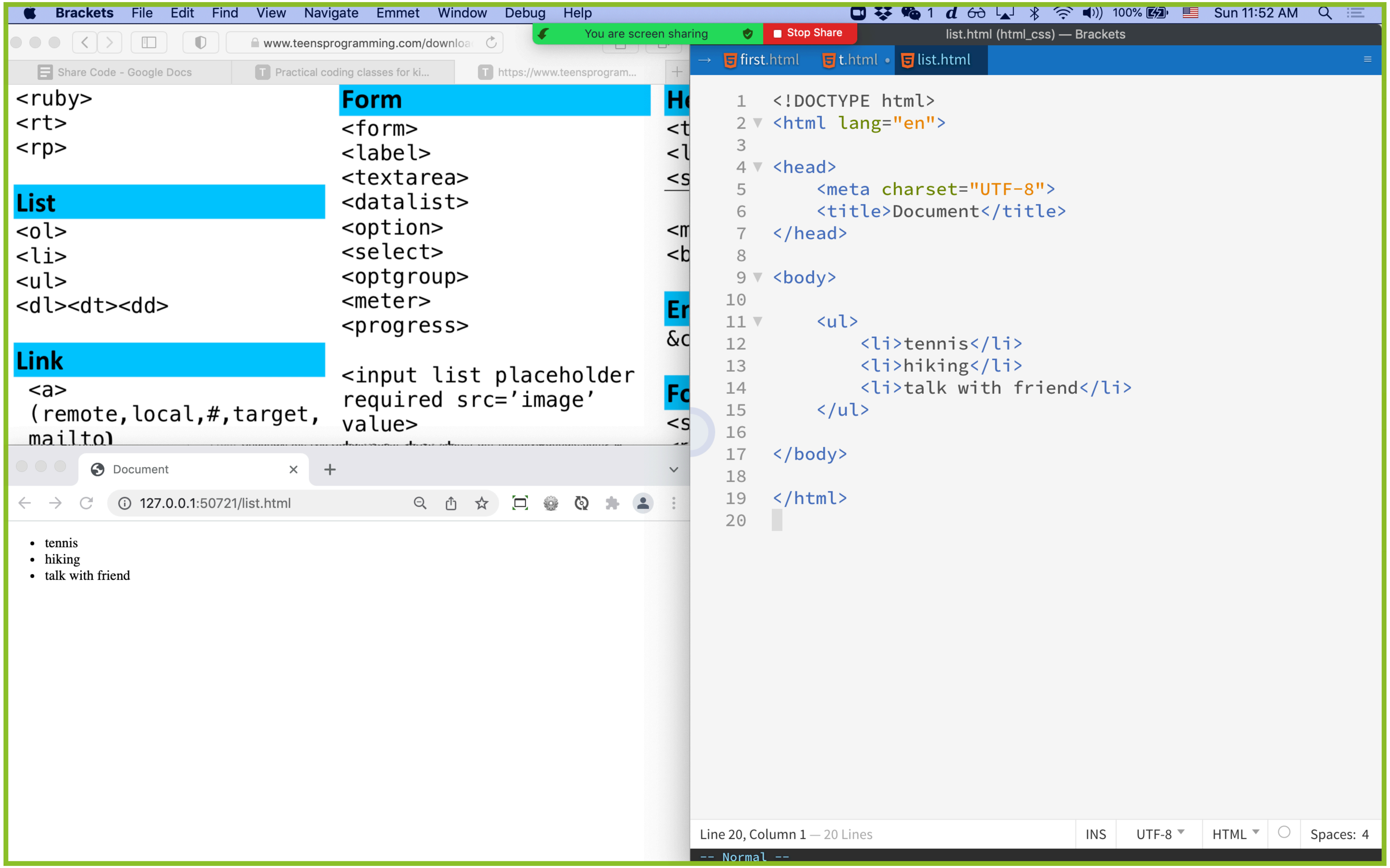
- ~/_a/html_css

Live preview

Layout (half and half)



Layout



Brackets File Edit Find View Navigate Emmet Window Debug Help
Sun 11:52 AM
www.teensprogramming.com/downloa
Share Code - Google Docs
Practical coding classes for ki...
https://www.teensprogram...
You are screen sharing
Stop Share
list.html (html_css) — Brackets
first.html
t.html
list.html
<ruby>
<rt>
<rp>
List

<dl><dt><dd>
Link
<a>
(remote,local,#,target,
mailto)
Form
<form>
<label>
<textarea>
<datalist>
<option>
<select>
<optgroup>
<meter>
<progress>
<input list placeholder
required src='image'
value>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<title>Document</title>
</head>
<body>

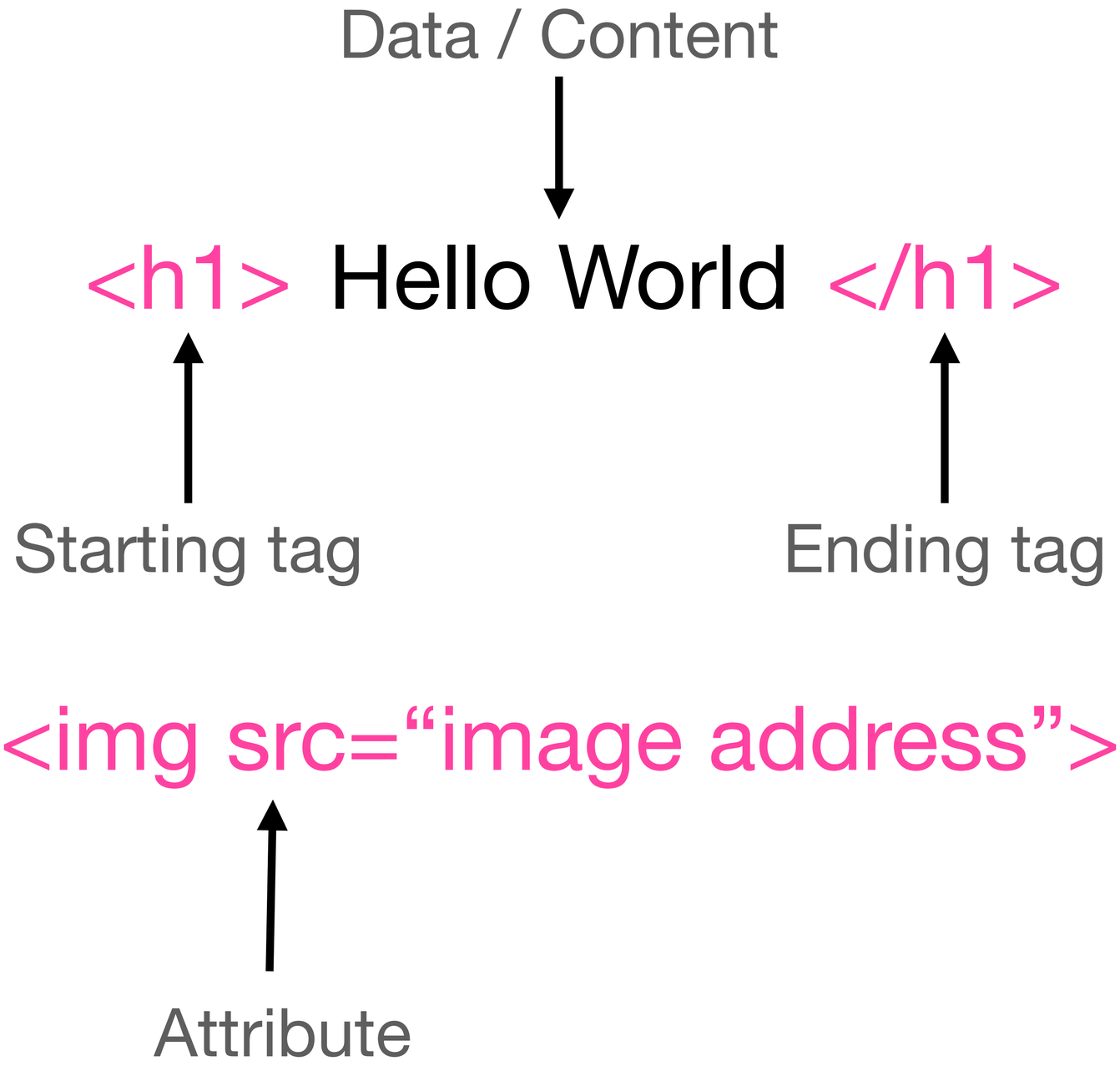
tennis
hiking
talk with friend

</body>
</html>
Document
127.0.0.1:50721/list.html
tennis
hiking
talk with friend
Line 20, Column 1 — 20 Lines
INS
UTF-8
HTML
Spaces: 4
-- Normal --

HTML is all about Data:
- use tag to enclose data
- provide data a meaning (semantic)

<h1> Hello World </h1>

<button> Ok </button>


Data / Content
<h1> Hello World </h1>
Starting tag
Ending tag
<img src="image address">
Attribute

HTML file structure

```
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <title>Document</title>
</head>

<body>

    <h1>Hello World!</h1>

</body>

</html>
```

data

Common format problems

<h1> Hello world </h1

<h1> Hello world <h1>

<h1> Hello world

! <tab>
generate templage

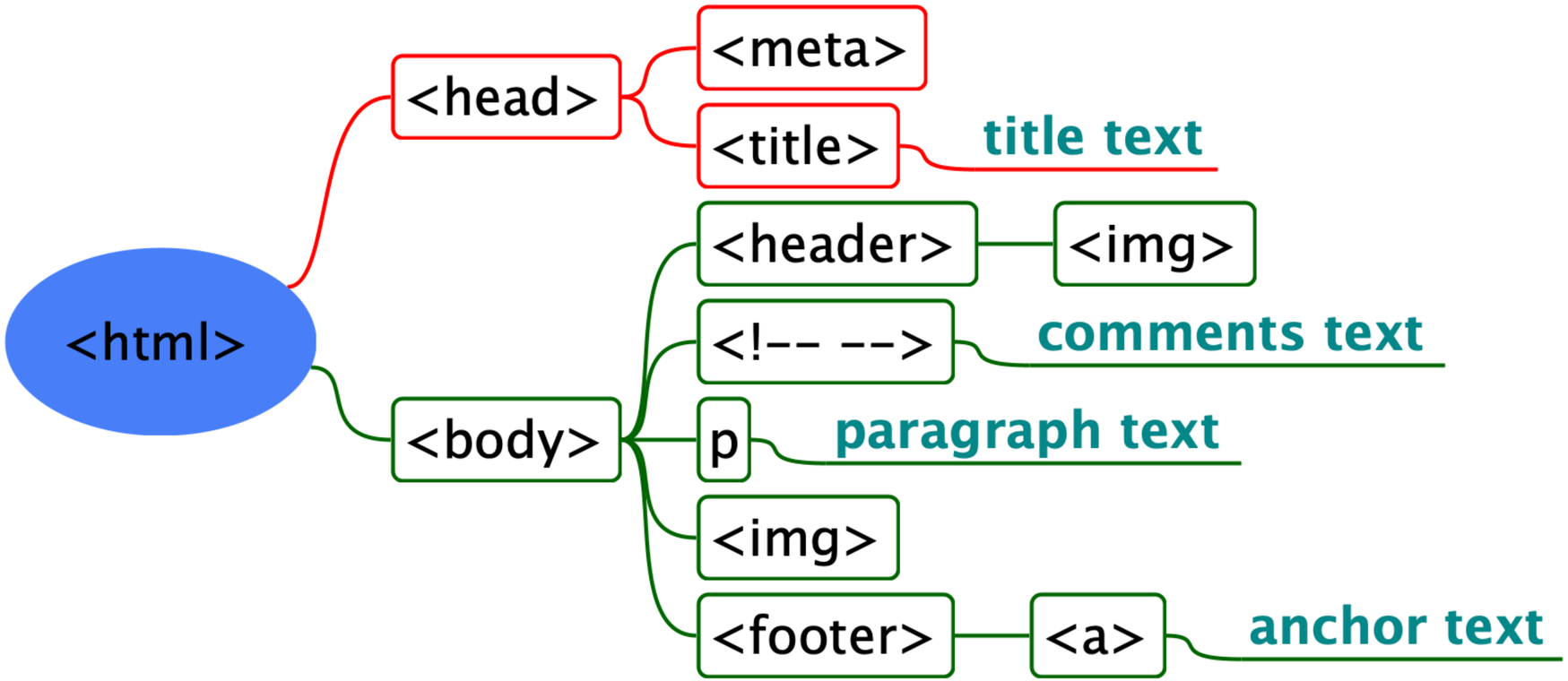
lorem200, lorem50

1st checkpoint：

Know how to write HTML by yourself?

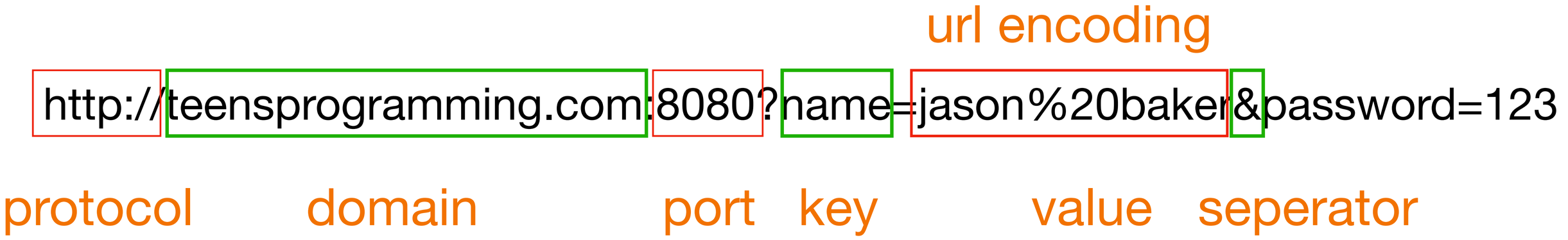
Share code (google doc)

HTML tree structure

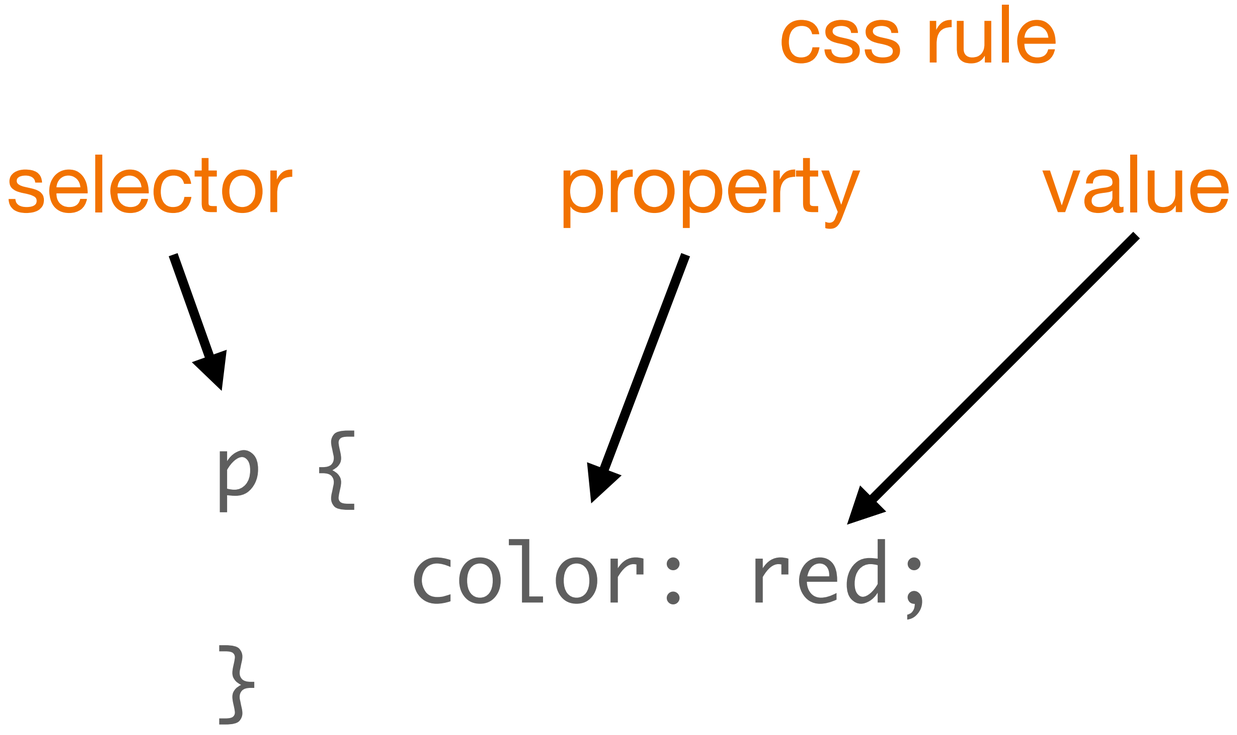


made by freeplane

url


url encoding
http://teensprogramming.com:8080?name=jason%20baker&password=123
protocol
domain
port
key
value
seperator

CSS



Shortcut

- mac: cmd-a, cmd-c, cmd-v
  windows: ctrl-a, ctrl-c, ctrl-v

- comments:
  mac: cmd-/
  windows: ctrl-/

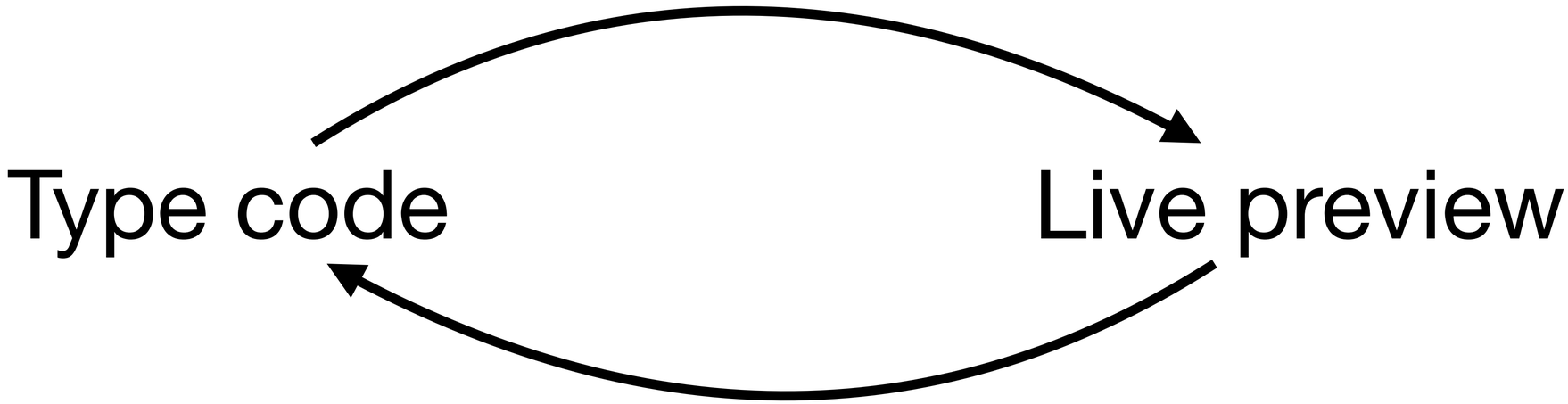
- live preview:
  mac: opt-cmd-p

- open/close dev tools:
  mac: opt-cmd-i

- make font larger:
  ctrl-+

- undo: ctrl-z
- duplicate a line: ctrl-d
- remove a line: shift-ctrl-d

Practice interaction



20 classes (40 hours)

HTML cheatsheet

HTML5 Elements

```
<!doctype html>
<!-- -->
```

Structure

```
<html><head><body>
<h1> … <h6>
<p>
<div>
<header>
<nav>
<main>
<footer>
<hr>
<br>
<fieldset><legend>
<details><summary>
<aside>
<article>
<section>
```

Text

```
<b><i>
<address>
<ins>
<del>
<mark>
<strong>
<em>
<small>
<big>
<sup>
<sub>
<blockquote>
<q>
<abbr>
<cite>
<dfn>
<s>
<u> (stylistically different)
```

```
<bdo dir='rtl'>
<bdi>اول</bdi>
<time>
<ruby>
<rt>
<rp>
```

List

```
<ol>
<li>
<ul>
<dl><dt><dd>
```

Link

```
<a>
 (remote,local,#,target,
 mailto)
```

Embedding

```
<img>
<figure>
<figcaption>
<picture><source>
embed google map
embed youtube video
```

```
<audio controls>
<video width poster src
controls loop track>

<iframe>
(url,pdf,txt,code)
```

Table

```
<table border>
<tr>
<th width>
<td colspan rowspan>
```

```
<caption>
<thead><tbody><tfoot>
Form (Adv)
<form>
<label>
<textarea>
<datalist>
<option>
<select>
<optgroup>
<meter>
<progress>

<input list placeholder
required src='image'
value>
type=text
type=password
type=hidden
type=number
type=email
type=url
type=tel
type=range
type=color
type=file
type=search
type=radio
type=checkbox
type=date
type=time
type=week
type=month
type=datetime-local

Button:
input type=submit
input type=reset
input type=button
input type=image
```

```
button
```

Head

```
<title>
<link>
<style>
```

```
<meta>
<base>
```

Entity

```
&copy; &lt; …
```

Format

```
<span>
<pre>
```

Map

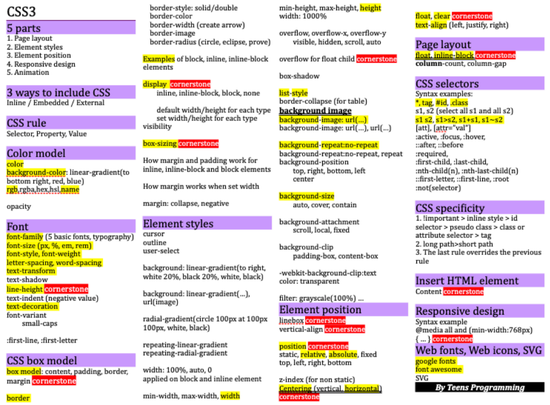
```
<img usemap="#dog"
src="dog.jpg">

<map name="dog">
<area shape="circle"
coords="250,250,50"
href="…"></map>
```

Programming

```
<script><noscript>
```

Created by
Teens Programming

CSS cheatsheet



CSS3

5 parts
1. Page layout
2. Element styles
3. Element position
4. Responsive design
5. Animation

3 ways to include CSS
Inline / Embedded / External

CSS rule
Selector, Property, Value

Color model
color
background-color: linear-gradient(to bottom right, red, blue)
rgb,rgba,hex,hsl,name

opacity

Font
font-family (5 basic fonts, typography)
font-size (px, %, em, rem)
font-style, font-weight
letter-spacing, word-spacing
text-transform
text-shadow
line-height cornerstone
text-indent (negative value)
text-decoration
font-variant
small-caps

:first-line, :first-letter

CSS box model
box model: content, padding, border, margin cornerstone

border

border-style: solid/double
border-color
border-width (create arrow)
border-image
border-radius (circle, eclipse, prove)

Examples of block, inline, inline-block elements

display cornerstone
inline, inline-block, block, none

default width/height for each type
set width/height for each type
visibility

box-sizing cornerstone

How margin and padding work for inline, inline-block and block elements

How margin works when set width

margin: collapse, negative

Element styles
cursor
outline
user-select

background: linear-gradient(to right, white 20%, black 20%, white, black)

background: linear-gradient(...), url(image)

radial-gradient(circle 100px at 100px 100px, white, black)

repeating-linear-gradient
repeating-radial-gradient

width: 100%, auto, 0
applied on block and inline element

min-width, max-width, width

min-height, max-height, height
width: 1000%

overflow, overflow-x, overflow-y
visible, hidden, scroll, auto

overflow for float child cornerstone

box-shadow

list-style
border-collapse (for table)
background image
background-image: url(...)
background-image: url(...), url(...)

background-repeat:no-repeat
background-repeat:no-repeat, repeat
background-position
top, right, bottom, left
center

background-size
auto, cover, contain

background-attachment
scroll, local, fixed

background-clip
padding-box, content-box

-webkit-background-clip:text
color: transparent

filter: grayscale(100%) ...

Element position
linebox cornerstone
vertical-align cornerstone

position cornerstone
static, relative, absolute, fixed
top, left, right, bottom

z-index (for non static)
Centering (vertical, horizontal) cornerstone

float, clear cornerstone
text-align (left, justify, right)

Page layout
float, inline-block cornerstone
column-count, column-gap

CSS selectors
Syntax examples:
*, tag, #id, .class
s1, s2 (select all s1 and all s2)
s1 s2, s1>s2, s1+s1, s1~s2
[att], [attr="val"]
:active, :focus, :hover,
::after, ::before
:required,
:first-child, :last-child,
:nth-child(n), :nth-last-child(n)
::first-letter, ::first-line, :root
:not(selector)

CSS specificity
1. !important > inline style > id selector > pseudo class > class or attribute selector > tag
2. long path>short path
3. The last rule overrides the previous rule

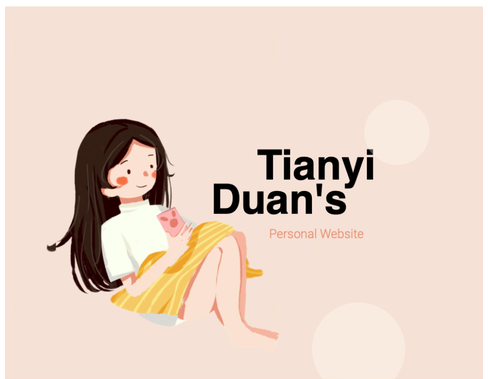
Insert HTML element
Content cornerstone

Responsive design
Syntax example
@media all and (min-width:768px)
{ … } cornerstone

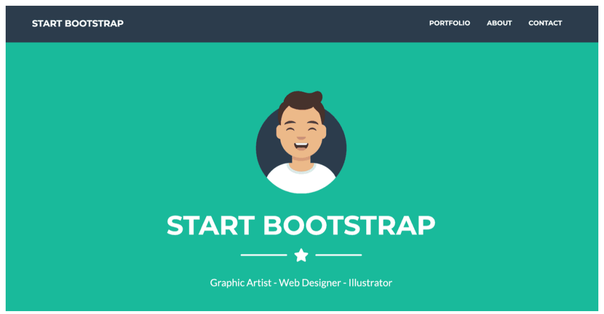
Web fonts, Web icons, SVG
google fonts
font awesome
SVG

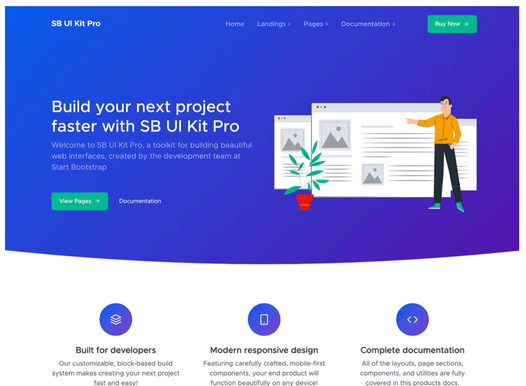
By Teens Programming

Your personal webpage



Recreating 2 professional designed web pages

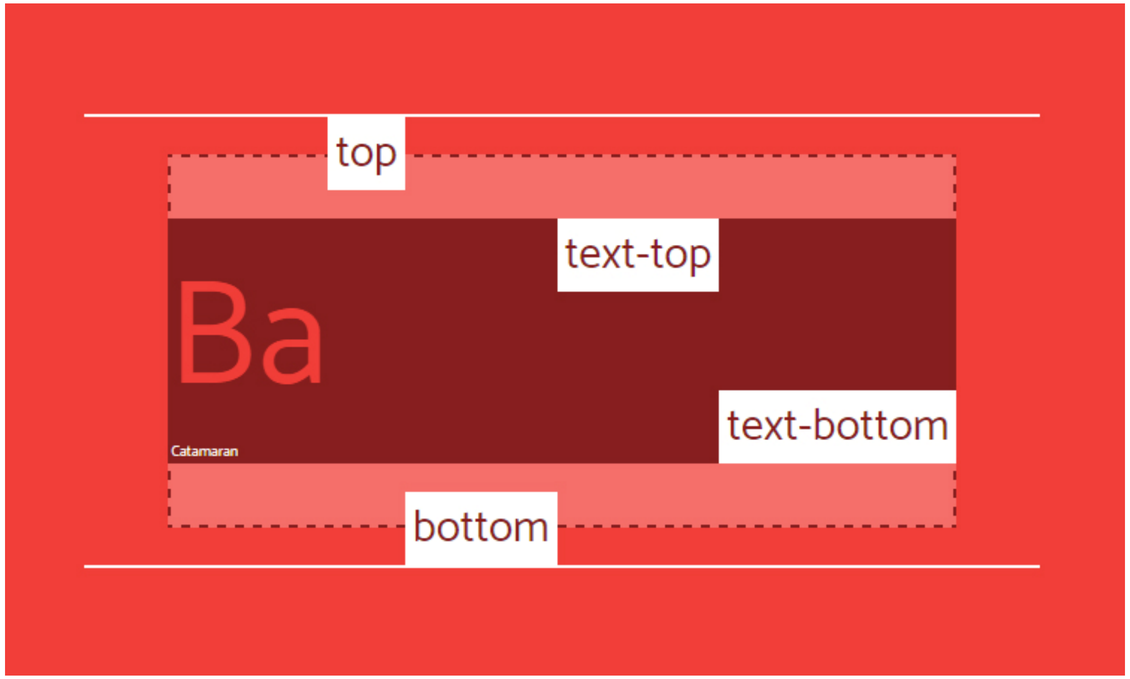




Marks

1. box model, display, horizontal center 60
2. position 70
3. page layout 80
4. responsive design 90
5. box-sizing, overflow for float, content 100

Vertical-align



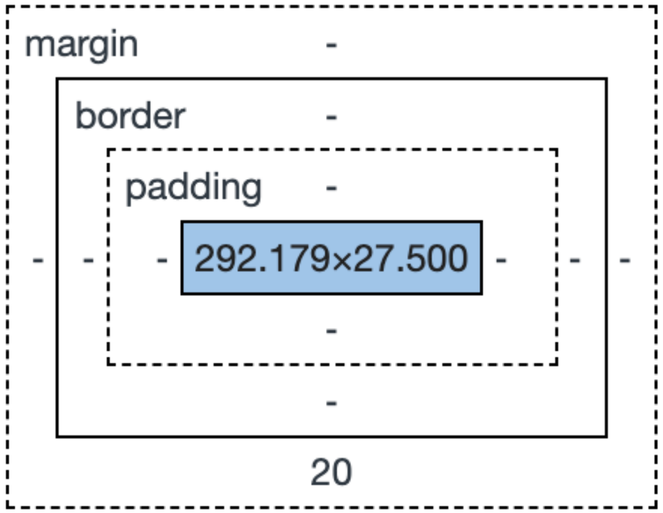
https://iamvdo.me/en/blog/css-font-metrics-line-height-and-vertical-align

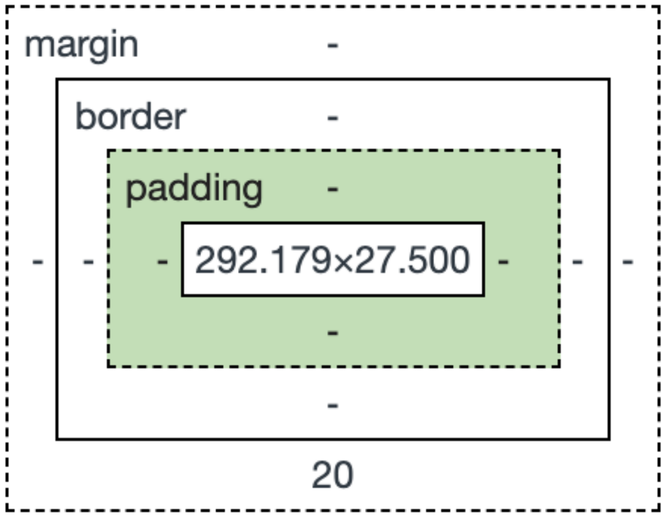
line box

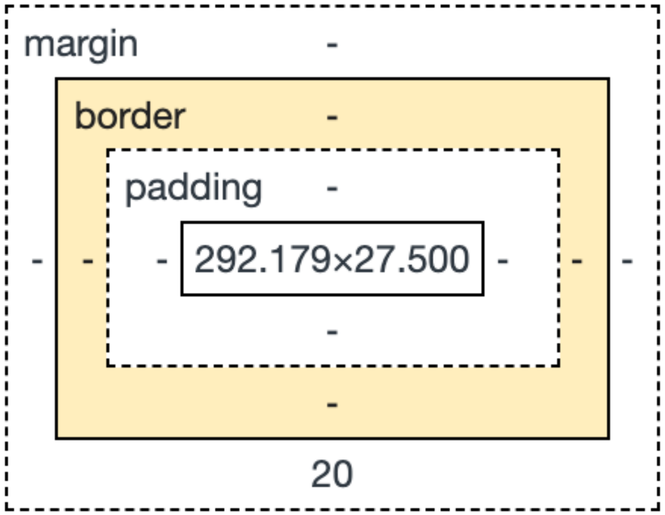

```
a {
    border: solid;
    text-decoration: none;
    height: 200px;
    width: 300px;
    text-align: center;
}
```

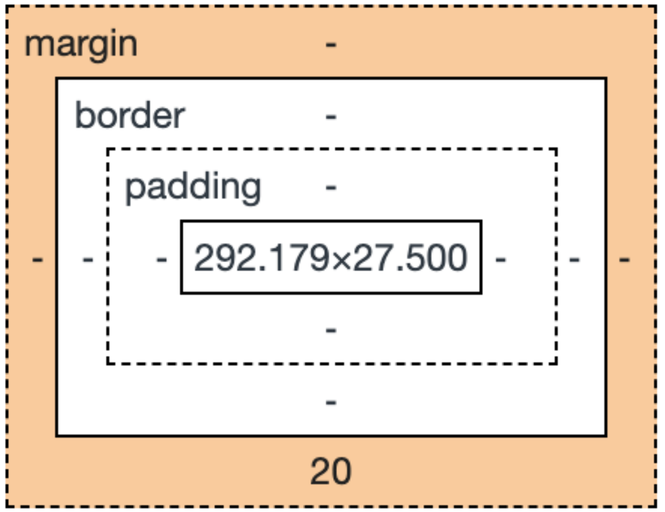
```
a {
    border: solid;
    text-decoration: none;
    height: 200px;
    width: 300px;
    text-align: center;
    /*              */
    line-height: 300px;
}
```

Content, Padding, Border, Margin









display: block, inline-block, inline

.

I

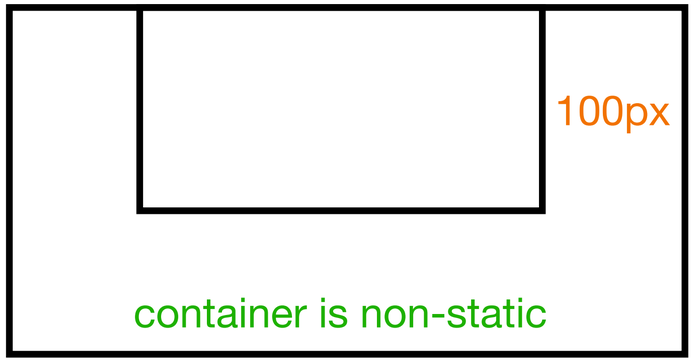
Horizontal Centering

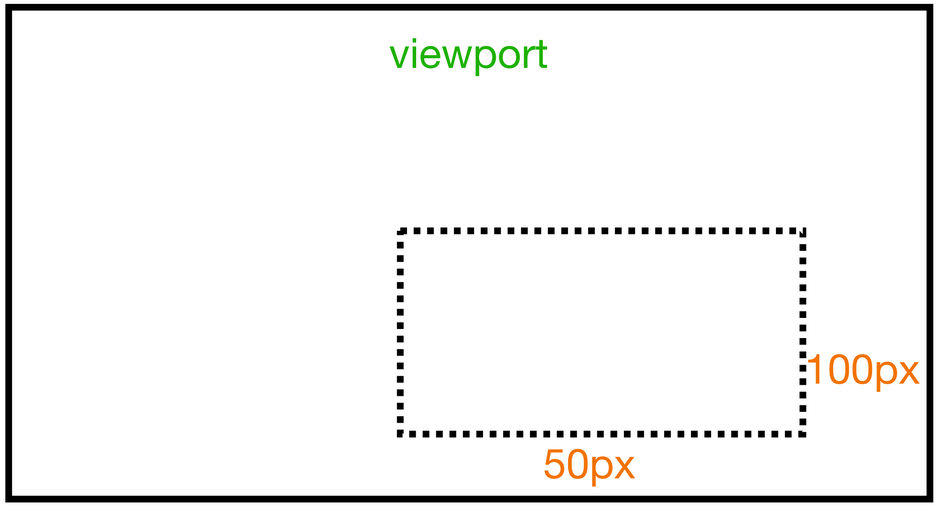
- For block element, using ‘margin:auto’
- For Inline element including inline-block: using ‘text-align:center’ in the element’s container

Position

position: relative
right: 100px

position: absolute
right: 100px





position: fixed
right: 100px
bottom: 50px

box-sizing

float, clear

Do Layout

inline-block

float

Environment part 1

Code remote repository	Github
Web hosting	Github pages
Editor	Brackets, extensions
Chrome	Dev tools

Environment

Environment part 2

Code manage tool	Git and its 3 commands
Code local repository	Clone remote repository to c:\

Environment

git

1

1. register github account
2. create new repository:
   your_account_name.github.io
3. check your website

2

1. download git and install
2. (for windows) open git bash; cd /c/_a
   (for mac) open terminal; cd ~/_a
3. git clone remote_repository
4. open brackets,
   open repository folder,
   create 'index.html'

3

1. (for Windows) cd /c/_a/repository
   (for Mac) cd ~/_a/repository
2. git config --global user.email "your_email"
3. git config --global user.name "your_name"

4

1. (for Windows) cd /c/_a/repository
   (for Mac) cd ~/_a/repository
2. git add .
3. git commit -m "message"
4. (optional) create github token
5. git push
6. check github repository contents
7. check website

Git 3 commands