Web101 Intro

Members

HTML

CSS

Javascript

HTML for data

CSS for styling

HTML/CSS is the base

HTML/CSS

Online game

Web Animation

Server programming

Web101 = Coding + Art

(Web user interface)

Including

- 2 languages：HTML，CSS
- 1 personal website for you and employers
- 2 pre-designed webpages
- regularly publish your work (homework or projects)
- you will get a certificate if you complete all

Download

- Brackets https://brackets.io

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

- ZOOM

Brackets extensions

- emmet
- beautify (edit -> beautify on save)
- Confetti

File structure

- C:_a\web101

or

- ~/_a/web101

Live preview

127.0.0.1

Layout （half and half)

Layout

Brackets File Edit Find View Navigate Emmet Window Debug Help
Sun 11:52 AM
You are screen sharing
Stop Share
list.html (html_css) — Brackets
www.teensprogramming.com/downloa
Share Code - Google Docs
Practical coding classes for ki...
https://www.teensprogram...
<ruby>
<rt>
<rp>
List
<ol>
<li>
<ul>
<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>
Document
127.0.0.1:50721/list.html
tennis
hiking
talk with friend
first.html
t.html
list.html
1 <!DOCTYPE html>
2 <html lang="en">
3
4 <head>
5 <meta charset="UTF-8">
6 <title>Document</title>
7 </head>
8
9 <body>
10
11 <ul>
12 <li>tennis</li>
13 <li>hiking</li>
14 <li>talk with friend</li>
15 </ul>
16
17 </body>
18
19 </html>
20
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

```html
<!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 template

lorem200, lorem50

1st checkpoint：

Know how to write HTML by yourself?

Share code (google doc)

HTML tree structure

made by freeplane

url (universal resource location)

front-end developer
back-end developer
full stack developer

Students need know how to try and learn HTML and CSS by themselves

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. page layout 70 (inline-block, float)
3. position, git 80
4. responsive design, vertical center 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

Find out your device CSS dimensions

https://www.mydevice.io/

Client - Server

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 the cloned repository folder,
   create 'index.html'

3

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

4

1. (for Windows) cd /c/_a/your_repository
   (for Mac) cd ~/_a/your_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