



CSS专家带你剖析

Web终端适配主流方案

主讲：大漠





大漠

- 手淘前端技术专家
- 10年+前端开发经验，W3cplus 创始人，CSS领域专家
- 目前主攻智能UI的研发，在HTML、CSS和A11Y 领域有较深的研究
- 著有《图解CSS3：核心技术与案例实战》

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- 03 / 未来值得期待的布局或适配方案



01

Web布局的发展史以及 主流的布局方案

Web Design 1.0



1992

Text Design



1996

Tables & Borders



2000

Blog Design



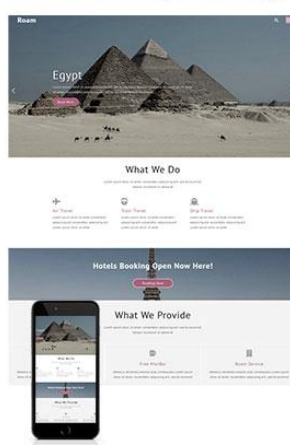
2008

Web Design 2.0



2010

Bootstrap Design



2015

Web Design 3.0



2019

- Web Design 1.0
- Web Design 2.0
- Web Design 3.0

World Wide Web

The WorldWideWeb (W3) is a wide-area [hypermedia](#) information retrieval in Everything there is online about W3 is linked directly or indirectly to this doc November's [W3 news](#) , [Frequently Asked Questions](#) .

[What's out there?](#)

Pointers to the world's online information, [subjects](#) , [W3 servers](#) , etc.

[Help](#)

on the browser you are using

[Software Products](#)

A list of W3 project components and their current state. (e.g. [Line Mode](#)

[Technical](#)

Details of protocols, formats, program internals etc

[Bibliography](#)

Paper documentation on W3 and references.

[People](#)

A list of some people involved in the project.

[History](#)

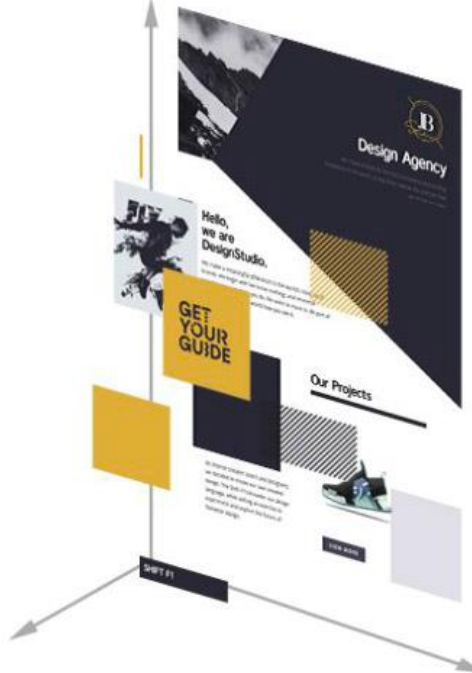
A summary of the history of the project.

[How can I help?](#)

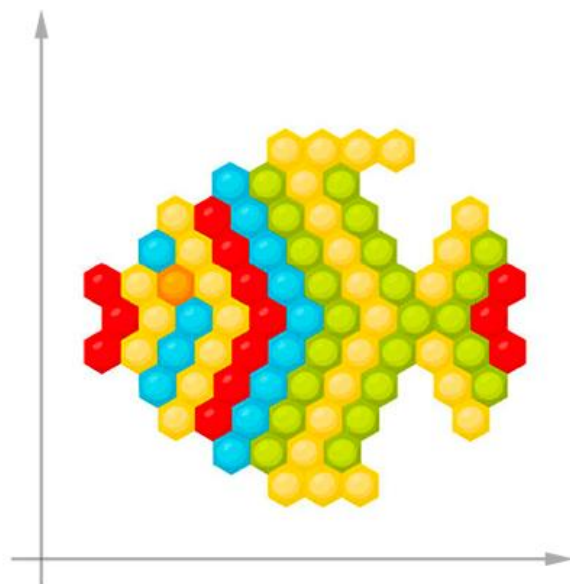
If you would like to support the web..

[Getting code](#)

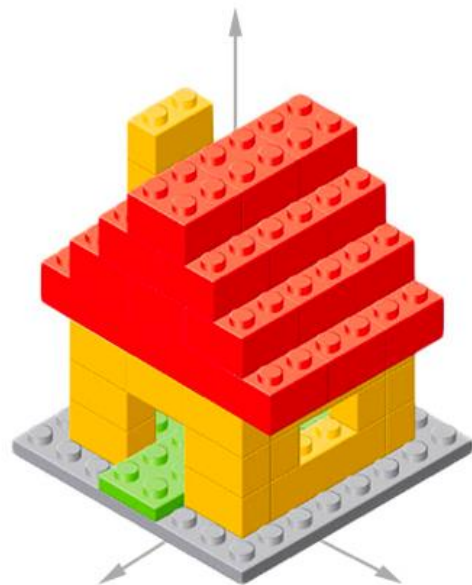
Getting the code by [anonymous FTP](#) . etc.



WEB DESIGN 1.0

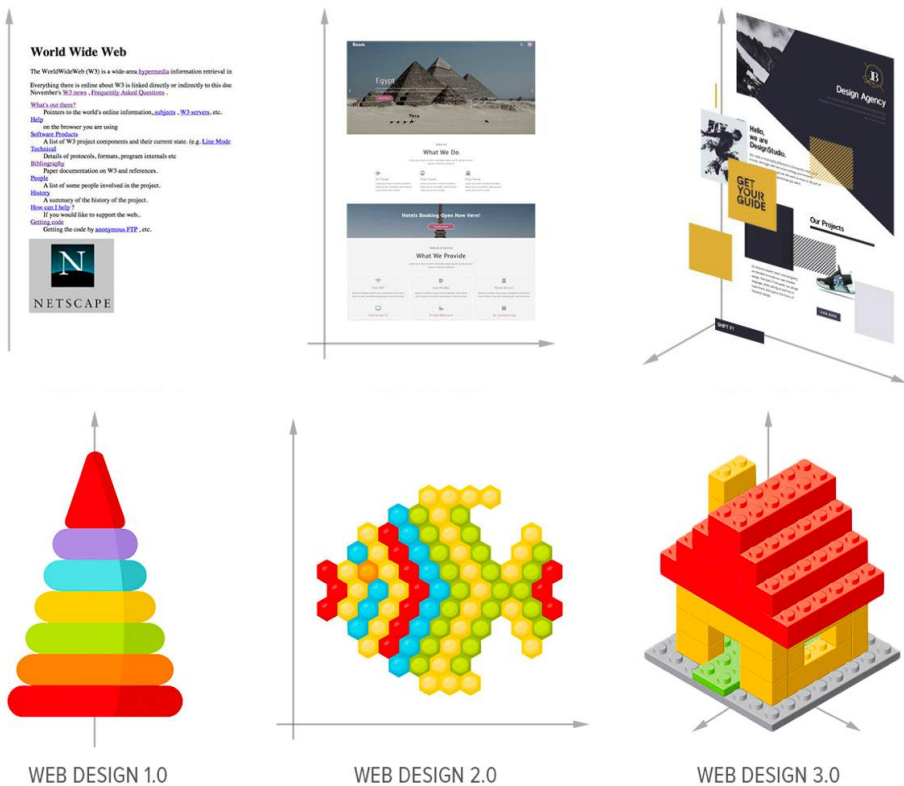


WEB DESIGN 2.0



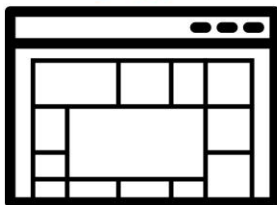
WEB DESIGN 3.0

- Web设计1.0是“一维的”：设计元素大多是按顺序排列的
(按文档流的自然顺序排列)
- Web设计2.0是“二维的”：单元格中有放置元素的网格，
具有更多的自由性
- Web设计3.0是一个“新的维度”：它可以像平面设计工具
一样的自由地定位元素、重叠

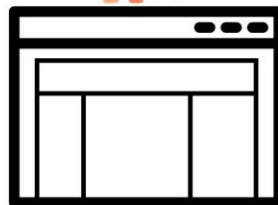




无布局形式



表格布局



浮动/定位/inline-block



CSS框架布局
(如960gs)



Flexbox/Grid/多列

Text Design



1992

Tables & Borders



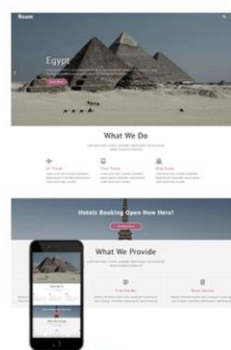
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Web Design 2.0



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2019

Web Design 1.0

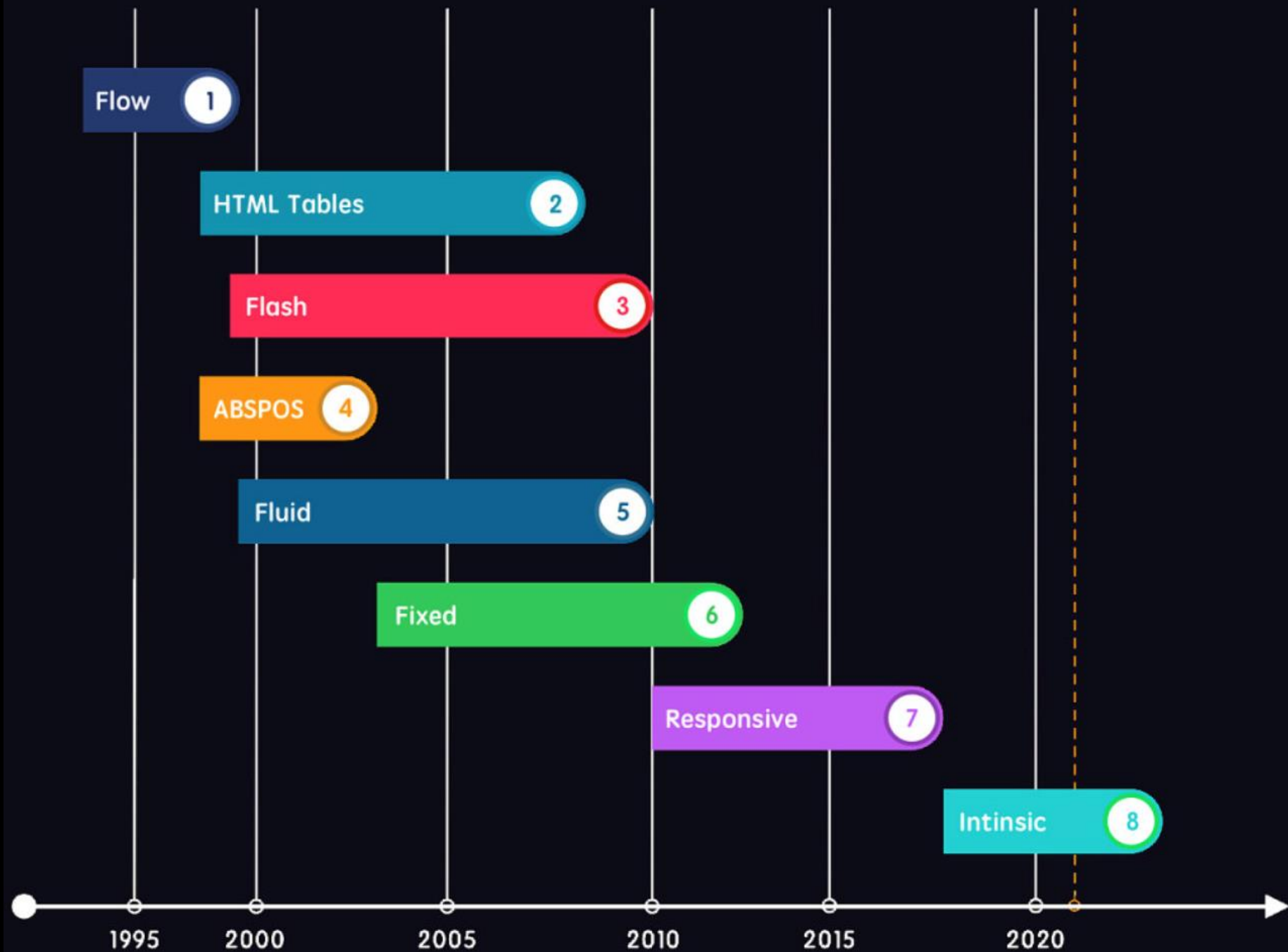


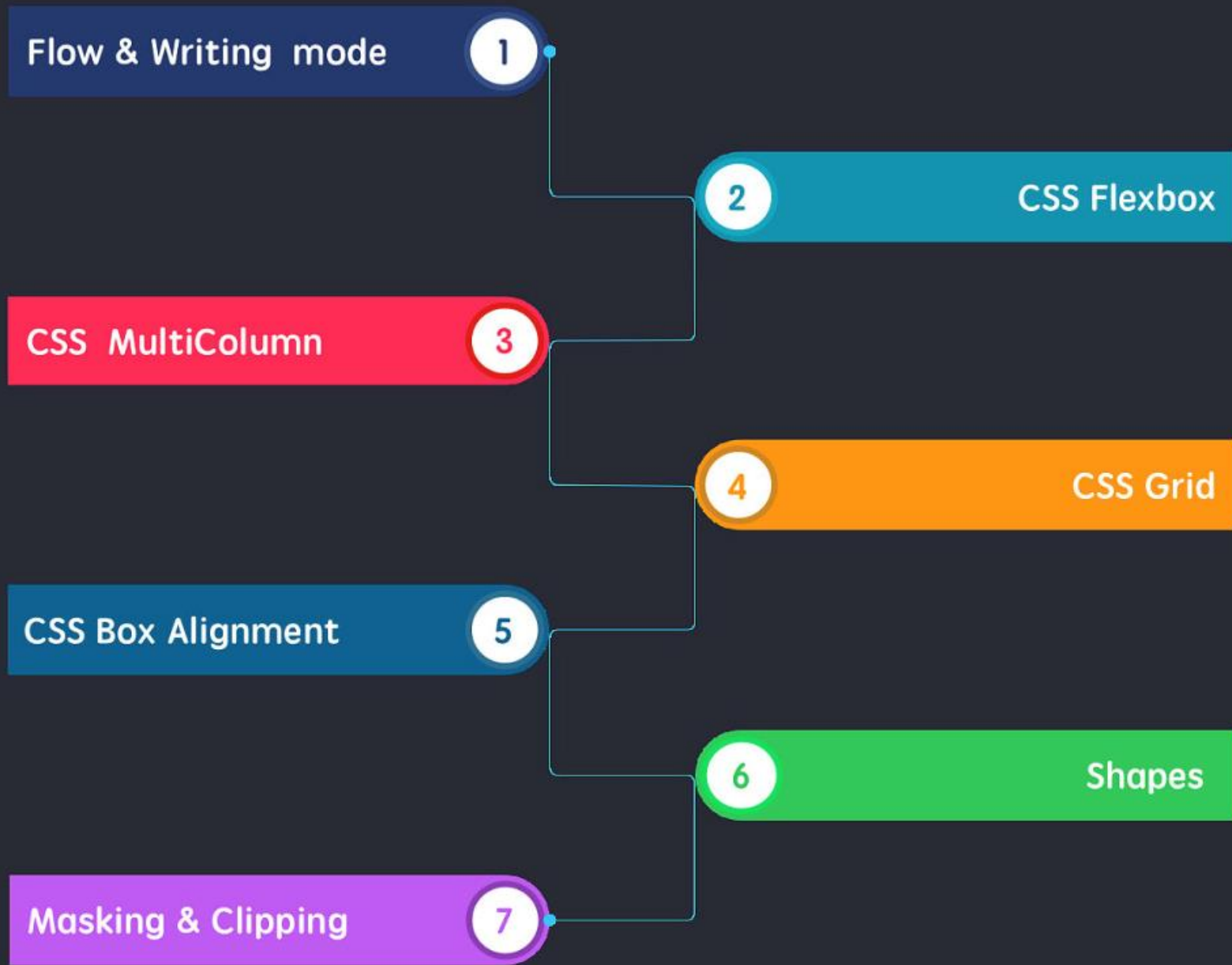
1996

Blog Design



2008







02

Rem 和 VW 适配方案的 设计思路和利弊



facebook

Connect with friends and the world around you on Facebook.

Log In

[Forgot Password?](#)

Create New Account

Create a Page for a celebrity, band or business.

www.facebook.com (桌面端)

facebook

Log In

[Forgot Password?](#)

or

Create New Account

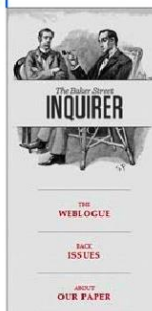
m.facebook.com (移动端)

< 400px

400px ~ 600px

600px ~ 1300px

>1300px



“Give me
problems, give
me work.”

In the year 1878 I took my degree of Doctor of Medicine of the University of London, and proceeded to Netley to go through the course prescribed for surgeons in the army. Having completed my studies there, I was duly attached to the Fifth Northumberland Fusiliers as Assistant Surgeon. The regiment was stationed in India at the time, and before I could join it, the second Afghan war had broken out. On landing at Bombay, I learned that my corps had advanced through the passes, and was already deep in the enemy's country.

victors & villains



Illustrations by Sidney Paget, words by Sir
Arthur Conan Doyle.
What remains is by Ethan Marcotte.



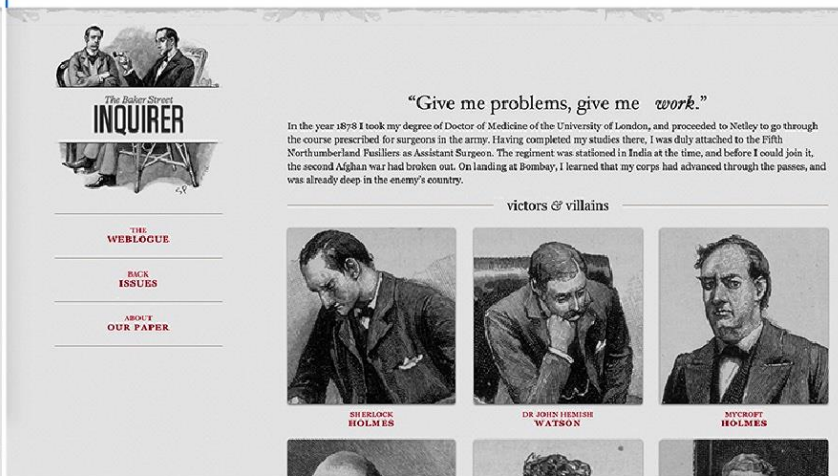
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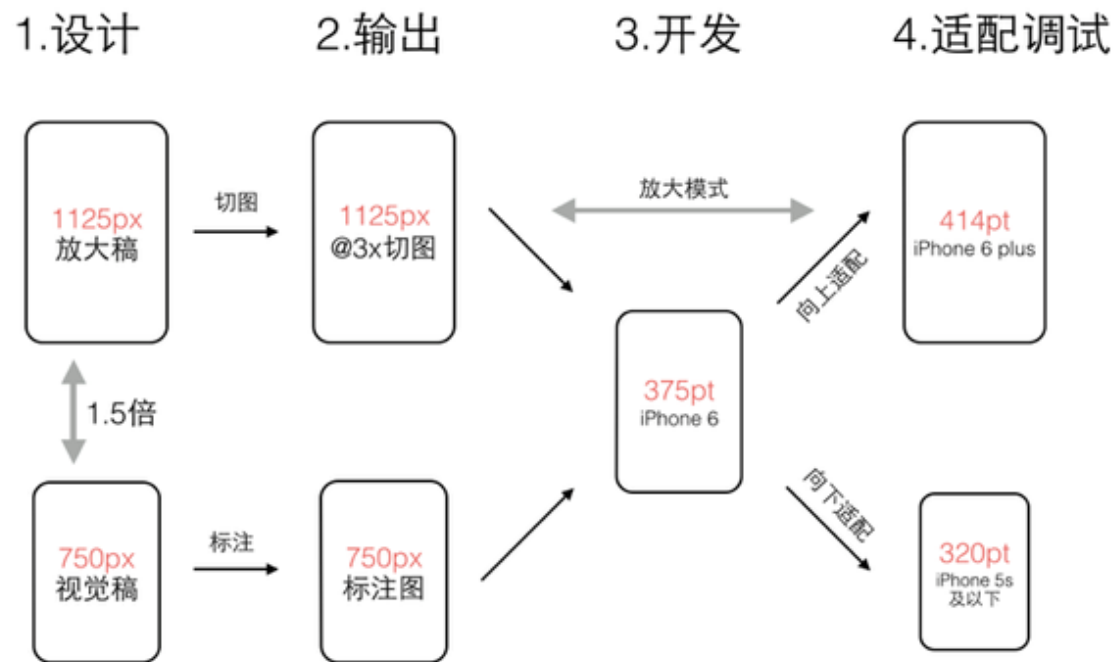
Device metrics



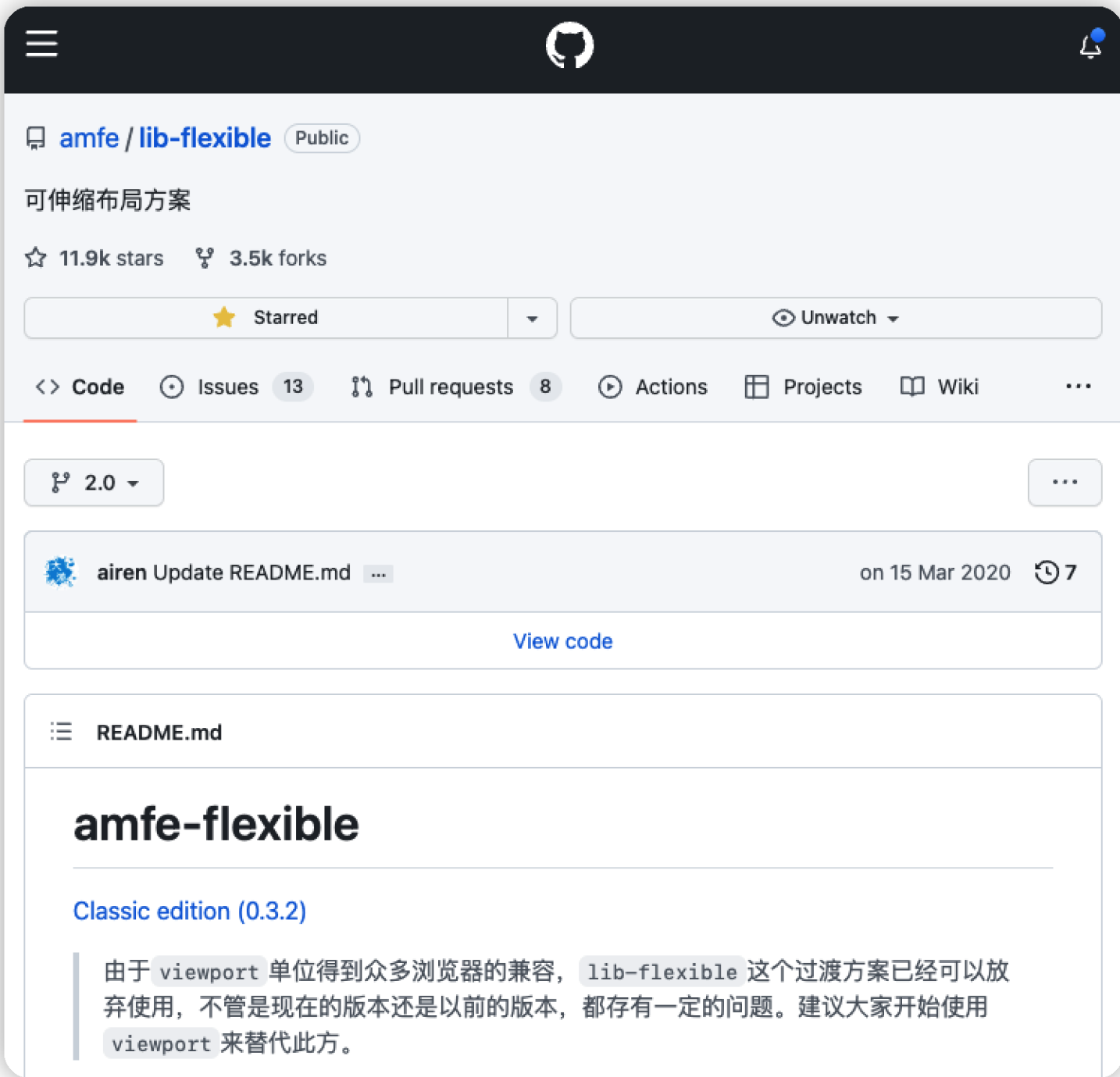
Type	Device	Platform	Screen dimensions in cm		Aspect Ratio	Width × Height dp	Width × Height px	Density
	iPad	iOS	9.7 in	5.8 × 7.8 in	4 : 3	768 × 1024 dp	768 × 1024 px	1.0 mdpi
	iPad Mini	iOS	7.9 in	4.7 × 6.3 in	4 : 3	768 × 1024 dp	768 × 1024 px	1.0 mdpi
	iPad Mini Retina	iOS	7.9 in	4.7 × 6.3 in	4 : 3	768 × 1024 dp	1536 × 2048 px	2.0 xhdpi
	iPad Pro	iOS	12.9 in	10.3 × 7.7 in	4 : 3	1366 × 1024 dp	2732 × 2048 px	2.0 xhdpi
	iPad Retina	iOS	9.7 in	5.8 × 7.8 in	4 : 3	768 × 1024 dp	1536 × 2048 px	2.0 xhdpi
	iPhone	iOS	3.5 in	1.9 × 2.9 in	3 : 2	320 × 480 dp	320 × 480 px	1.0 mdpi
	iPhone 4	iOS	3.5 in	2.0 × 2.9 in	3 : 2	320 × 480 dp	640 × 960 px	2.0 xhdpi
	iPhone 5	iOS	4.0 in	2.0 × 3.5 in	16 : 9	320 × 568 dp	640 × 1136 px	2.0 xhdpi
	iPhone 6	iOS	4.7 in	2.3 × 4.1 in	16 : 9	375 × 667 dp	750 × 1334 px	2.0 xhdpi
	iPhone 6 Plus	iOS	5.5 in	2.7 × 4.8 in	16 : 9	414 × 736 dp	1080 × 1920 px	3.0 xxhdpi
	iMac 27	OS X	27.0 in	23.5 × 13.2 in	16 : 9	2560 × 1440 dp	2560 × 1440 px	1.0 mdpi

- 选择一种尺寸作为设计和开发的基准
- 定义一套适配规则，自动适配其他尺寸的设备
- 特殊适配效果给出设计效果

手机淘宝团队适配协作模式



手淘设计师常选择iPhone6作为基准设计尺寸，交付给前端的设计尺寸是按 750px x 1334px 为准（高度会随着内容多少而改变）。前端开发人员通过一套适配规则自动适配到其他的尺寸。



lib-flexible

<https://github.com/amfe/lib-flexible>



Flexible会将视觉稿分成 100 等份，每一等份被称为一个单位 a。
同时 1rem 单位被认定为 10个a。

$1a = 7.5px$
 $1rem = 75px$

$750px ==> 10rem$

<html> 元素设置的 font-size 为 75px

<https://www.w3cplus.com/mobile/lib-flexible-for-html5-layout.html>



20

carter's

Carter's 1件式灰色长袖连体衣包脚爬服
全棉鲸鱼男婴儿童装115G093

750

#f32a4c

#ffffffd

16

双11价 ¥ 299.06 (满400减100)

1小时内热卖5885件

#ff6a30

#f5294c

马上抢!



176

176

Nike 耐克官方 ZOOM KOBE VENOMENON
5 EP 科比男子篮球鞋815757

双11价 ¥ 699.50 (满300减150)

6744人正在疯抢

马上抢!



现货【送皮套+钢膜+耳机】Xiaomi/小米
红米Note2手机note2

双11价 ¥ 799.00 (满300减150)

7833人正在疯抢

马上抢!



13

ONLY

ONLY 2015秋装新品七分袖弹力修身针织衫女

18

双11价 ¥ 299.00 (满300减100)

2379人想买

马上抢!



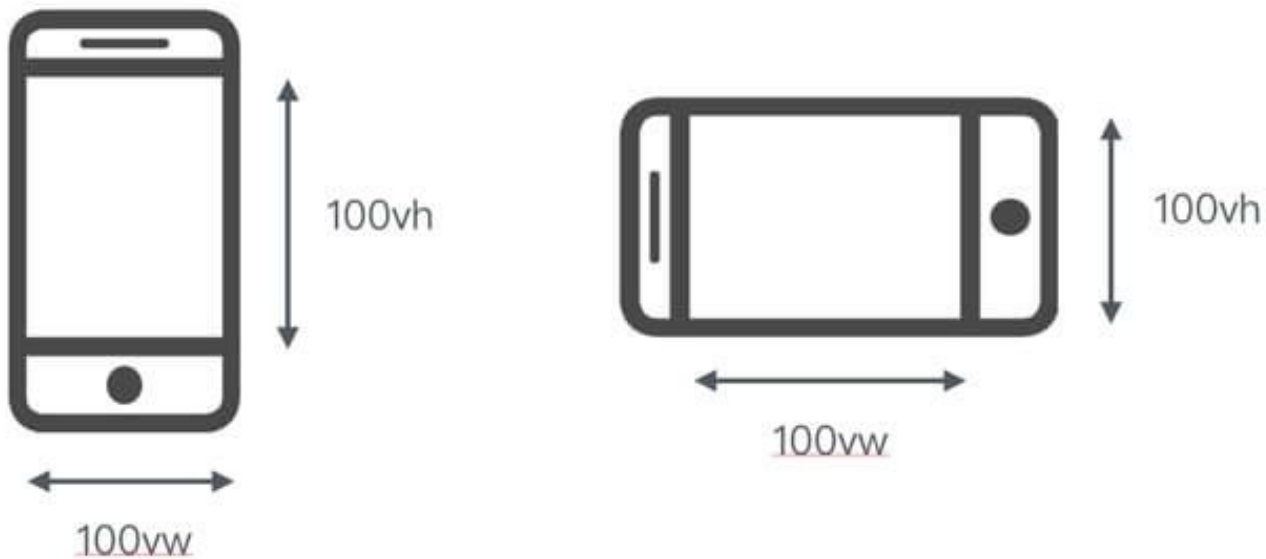
13

Levi's 李维斯 513 春季男士修身直筒牛仔裤长裤

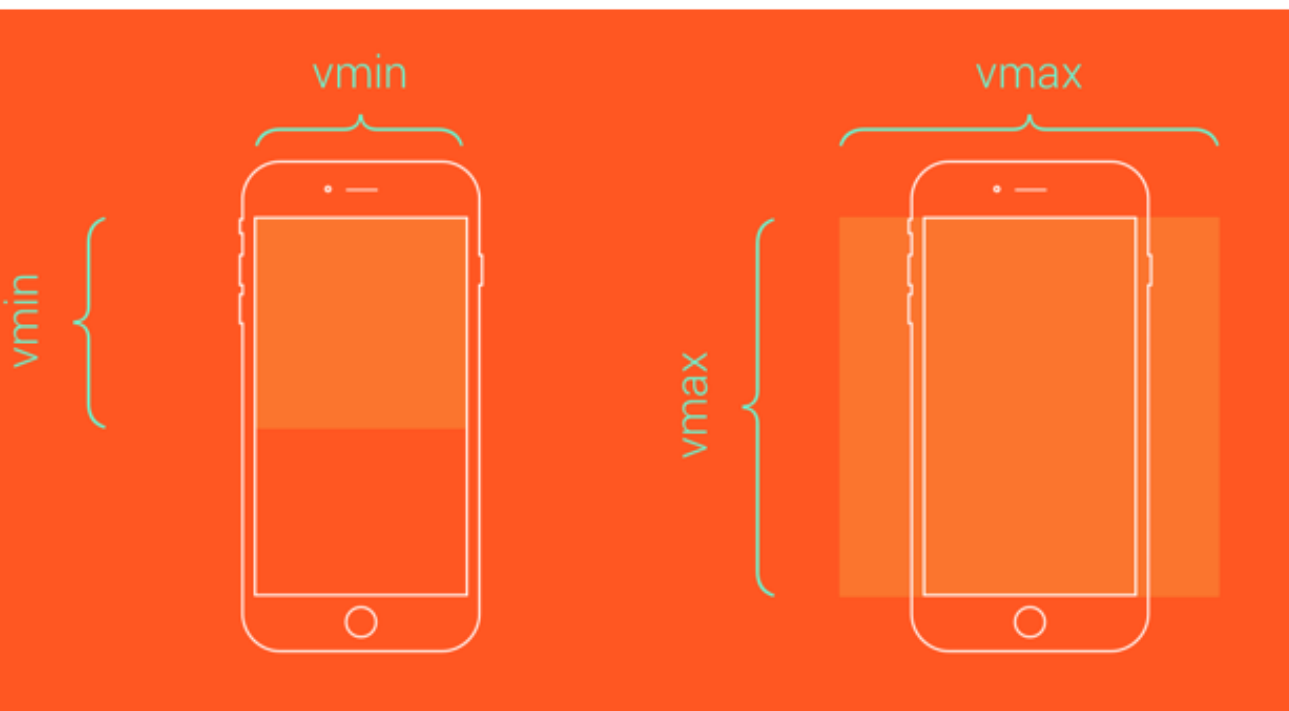
双11价 ¥ 399.00 (满300减100)

预热期加购TOP1

马上抢!



$$100vw = 750px$$
$$1vw = 7.5px$$




```
"postcss-px-to-viewport": {  
  // 视窗的宽度，对应的是我们设计稿的宽度，一般是750  
  viewportWidth: 750,  
  // 视窗的高度，根据750设备的宽度来指定，一般指定  
  1334，也可以不配置  
  viewportHeight: 1334,  
  // 指定`px`转换为视窗单位值的小数位数（很多时候无法整  
  除）  
  unitPrecision: 3,  
  // 指定需要转换成的视窗单位，建议使用vw  
  viewportUnit: 'vw',  
  // 指定不转换为视窗单位的类，可以自定义，可以无限添加，  
  建议定义一至两个通用的类名  
  selectorBlackList: ['.ignore', '.hairlines'],  
  // 小于或等于`1px`不转换为视窗单位，你也可以设置为你  
  想要的值  
  minPixelValue: 1,  
  // 允许在媒体查询中转换`px`  
  mediaQuery: false  
}
```

<https://git.kaikeba.com/damo/clear-cart/blob/create-components/postcss.config.js>

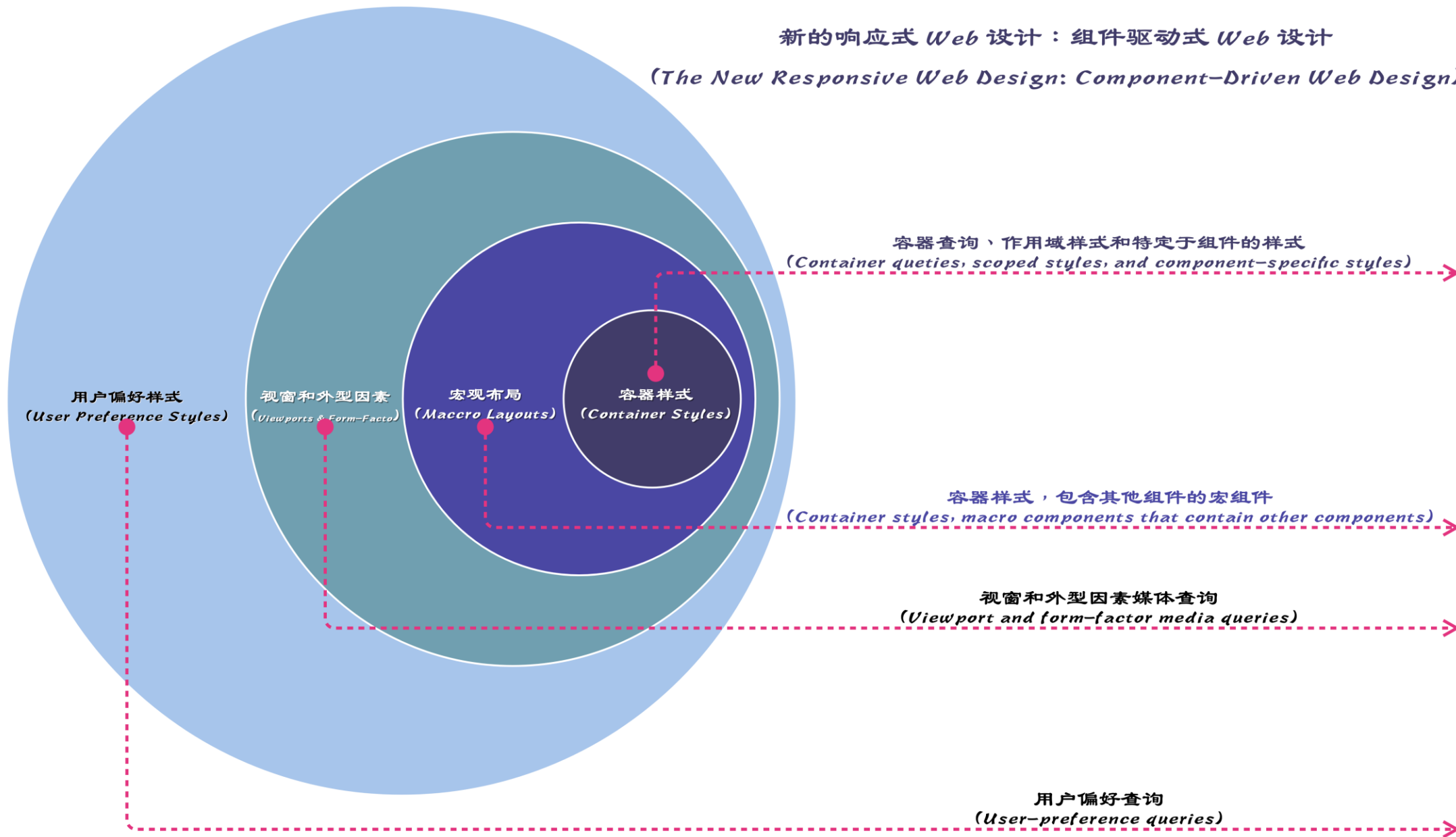
<https://www.w3cplus.com/css/vw-for-layout.html>



03

未来值得期待的布局或适配方案

新的响应式 Web 设计：组件驱动式 Web 设计
(The New Responsive Web Design: Component-Driven Web Design)





PINK HAND-MADE PLANTER

\$16.99

Handmade in Brooklyn, NY. Dimensions: 16" at opening, 10" at base. Round dome shape for single or multiple plantings.

 + ADD TO CART



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\$16.99

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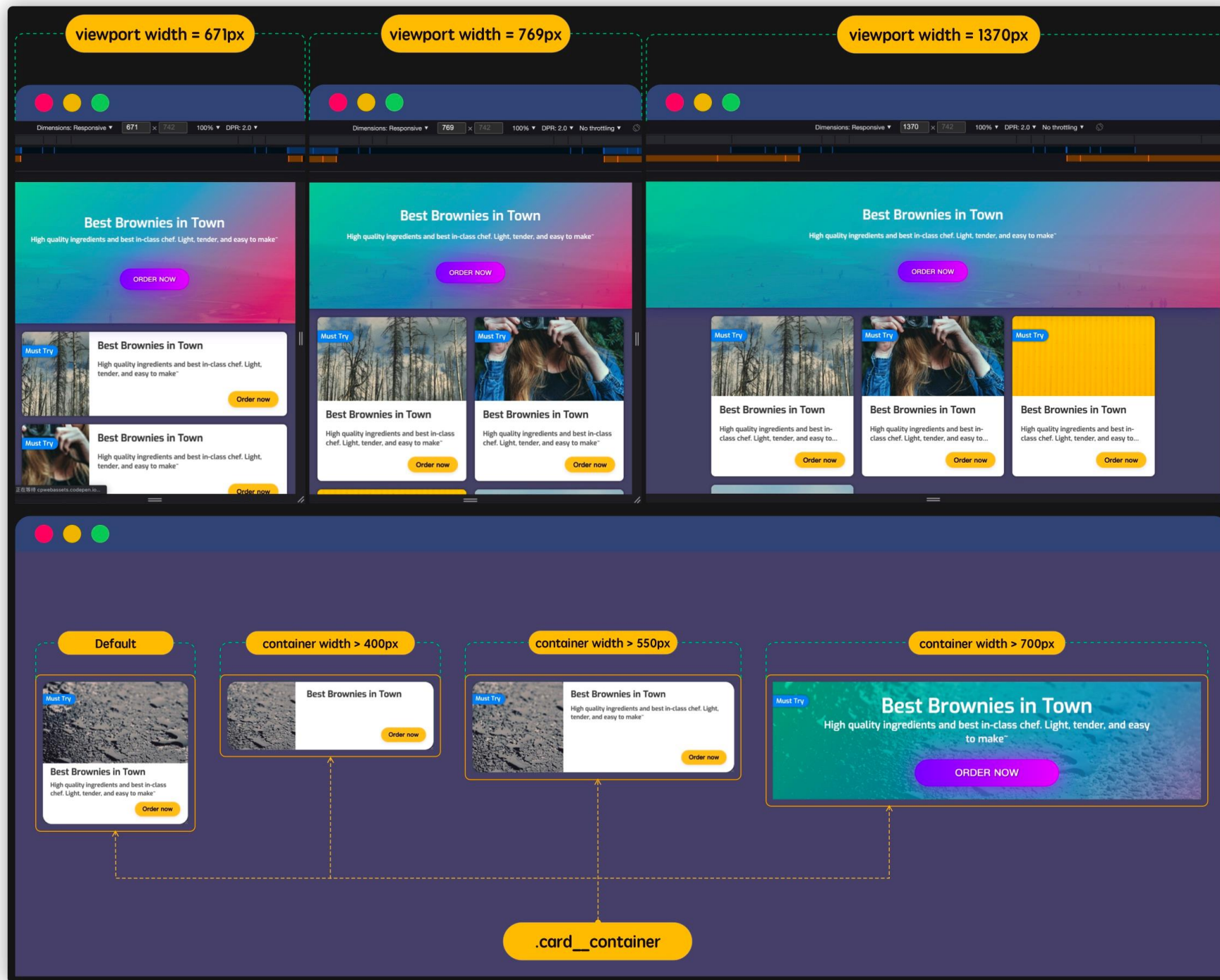
 + ADD TO CART

inline-size > 45em

侧边栏 (aside)

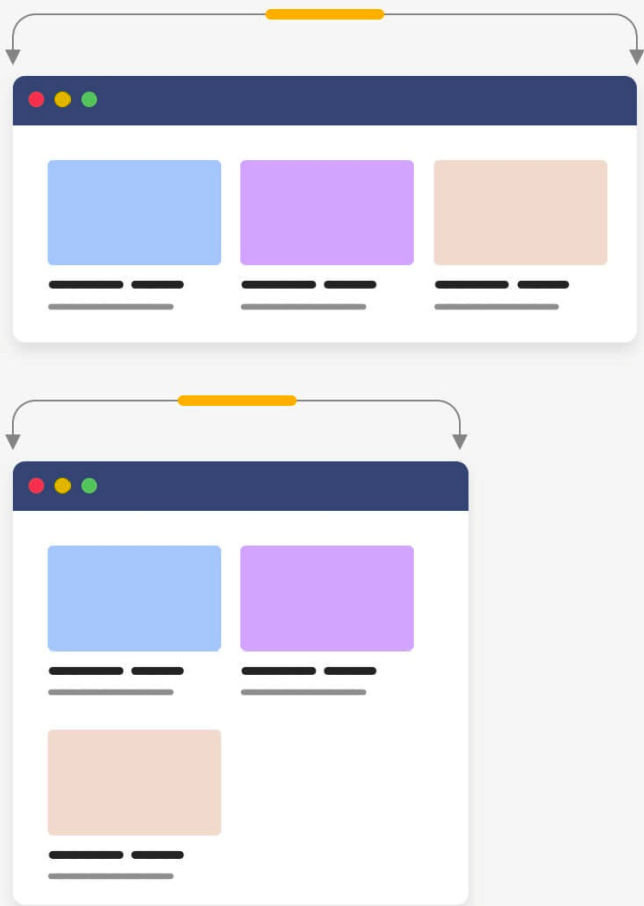
主内容 (main)

侧边栏 (aside)



Media Query

● Viewport width

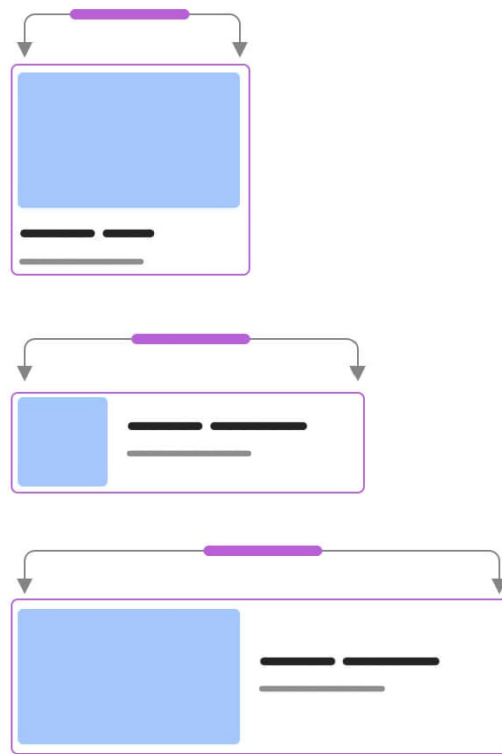


宏观布局 (*Macro Layout*)

服务于整个页面布局

Container Query

● Container width

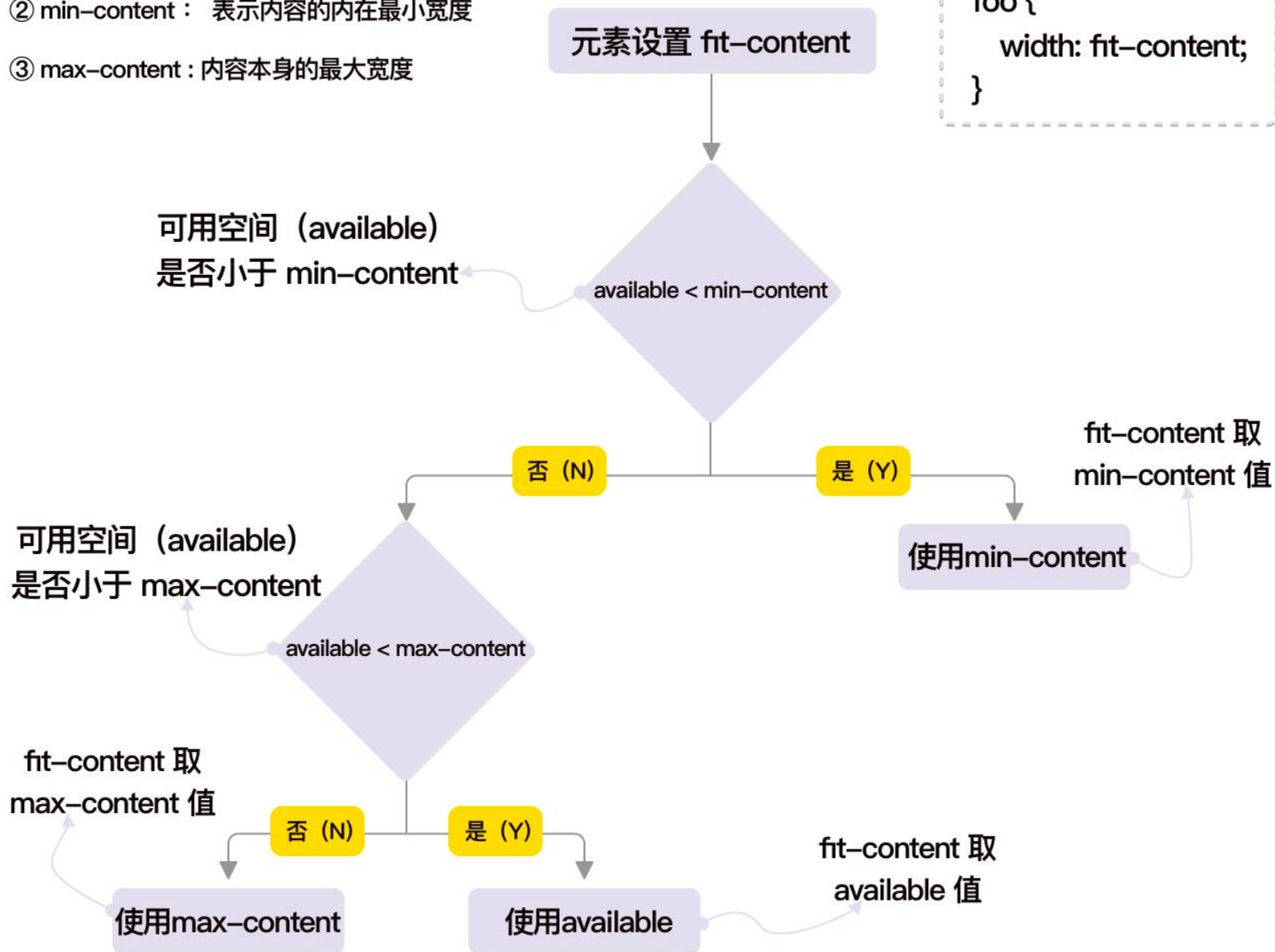


微观布局 (*Micro Layout*)

服务于组件布局或样式调整

- ① available : 可用空间 (Available Space)
- ② min-content : 表示内容的内在最小宽度
- ③ max-content : 内容本身的最大宽度

```
foo {
  width: fit-content;
}
```



<https://noti.st/airenliao/MXTHfl#sfawHn5>

<https://codepen.io/airen/pen/dyPJdWJ>

Dimensions: Responsive ▾

1862

×

607

50% ▾

DPR: 2.0 ▾

No throttling ▾



本周特推



星巴克猫爪杯八个字

这是一段推荐文字九十一二三四五

¥1 ¥280.00

1元抢

<https://www.w3cplus.com/css/practical-uses-of-css-math-functions-calc-clamp-min-max.html>

<https://www.w3cplus.com/css/how-to-get-a-pixel-perfect-and-linearly-scaled-ui.html>

<https://codepen.io/airen/pen/oNWwdoZ>



Q&A 环节



THANKS

数字化人才在线教育平台

