

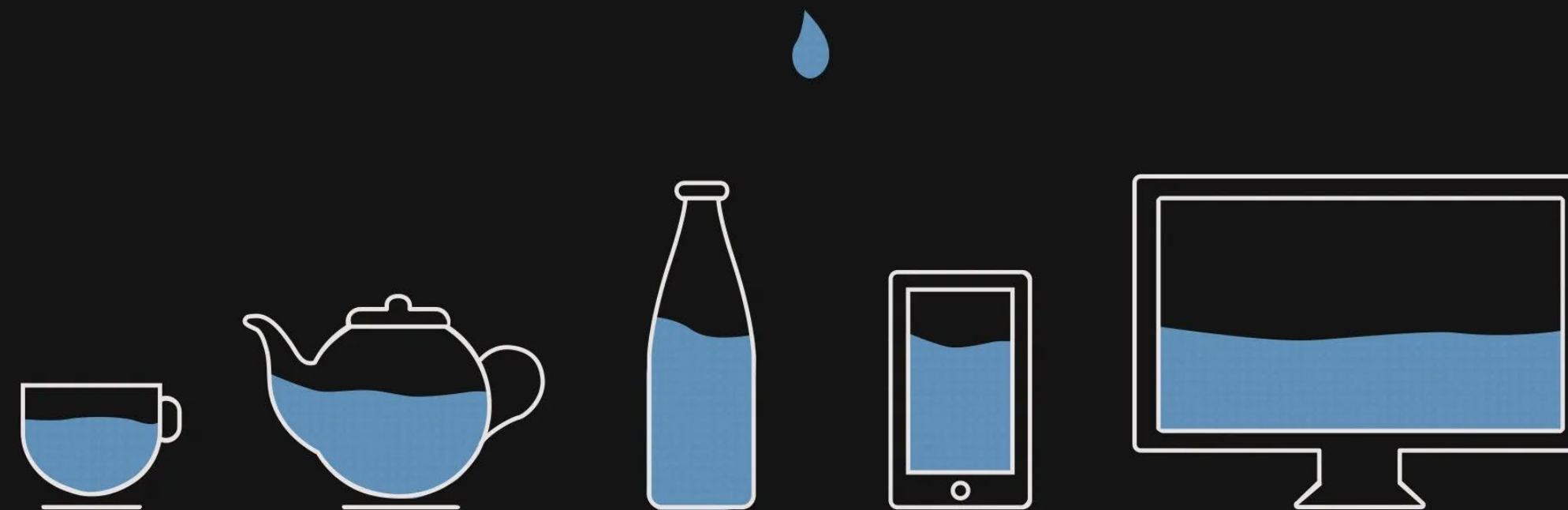
CASCADING STYLE SHEETS : CSS

03 RESPONSIVE vs ADAPTIVE

INFO 2302 WEB TECHNOLOGIES

What is Responsive?

CONTENT IS LIKE WATER



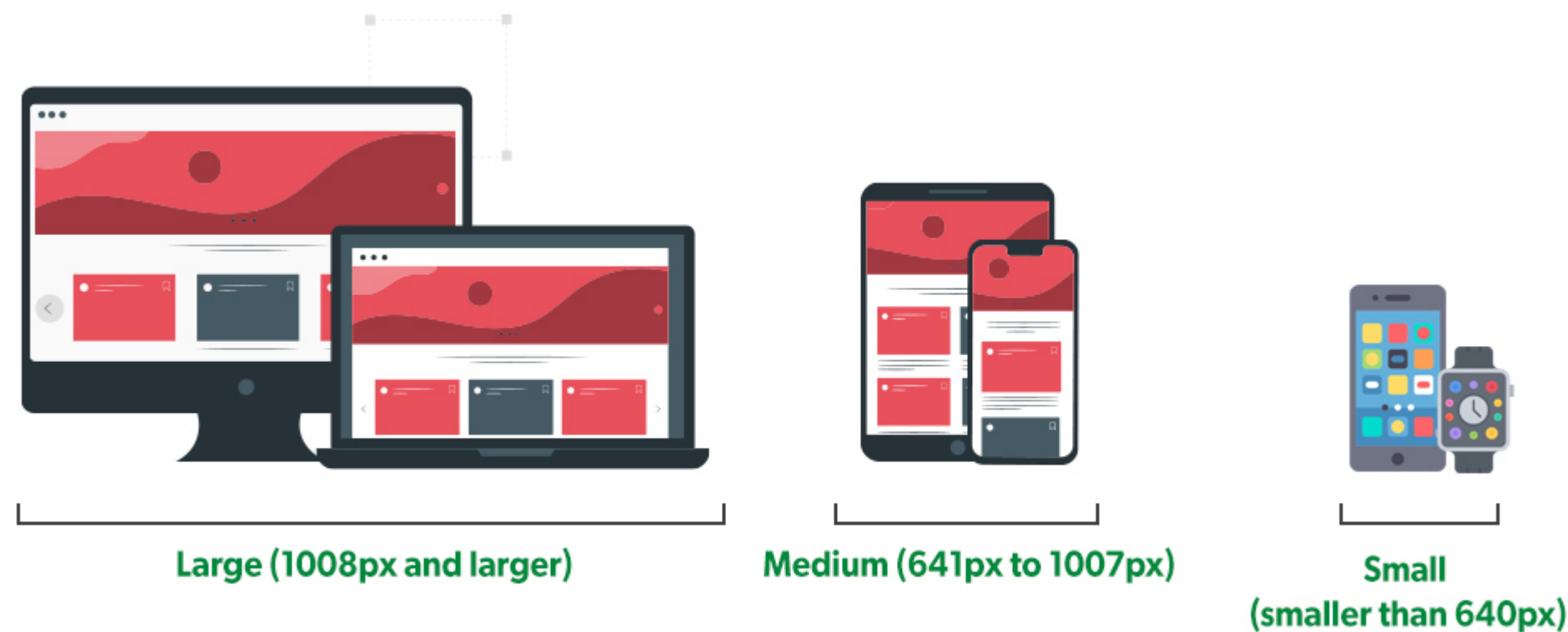
“You put water into a cup it becomes the cup.
You put water into a bottle it becomes the bottle.
You put it in a teapot, it becomes the teapot.”

Josh Clark (originally Bruce Lee) - Seven deadly mobile myths

Illustration by Stéphanie Walter

What is Adaptive?

Responsive Design

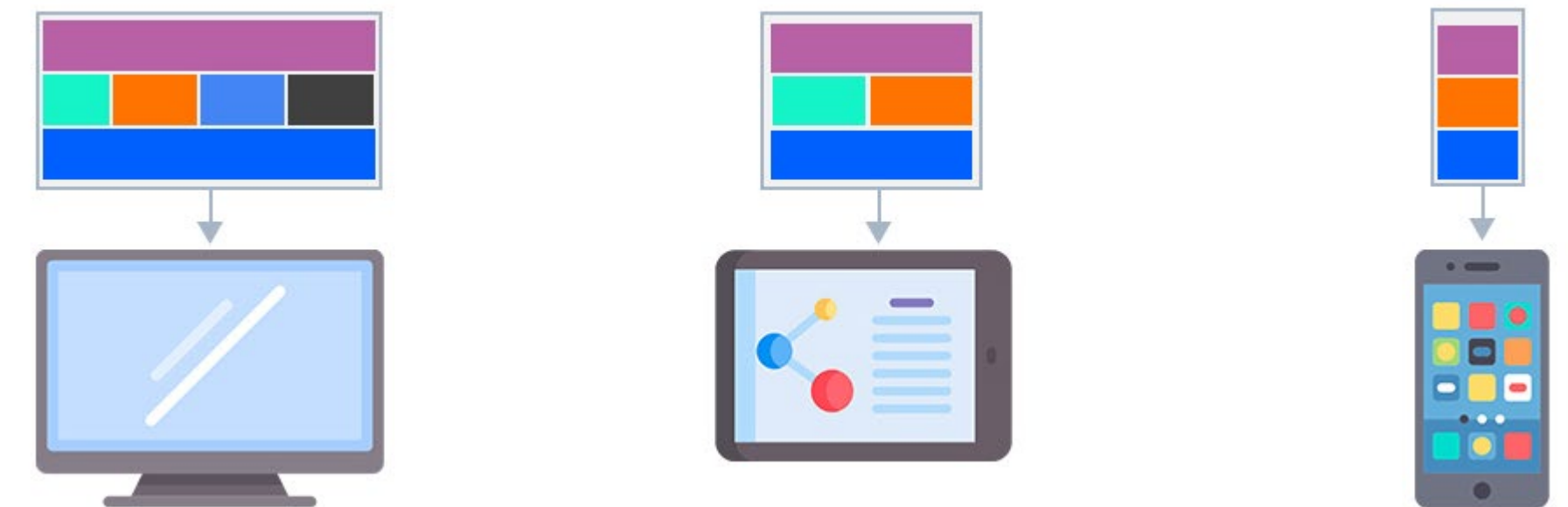


Responsive Web Design **responds** to the **changes** in the **browser** by aligning and arranging the various elements **according to the given screen size.**

The term responsive design was first coined by designer Ethan Marcott in his book of the same name.

Responsive Design changes with the change in the browser width by adjusting the placement of its design elements in the available browser space.

Adaptive Design



The concept of Adaptive Design is relatively new as it was conceptualized in 2011 by web designer Aaron Gustafson in his book.

While Responsive Design relies on changing the design pattern to fit the real estate available to it, **Adaptive Design has multiple fixed layout sizes.** When the **site** detects the **available space**, it selects the layout most appropriate for the screen.

RESPONSIVE WEB DESIGN universal	ADAPTIVE WEB DESIGN more specific
It adjusts its content and width according to the device.	According to the device, it loads the content of the web page that was already designed.
Designers have to work less because they have to create the single layout of the page designers	Designers have to work more because they have to create six different versions of the site to handle different screen sizes.
If there is any new layout of the screen comes into the market, the content is adjusted according to them .	Designers have to develop a completely new page if the new layout of the screen has come into the market.
Use of Responsive Design It has been made easier for less experienced designers and developers to use Responsive Design with the availability of themes via CMS systems such as WordPress, Joomla, and many more.	Use of Adaptive Design Adaptive is handy for updating an existing site to make it more mobile-friendly.
PRO <ul style="list-style-type: none"> Uniform & seamless = good UX. Abundance of templates to use. SEO friendly. Often easier to implement 	PRO <ul style="list-style-type: none"> Allows designers to build the best UX for the appropriate device. Mobile devices can sense their user's environment. Designers can optimize advertisements based on user data from smart devices.
CON <ul style="list-style-type: none"> Less screen size design control. Elements can move around Advertisements lost on screen. Longer mobile download times. 	CON <ul style="list-style-type: none"> Labor-intensive to create – most adaptive designs are retrofitting traditional sites to make them more accessible. Tablets and netbooks can have trouble with site configuration tending to be smartphone- or desktop-oriented. Challenging to SEO — Search engines have trouble appreciating identical content on multiple sites.

seo is search engine optimization:
-stratergy to make your website come
up in the first page

Responsive Design

Responsive web design (RWD) is a web design approach to make web pages that render well on all screen sizes and resolutions while ensuring good usability. It is the way to design for a multi-device web.

1. Viewport

- a. Metatag
- b. Viewports unit = vw

2. layout

- a. multiple columns, flexbox, and grids

3. media queries

- a. run series of test, case

4. Patterns

- a. <https://bradfrost.github.io/this-isresponsive/patterns.html>

b.

[https://medium.com/@daniaherrera/responsive-designlayout-](https://medium.com/@daniaherrera/responsive-designlayout-patterns-70e710551818)

[patterns-70e710551818](https://medium.com/@daniaherrera/responsive-designlayout-patterns-70e710551818)

c. [https://imdac.github.io/modules/css/css-rwdpatterns/#](https://imdac.github.io/modules/css/css-rwdpatterns/#layout-shifter)
[layout-shifter](https://imdac.github.io/modules/css/css-rwdpatterns/#layout-shifter)

5. Mobile First

- a. Prioritizing design for mobile first
- b. Designing for small screen remove unnecessary elements

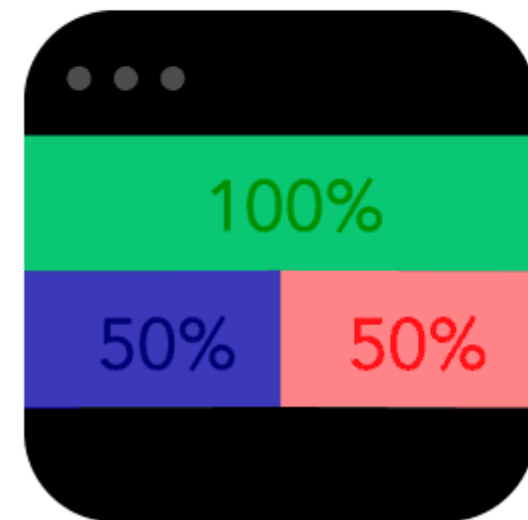
c. <https://www.browserstack.com/guide/how-toimplement-mobile-first-design>

6. Relative units

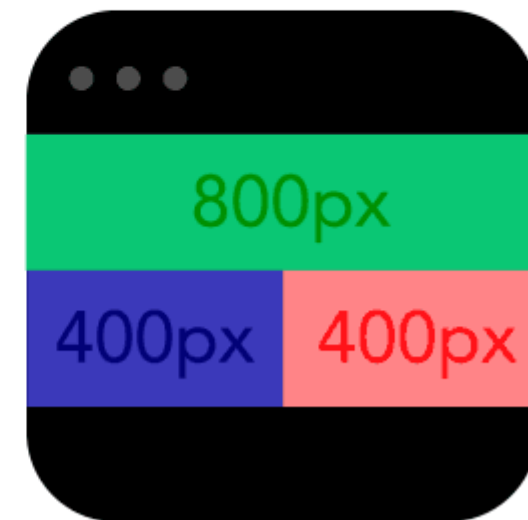
- a. For images, width, fonts

•CSS unit

Relative Units



Static Units



Absolute

Pixels (px)
 Centimeters (cm)
 Millimeters (mm)
 Inches (in)
 Points (pt)
 Picas (pc)

Relative

Percentages (%)
 Font-sizes (em&rem)
 Character-sizes (ex&ch)
 Viewport Dimensions (vw &vh)
 Viewport Max (vmax)
 Viewport Min (vmin)

Css units

%

Relative to the value of parent element. 100% is the width of the parent element

em

Relative to the font-size of the parent element.

vh

equal to 1% of the height of the browser window size.

px

Pretty self explanatory .Absolute length in pixel

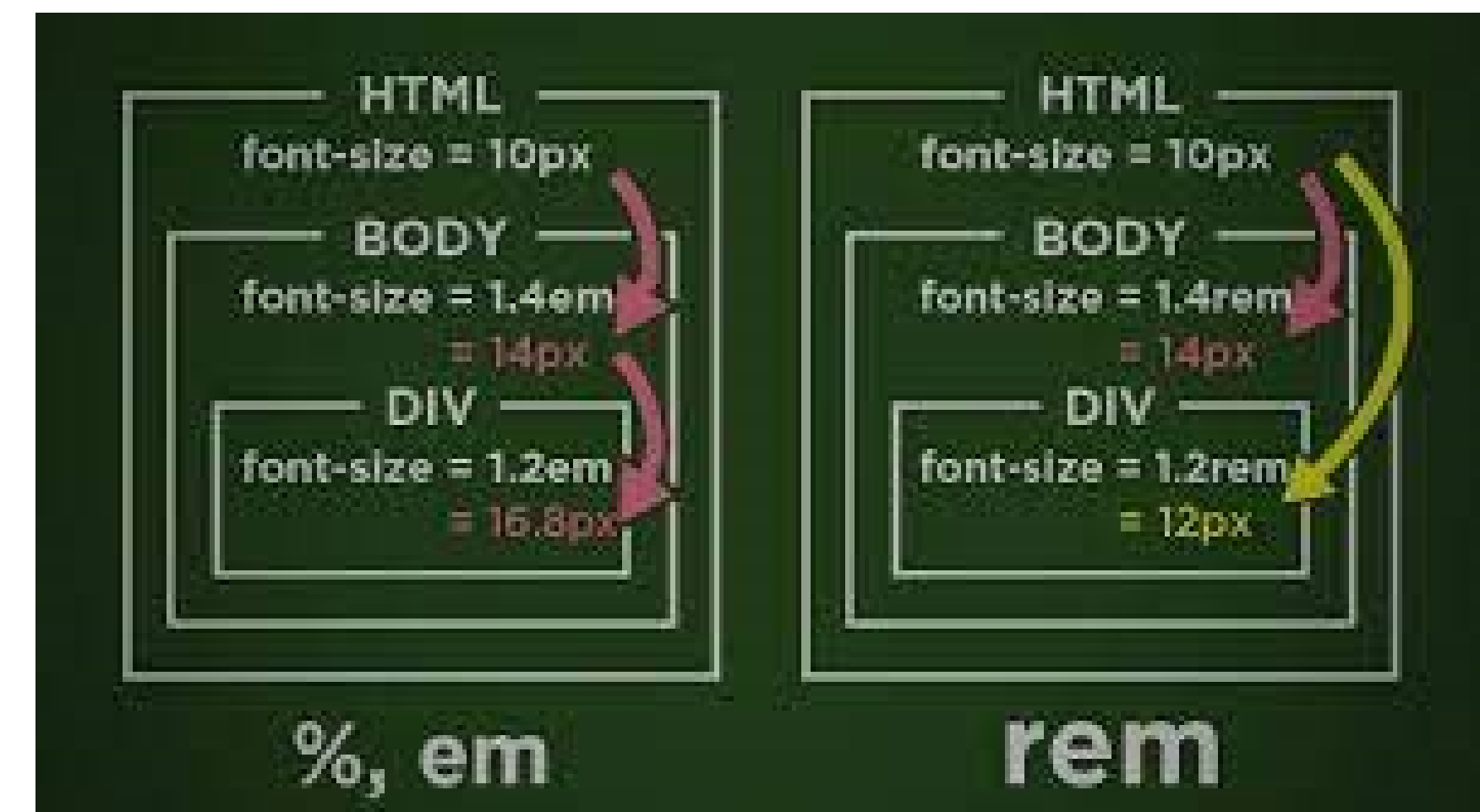
rem

Relative to font-size of the root element.

vw

equal to 1% of the width of the browser window size.

@ayuxhg



Media Queries

Media Query is a CSS technique that is used to produce a responsive design.

Essentially, it includes conditions, and responsive design will be only shown if those conditions are met.

```
@media only screen and (max-width: 500px) {  
  body {  
    background-color: black;  
  }  
}
```

<https://mediaqueri.es/>

<https://web.dev/responsive-web-design-basics/>



CLASS ACTIVITIES