

*Class #8*

# DIGITAL MEDIA FOUNDATIONS

*Class #8*

# **RESPONSIVE DESIGN & VIDEO FORMATS**

# Today's agenda

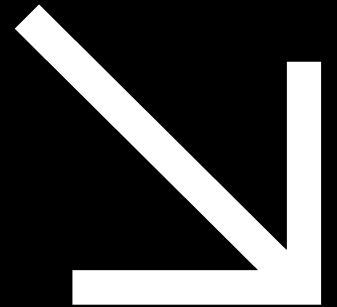
**Responsive Design**

**Video Formats**

**Homework reviews**

**Your homework: Start Design!**

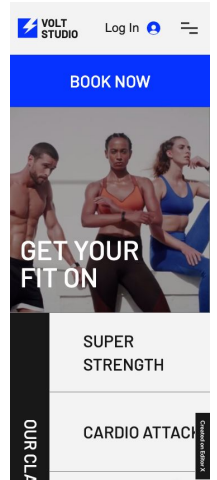
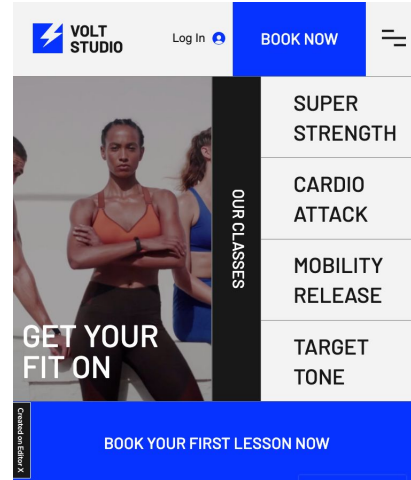
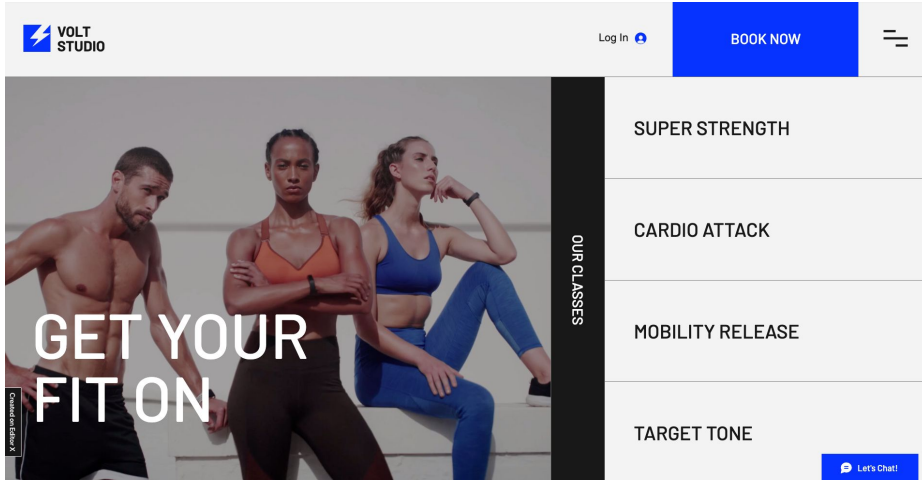
# Responsive Design



“ Responsive web design is an approach to web design which makes web pages render well on a variety of devices, windows or screen sizes ”

Google Search  
The Internet

# Seamless Experience



# The First Ever Website

—

This is the first website on the internet  
From 1991. it's also fully responsive.

## World Wide Web

The WorldWideWeb (W3) is a wide-area [hypermedia](#) information retrieval initiative aiming to give universal access to a large universe of documents.

Everything there is online about W3 is linked directly or indirectly to this document, including an [executive summary](#) of the project, [Mailing lists](#), [Policy](#), 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](#), [X11 Viola](#), [NeXTStep](#), [Servers](#), [Tools](#), [Mail robot](#), [Library](#))

### [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?](#)

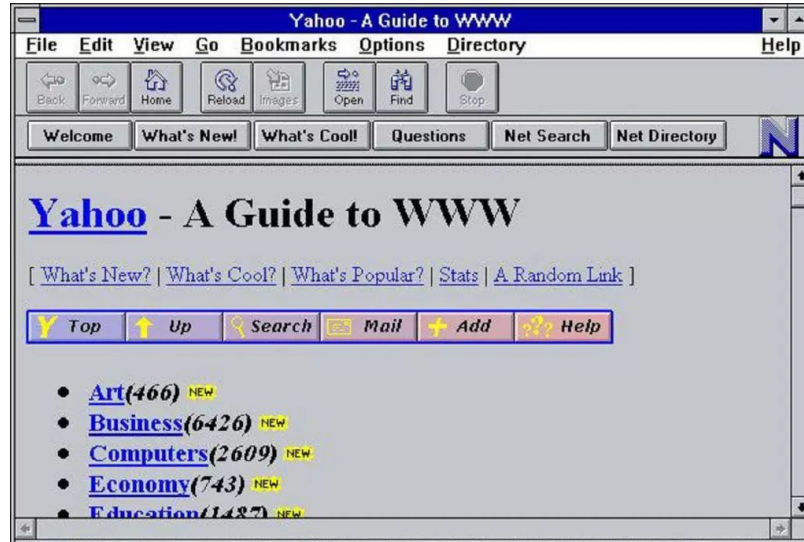
If you would like to support the web..

### [Getting code](#)

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

# Fixed Desktop

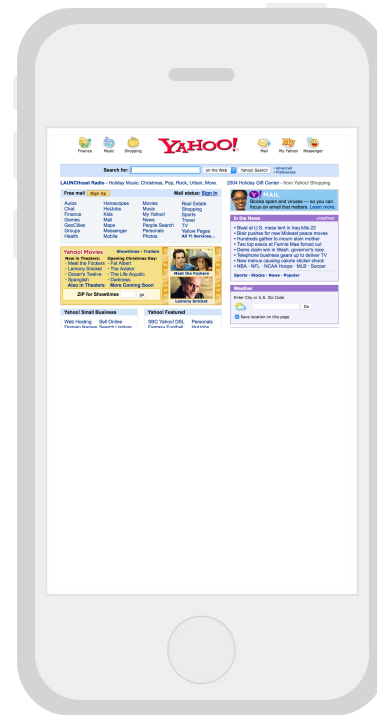
—  
Yahoo website in 1994 viewed viewed  
on a 640 pixel width monitor





# Desktop On Mobile

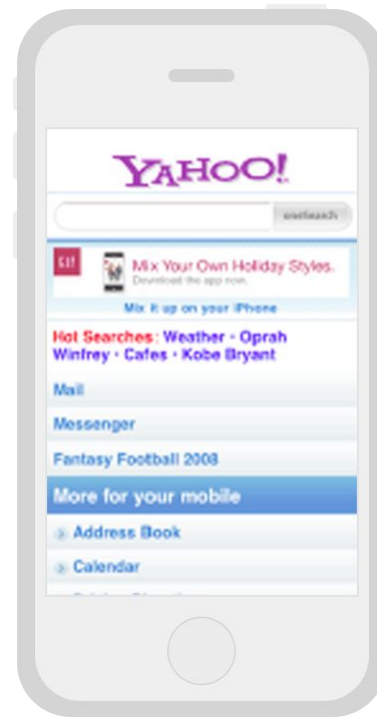
Desktop Yahoo website viewed  
on the iPhone 1, circa 2007



# Dedicated Mobile

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Mobile Yahoo website on the iPhone 1,  
circa 2008



# Adaptive Sites

Adaptive sites, circa 2013  
Each site is its own creation these are still not responsive websites.

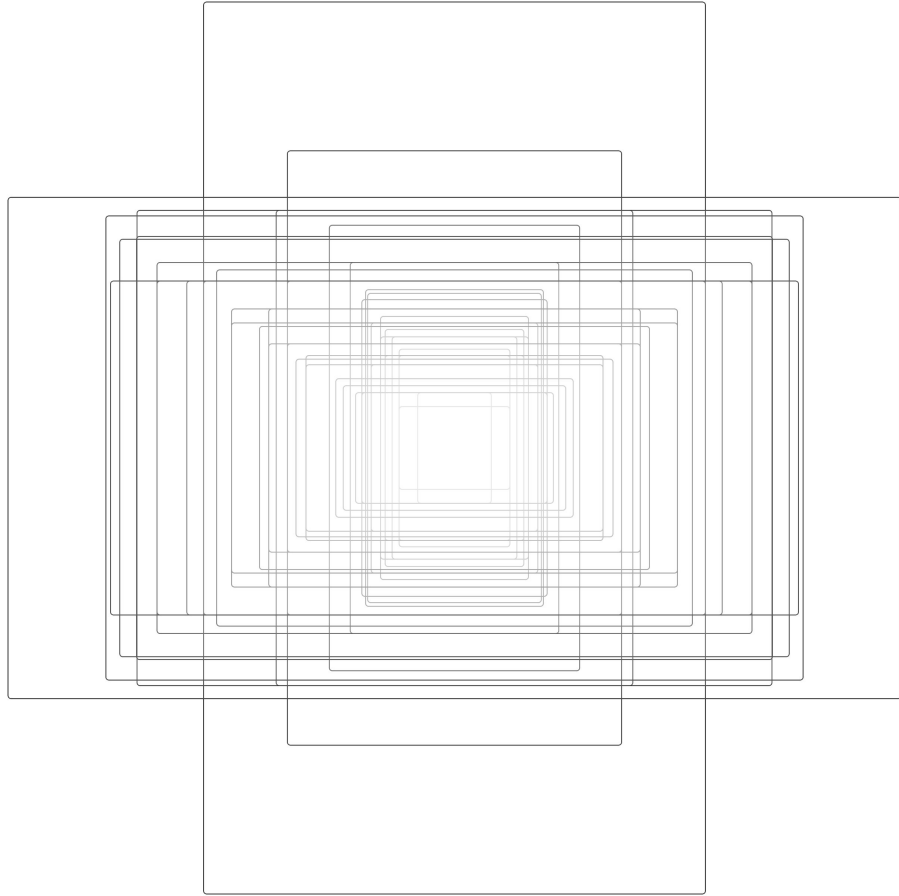
[Read about Adaptive VS Responsive](#)



# Today



A fraction of the device sizes used in the market today. Which device should you target?



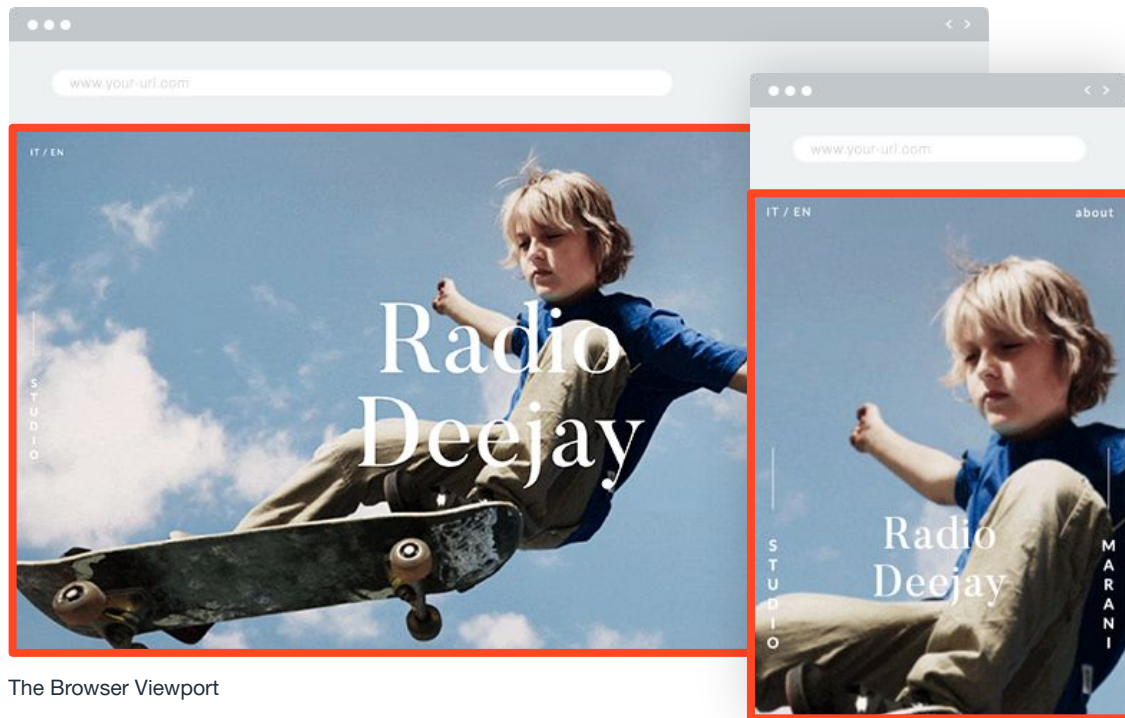
# Viewports

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The viewport is the user's visible area of a web page.

[Read About Viewports](#)

[Read About Viewport Height](#)



The Browser Viewport

Viewport in a smaller resolution

# **What Tools Do We Use in Responsive Design ?**

# Our Tools For Responsive

We can deconstruct responsive design into these three main parts.



## Fluidity

Position, Size & Constraints



## Breakpoints

Apply Change to Layouts or Styling



## Responsive Layouts

Standalone Layout Components

# Fluidity

Fluid Elements are using relative units for scale and / or position.

Fluid means the elements can scale and move gradually relative to the parent container page or viewport.

**Fluidity is the most basic element of responsive design.**

## A fluid only website

There are no breakpoints or any responsive layouts here.

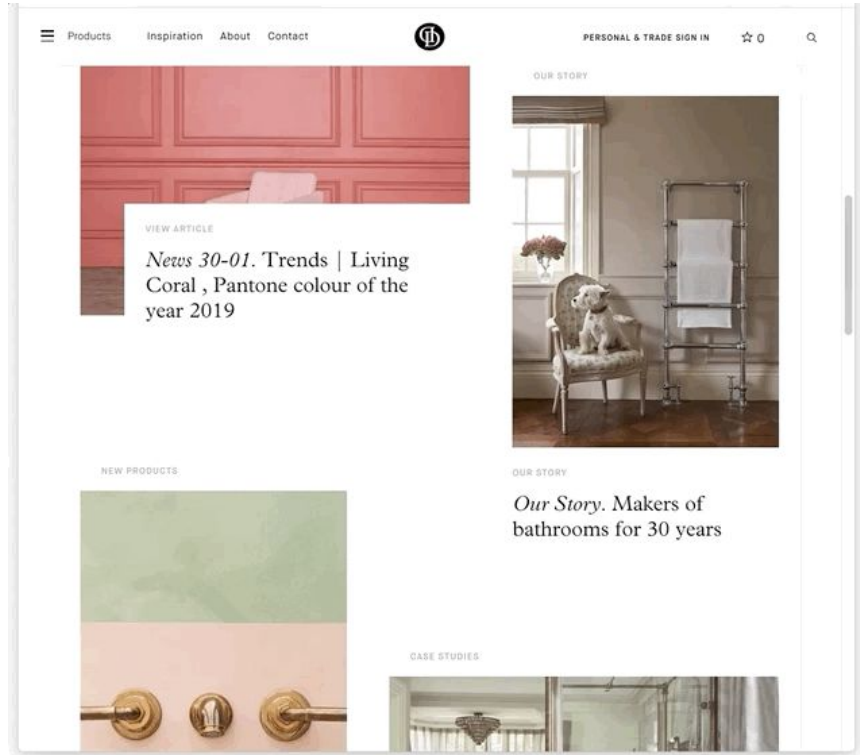
Note how many overlaps. **Fluidity is not enough!**





# Breakpoints

Sometimes fluidity is not enough. When we need to make changes to a website's layout or style, we can place a **breakpoint**.



How many breakpoints do you count?

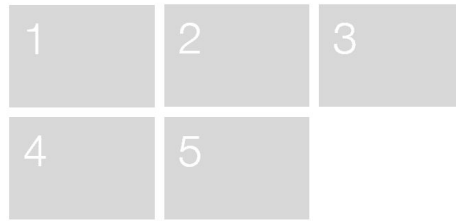
# Responsive Layout

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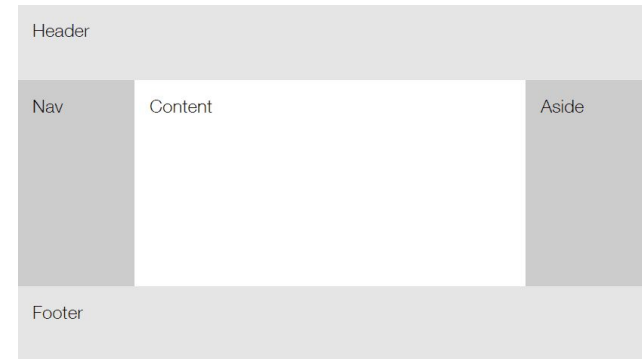
Using only fluidity and breakpoints you can already make some great responsive websites.

But to create awesome responsive websites we need responsive layout components. We categorize them to two types **Lists** and **Grids**.

## List Layout



## Grid Layout



# Units

**Lets drill in.**

# Fluidity

CSS has many units to choose from. Some are considered fixed and some fluid. For example a pixel is a fixed unit while percentage is a fluid unit.

Check this [link](#) for live examples

## A fluid only website

There are no breakpoints or any responsive layouts here.

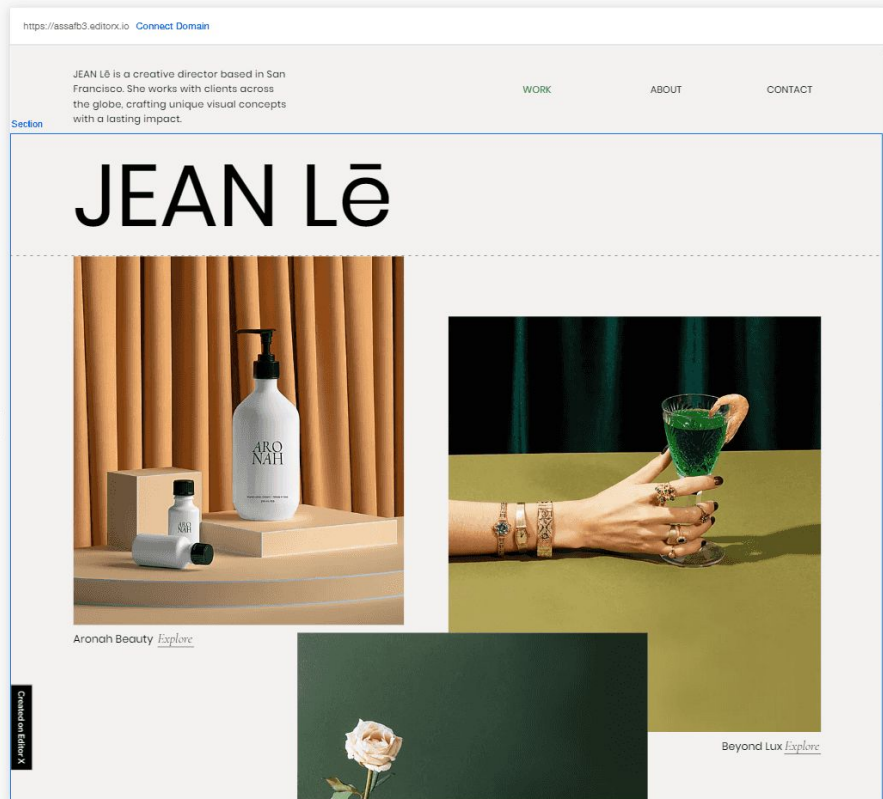
Note how many overlaps. **Fluidity is not enough!**



# Units - PX

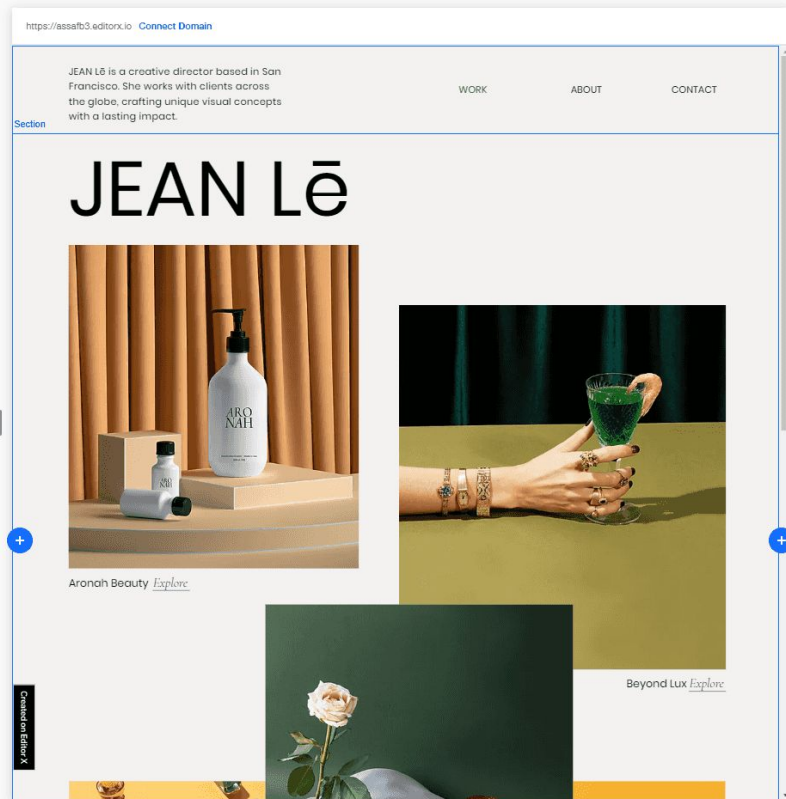
An absolute length unit of measurement, Pixels (px) are relative to the viewing device. For low-dpi devices,

1px is one device pixel (dot) of the display. For high resolution screens 1px implies multiple device pixels.



# Units - %

This is a relative length unit of measurement. percentage is relative to the parent element. For example, a container set to 50% width is half the width of its parent container.



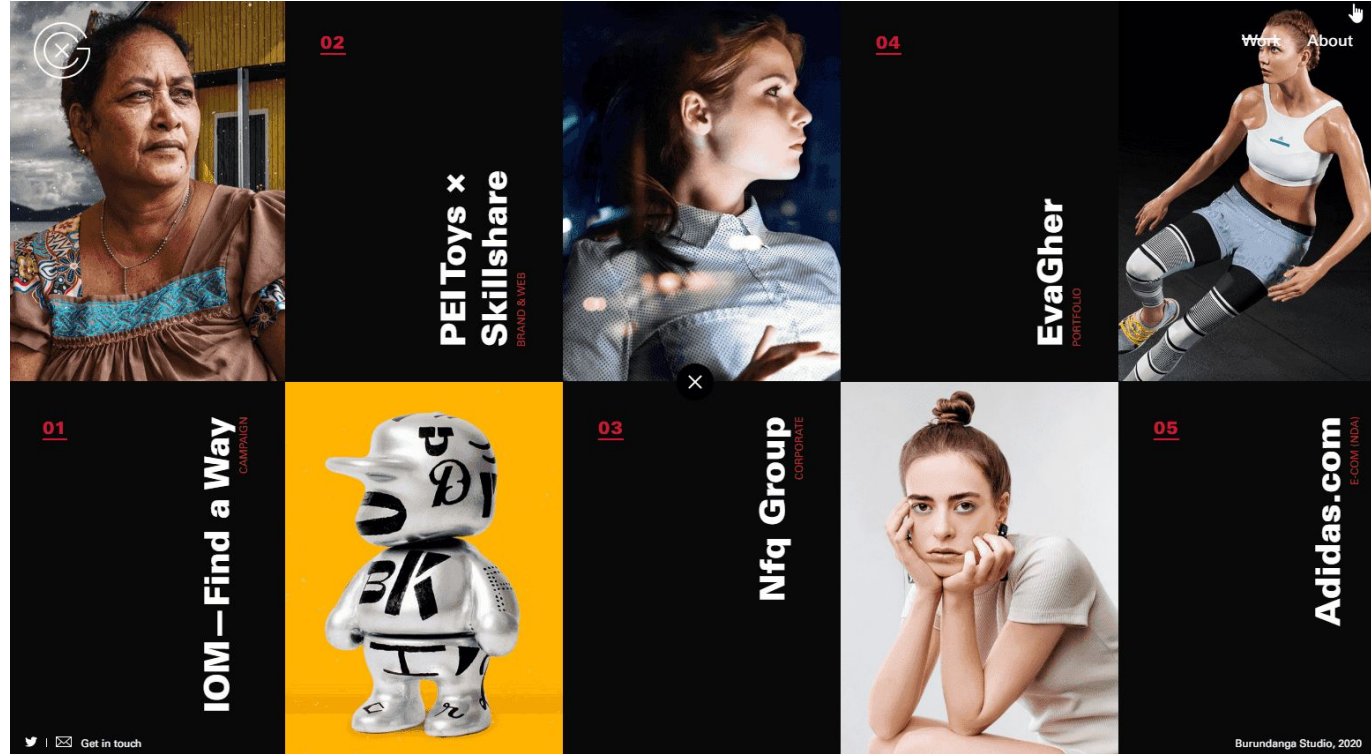
# Units - vw/vh

These are relative length units of measurement.

1VW is 1% of the viewport's current width

1VH is 1% of the viewport's current height

100VW is the full viewport current width  
100VH is the full viewport current height



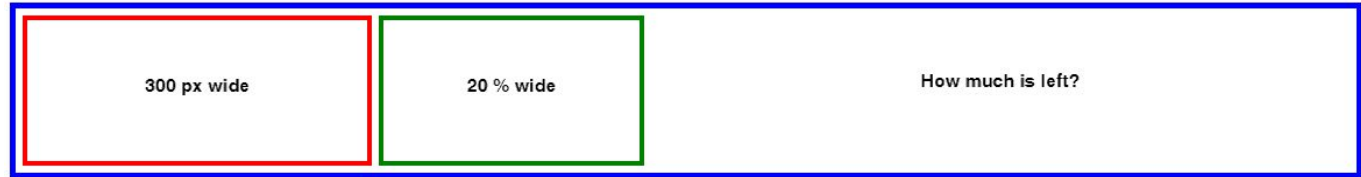


# Units - fr

---

This is a relative length unit of measurement used only in grid containers.

Fr is a fractional unit and 1fr is for 1 part of the available space.

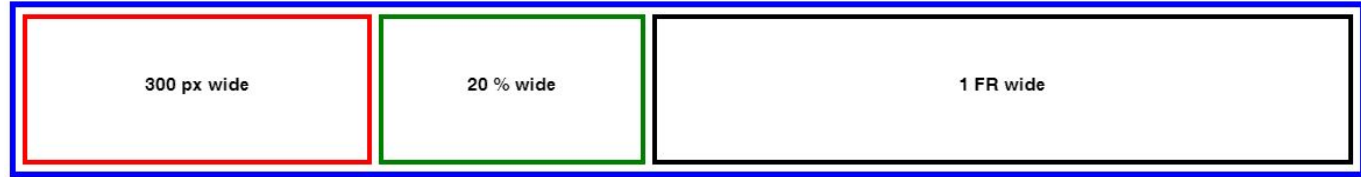


# Units - fr

---

This is a relative length unit of measurement used only in grid containers.

Fr is a fractional unit and 1fr is for 1 part of the available space.

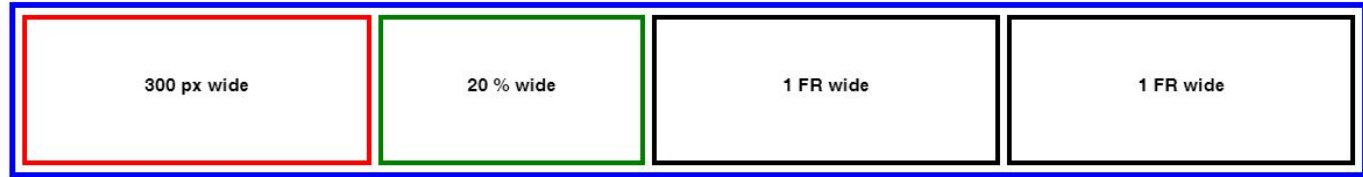


# Units - fr

---

This is a relative length unit of measurement used only in grid containers.

Fr is a fractional unit and 1fr is for 1 part of the available space.

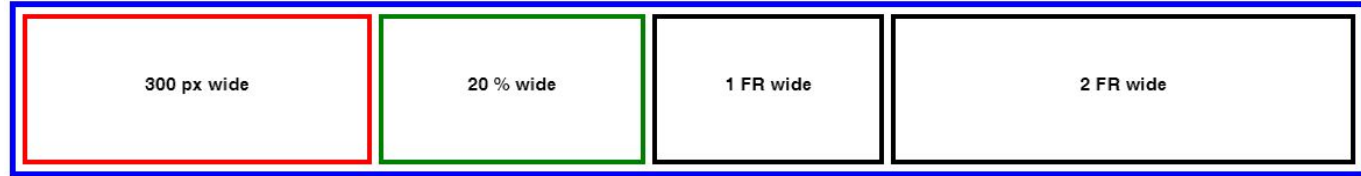


# Units - fr

---

This is a relative length unit of measurement used only in grid containers.

Fr is a fractional unit and 1fr is for 1 part of the available space.

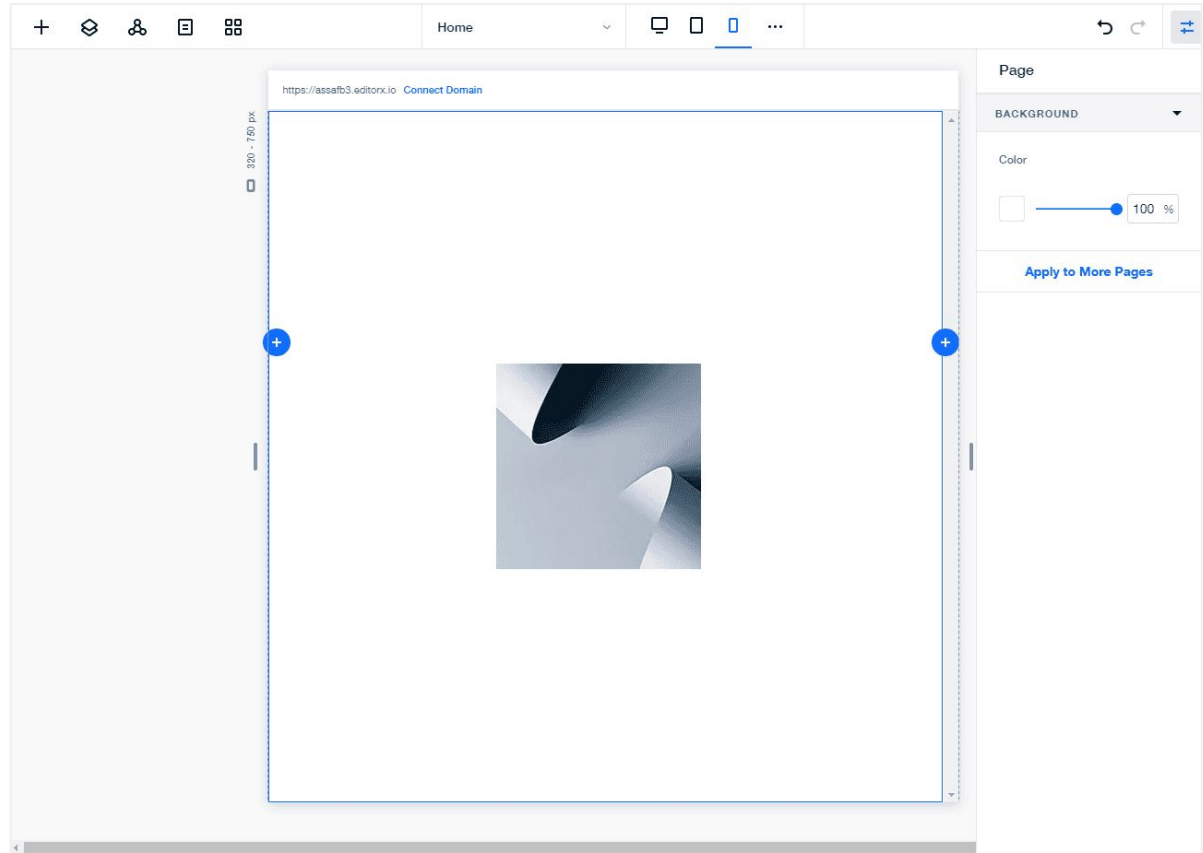


**What aspects of an element  
these units can affect?**

**Position**

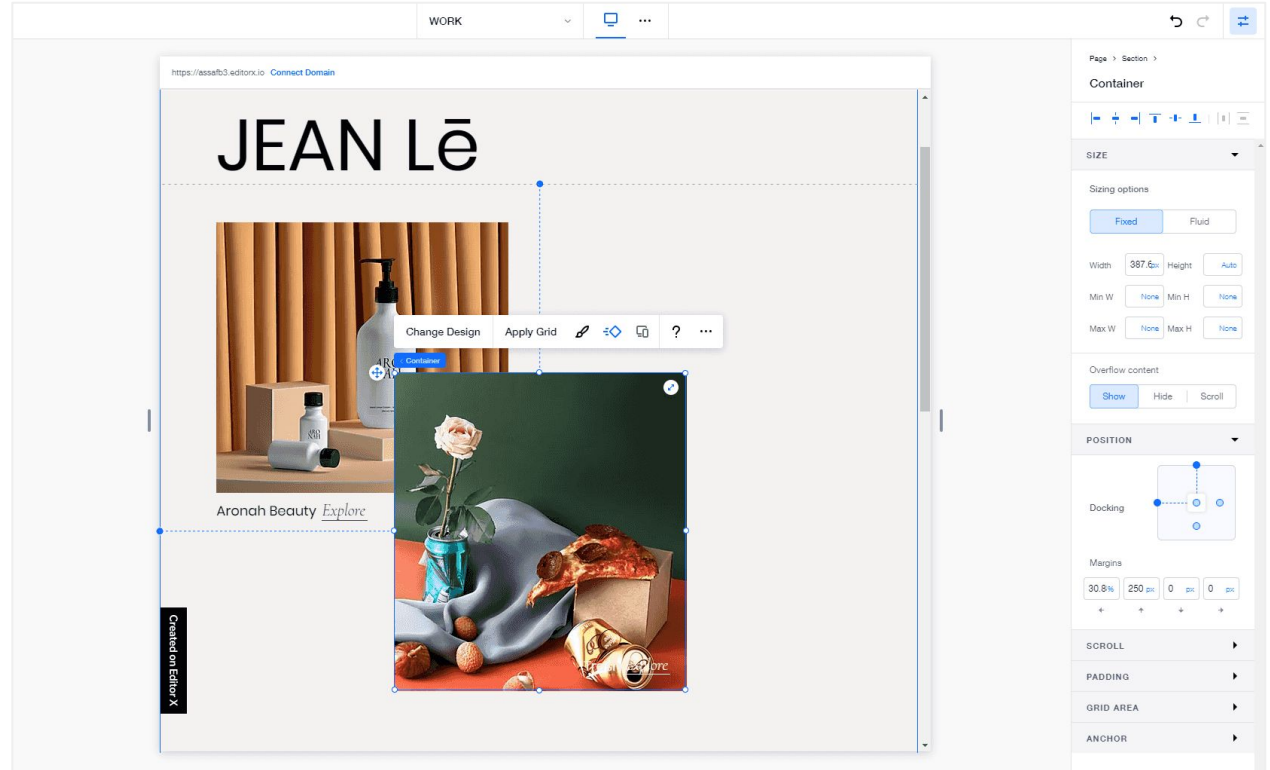
# Position

Using **Docking** we can pin any element to any container on stage, be it the page, a box, a strip or any other container we may have.



# Fixed vs Fluid Position

The difference between fixed position to fluid position is that in fixed position the margins are using pixel units and for fluid position the margins are using a relative unit like the percent unit

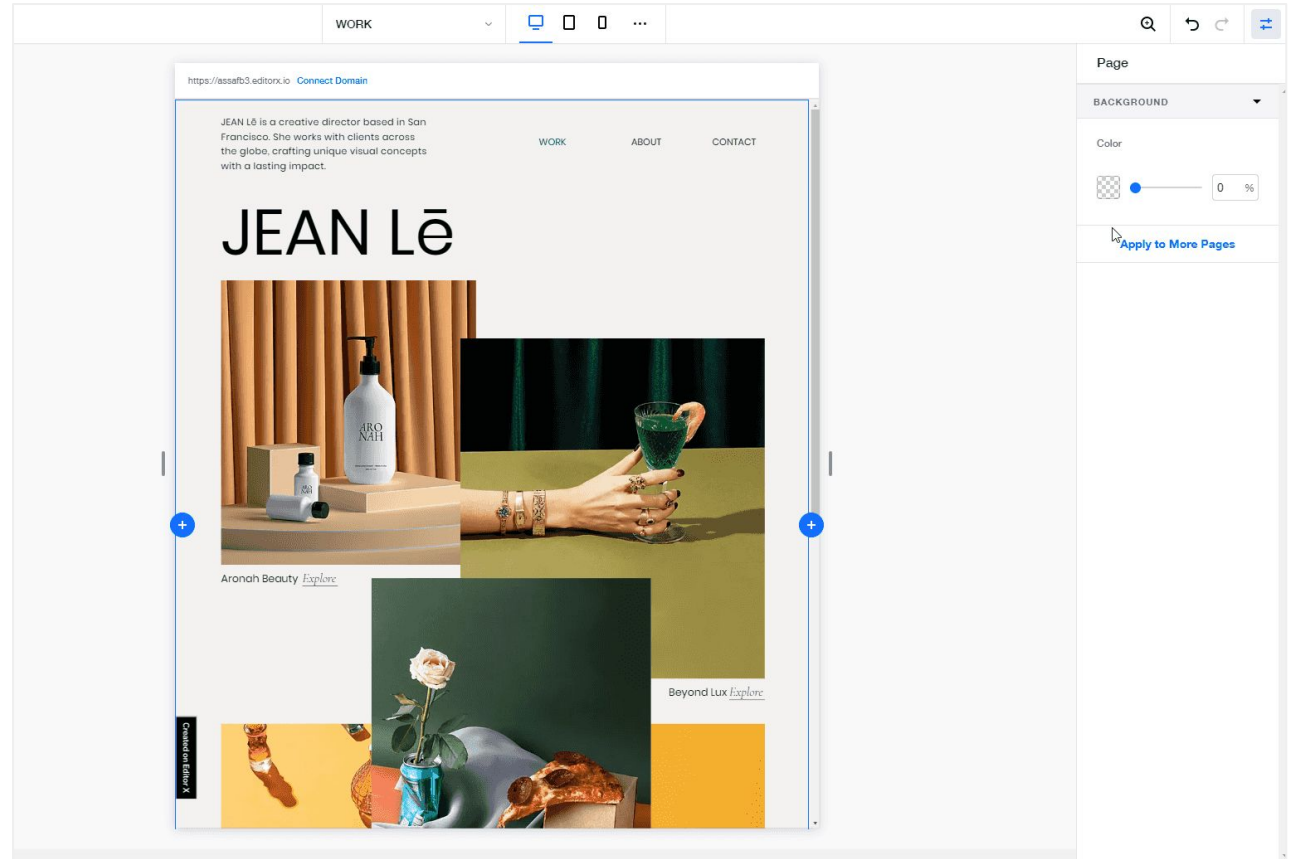




**Scale**

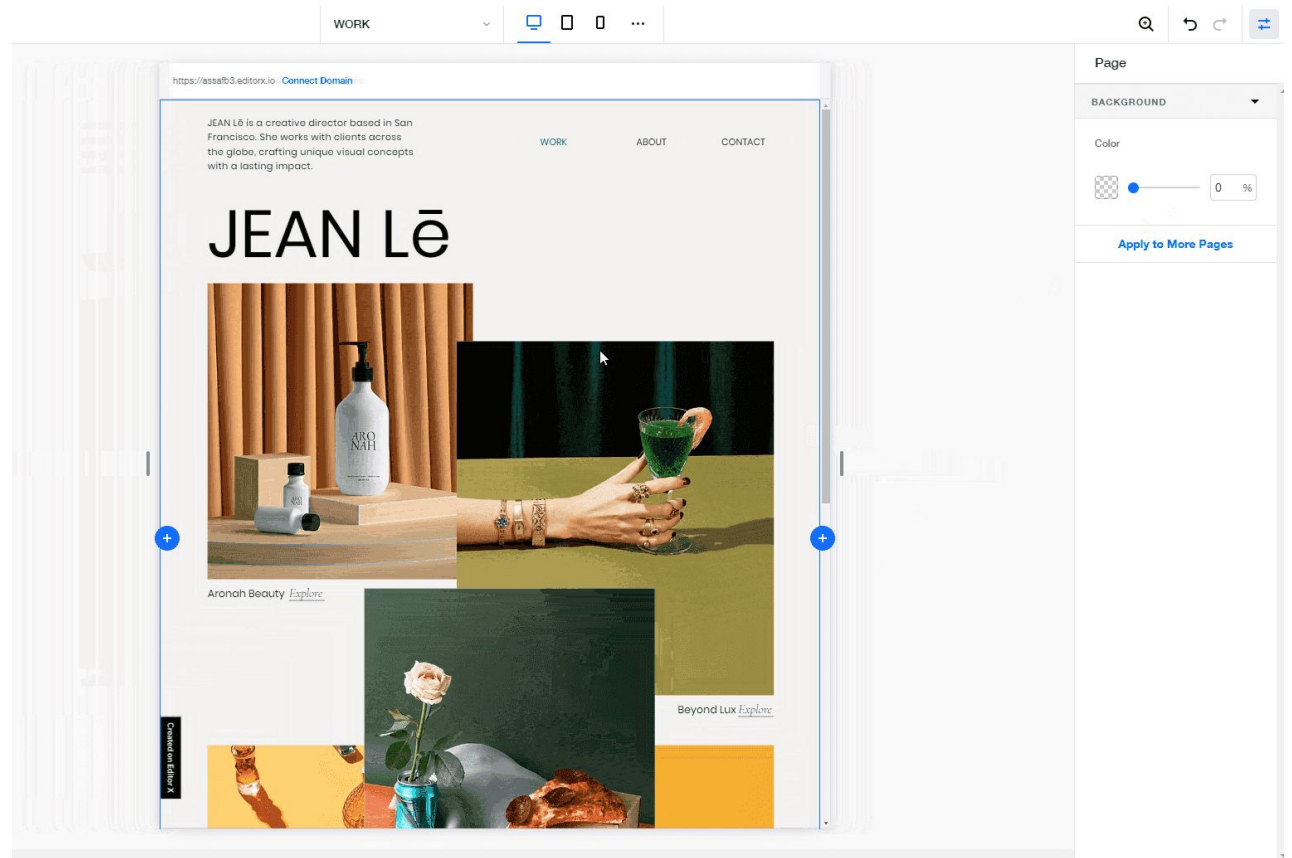
# Fluid Scale

Note how the images are changing their size as the viewport is shrinking and expanding



# Fixed Scale

Note how the first image doesn't scale with the viewport anymore after changing it's width units to pixels.



# Min / Max

Note how one image stops shrinking and expanding and the other image is not.

The screenshot displays a web editor interface for a website titled "ZOFÍA OTERO Culinary Consultant". The main content area features a green background with a grid. The text "A STORY OF INGREDIENTS" is prominently displayed in the center, with a signature "Zofia Otero" below it. Below the text, there are two images: one showing a wine glass and a plate of food, and another showing a person in a blue dress holding a glass. The editor interface includes a top navigation bar with "Home", "Recipes", "About", and "Contact" links. A sidebar on the right contains settings for the selected image, including "SIZE" (Fixed vs. Fluid), "POSITION" (Docking), and "MARGINS". The "SIZE" section shows "Width" set to 50%, "Height" set to Auto, "Min W" set to 250px, "Min H" set to None, "Max W" set to 350px, and "Max H" set to None. The "POSITION" section shows "Docking" options and "Margins" set to 0px, 32px, 0px, 0px. The "SCROLL", "ADJUST", "GRID AREA", and "ANCHOR" sections are also visible.

# Pushing

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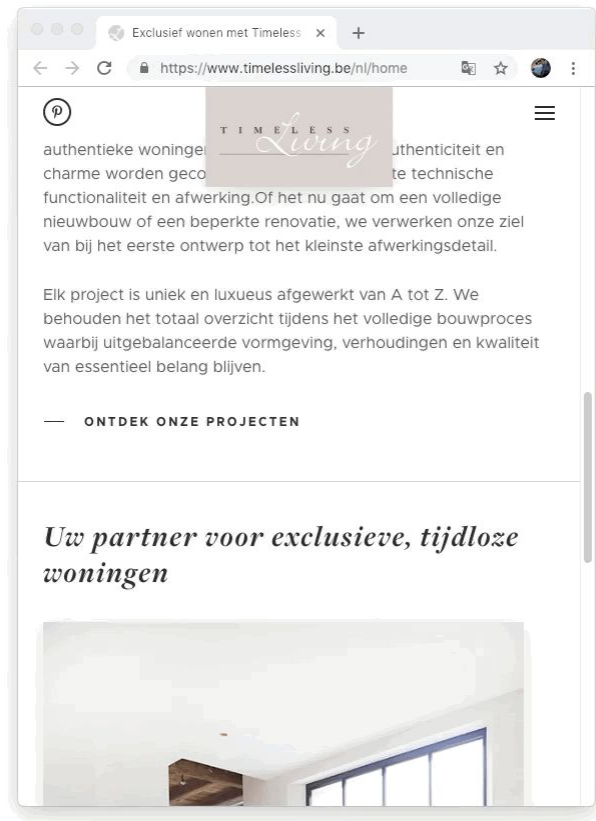
As the text box shrinks in width it is growing in height.

As it grows it is pushing whatever is below or above it, depending on the grow direction.

The grow direction will be opposite to the docking direction.

## **Text is pushing**

Note the title is pushed down because the text above is growing down



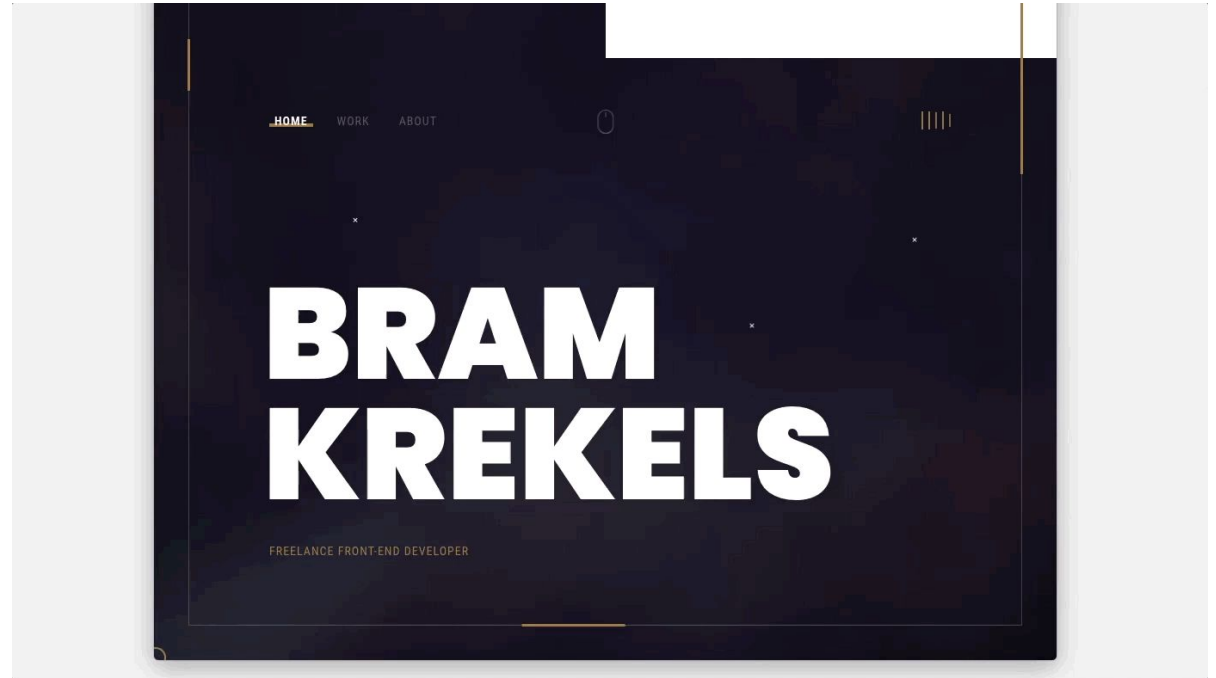
# Components

# Fluid Size Titles

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# Fixed Size Titles





# Fluid Running Text

Fluid running text in this example is shrinking too much to the point it's unreadable.

Running text should always be set in **pixels** inside a breakpoint range

VO2 GROUP

About VO2 Group Brands News References Apply! in FR/EN

## DIGITAL TRANSFORMATION CONSULTANCY

To transform themselves and gain agility: these are the challenges of our customers! Marketing, sales, HR departments ... organizations must adapt to meet the new requirements of Time to Market.

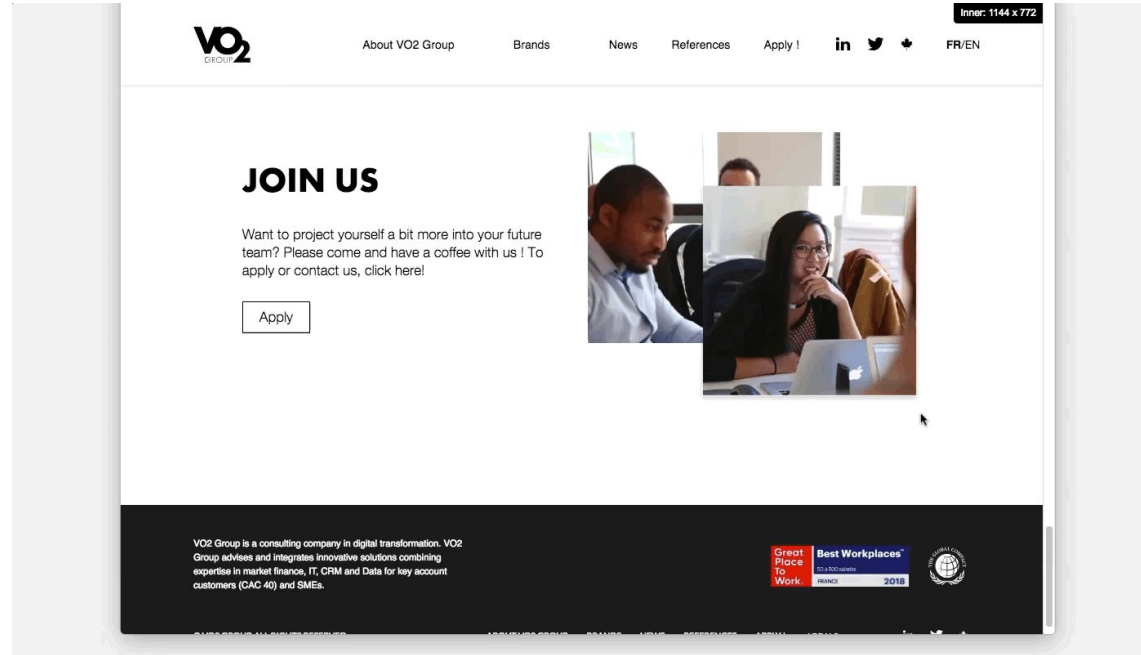
VO2 GROUP accompanies its major clients and innovative start-ups in the implementation of their digital projects as well as their vision.

Our specialist brands and Divisions work in synergy to produce and implement concrete solutions that combine business, IT and technological expertise.

**160** **16M** **30%** **80%** **20%**  
Consultants Sales figures Annual growth Large Accounts Start-ups

# Fixed Size Running Text

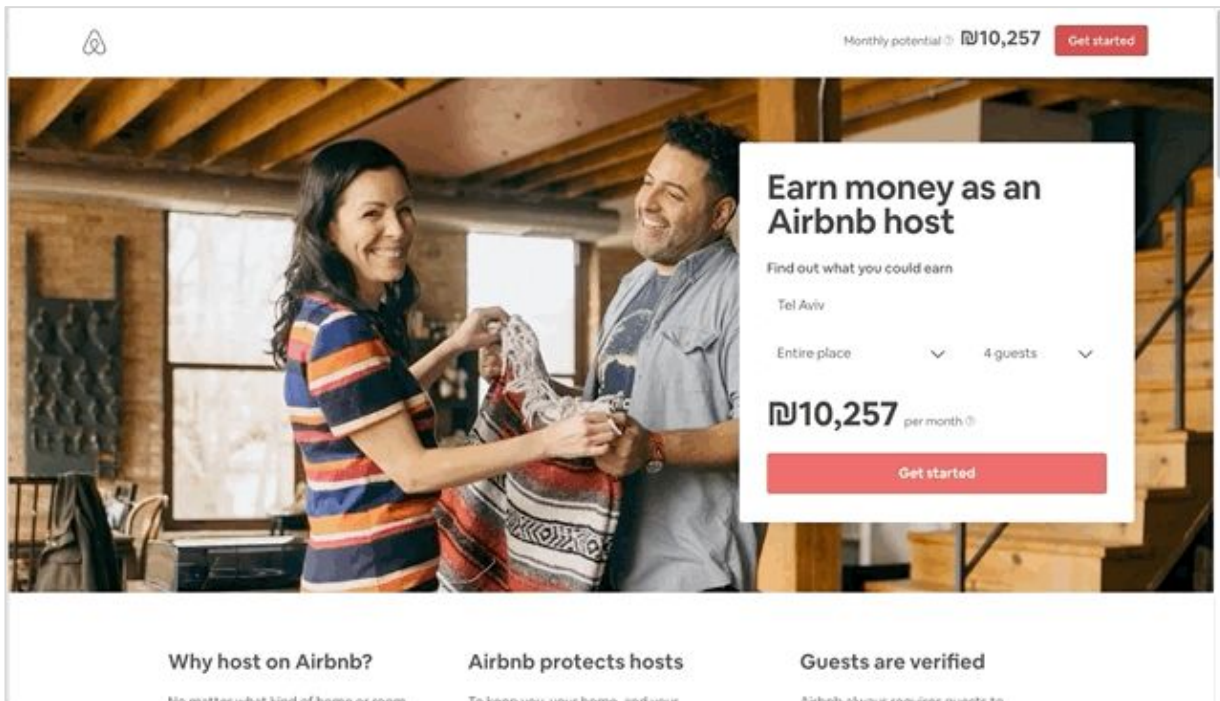
Running text is changing font size using a breakpoint.



# Buttons

Buttons can be either fluid or fixed in size. Usually in larger viewports they are fixed in size while in the smaller viewports they can be fluid in size.

[See more here about buttons in Responsive design.](#)



Fixed button in Desktop turns into a fluid full width button in smaller BP

# Image Fluidity

The blue dotted line represents the image parent.

**Width > Height**  
Most common behavior



**Height > Width**  
Also a common behavior



**Non-Aspect Ratio**  
Mostly as background images



**Scale Down**  
Useful in some edge cases (Product Image)



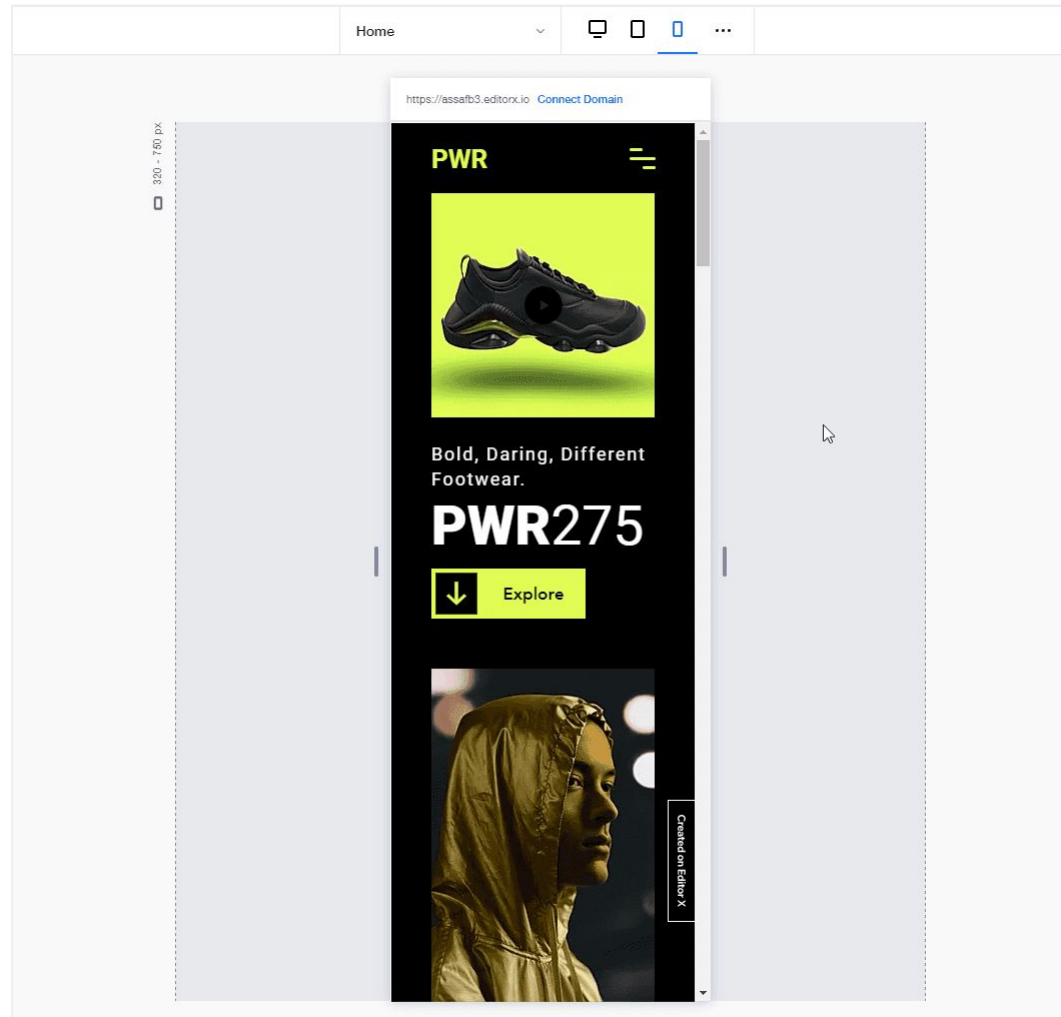
**Stretch - Best to Avoid**  
Could be found used on patterns or abstracts



# Breakpoints

# Breakpoints Overview

A breakpoint is a point on a straight line which represents all the possible viewport sizes out there.



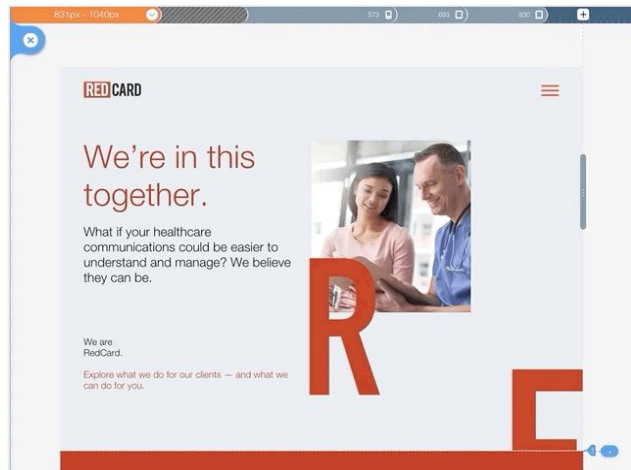
# Creating Breakpoints



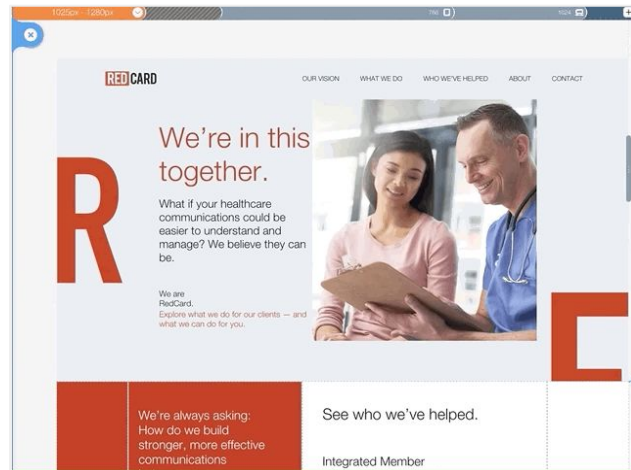
Generally there are two ways to approach breakpoint creation.

**Content driven breakpoints** and **Device driven breakpoints**.

## Content driven BP



## Device driven BP



# Creating Breakpoints

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**Content driven** means you create a breakpoint when your site content demands it. (either the layout breaks or you need a style change).

**Device driven** means you set breakpoints according to popular devices and viewport sizes and design your layout around those breakpoints.

## Content Driven Breakpoints

- Typically, a small amount of breakpoints is needed. You still have the flexibility to add BPs when needed and stay true to your original master design as much as possible.
- Breakpoints always fit the content. Move your design freely without thinking if the breakpoints fit your design or not. create BP when you need
- Starting “clean” without breakpoints is A helpful extra step to avoid re-parenting issues further down the line
- Not talking about devices (devices are kind of meaningless in responsive design)

## Device Driven Breakpoints

- Easy starting point, easier for complete beginners, no need to know your design for breakpoint creation
- Works well for design systems that need consistency across components (wix verticals for example)

## Pros

## Cons

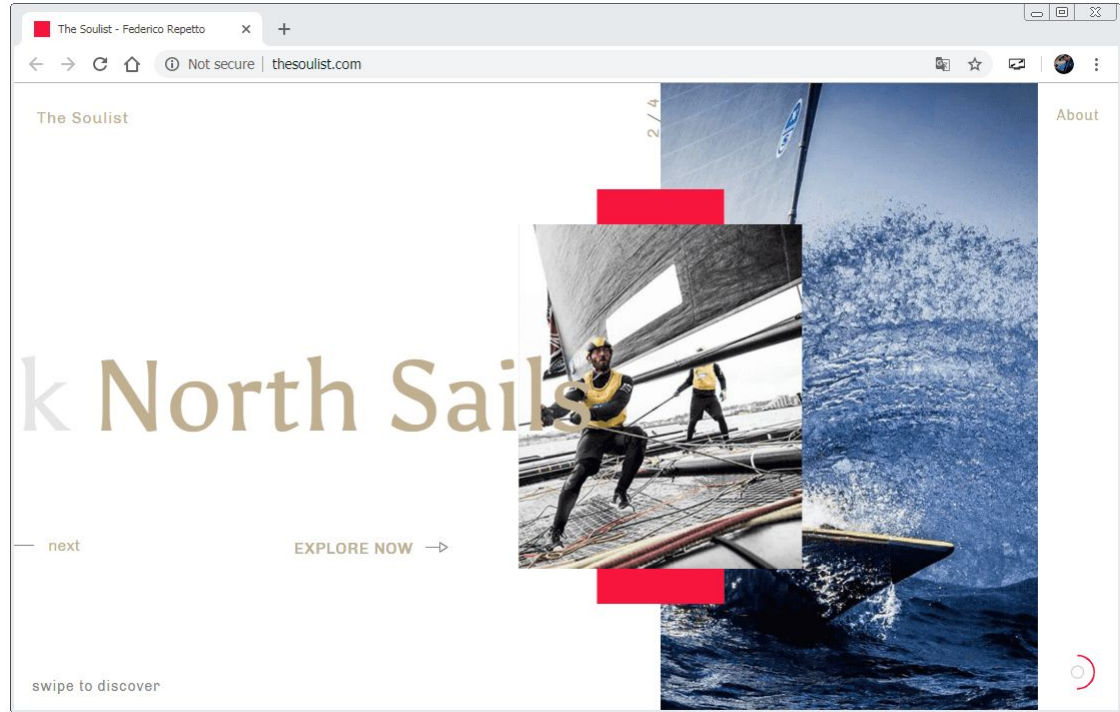
- Not an easy starting point, can be confusing for beginners. Need to check when your design need a breakpoint.
- Not good for design systems that need consistency across components (wix verticals for example)
- Can accumulate breakpoints fast if not paying attention. more breakpoints generally means more problems because of editing complexity.

- Might use more or less than the needed breakpoints for your design
- Breakpoints don't always fit the content
- Must design around existing breakpoints This might change your design in ways you don't want
- Starting “Dirty”, meaning, adding content only after we finish creating layouts for each breakpoint, can potentially cause re-parenting issues further down the line
- Devices are kind of meaningless and can be very confusing and cause mistakes



# Hide & Show

You might want to hide in smaller viewports things like banners, large images, some text or any content you regard as non essential

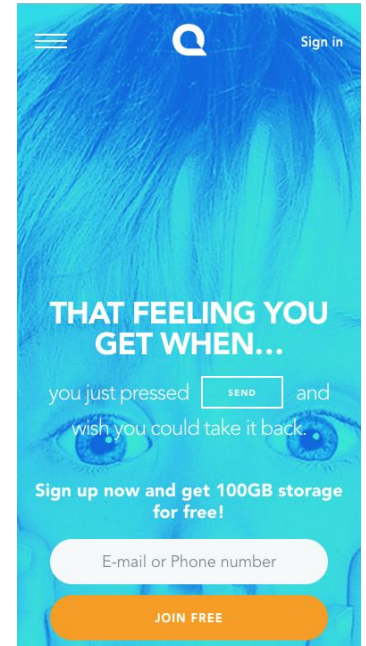
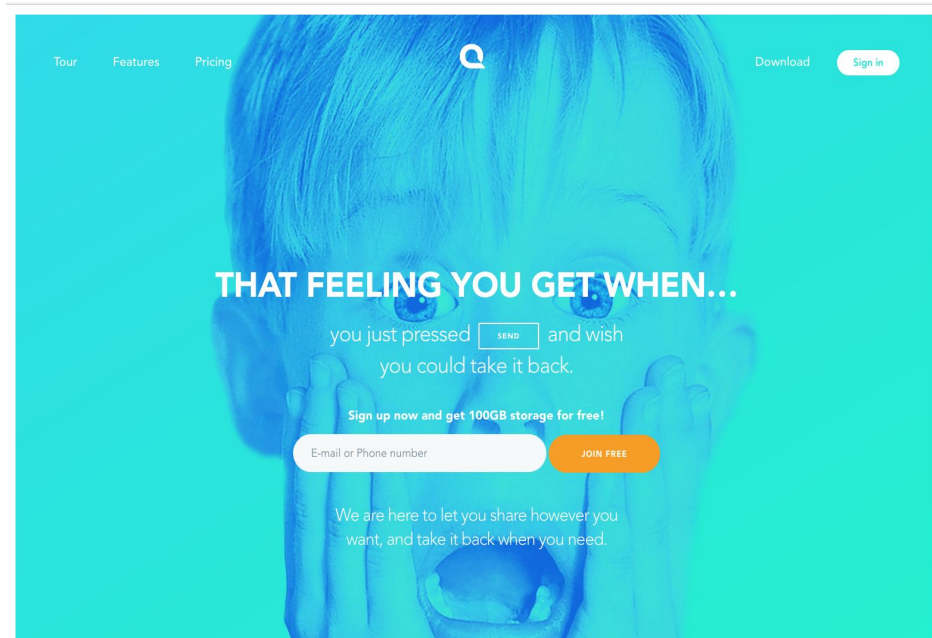


The image is hidden when not enough space is there to hold it.  
The image is not important content wise.

# Change Styling

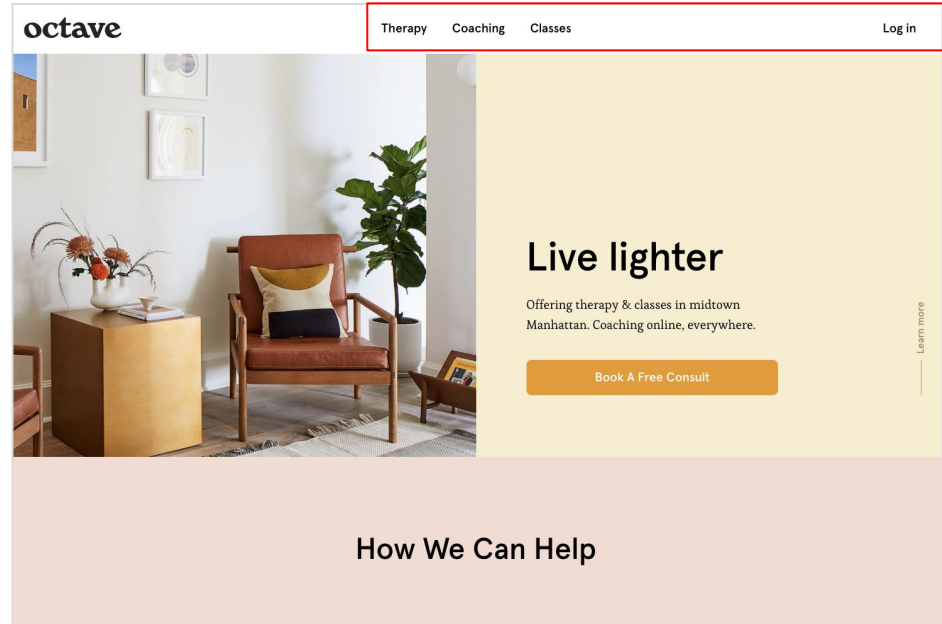
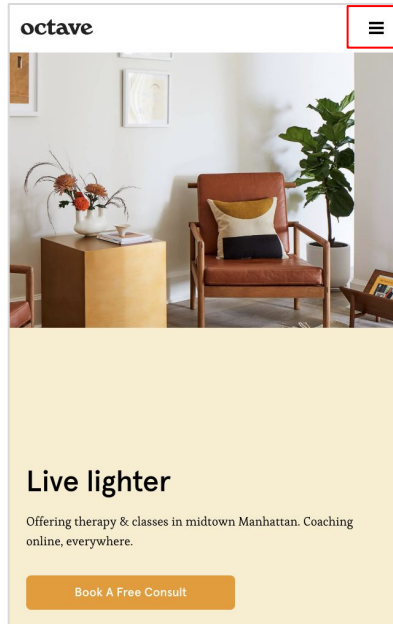
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Notice the Sign In button background at the top right



# Change Component

Menu is changing to a Hamburger Menu



How We Can Help

# Change Component

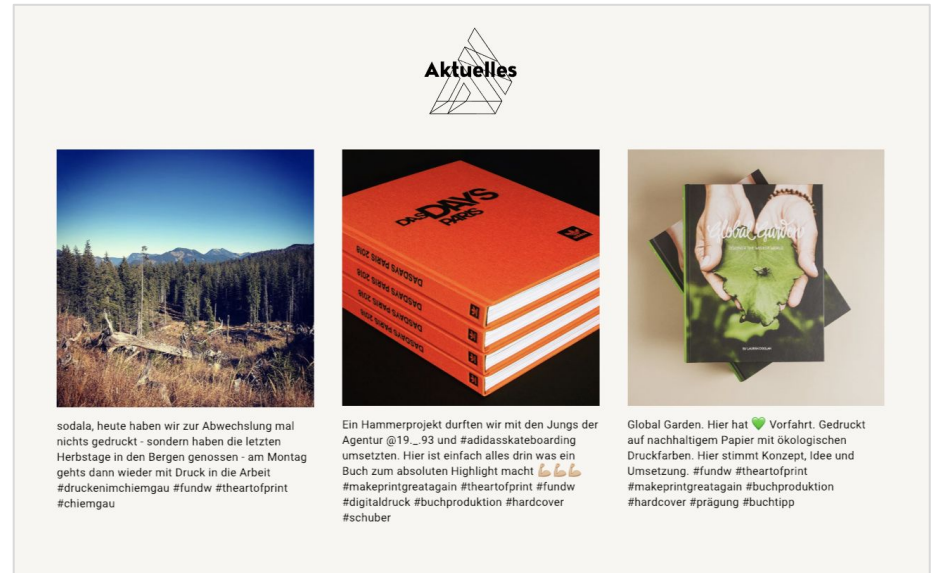
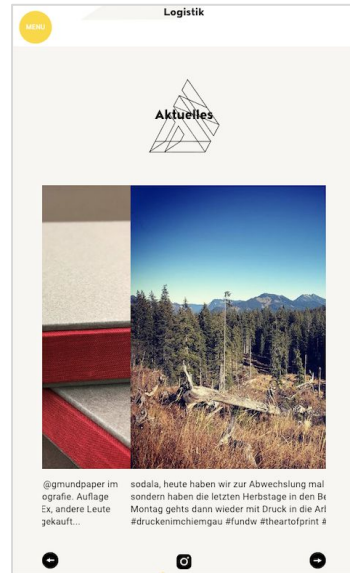
List is changing to a drop down.

- EST. 2012 -			
FRESH FOOD		+555 5555 5555	
LOCAL GOURMET			
<b>Drinks</b>			
Cold Drinks			
Sparkling Mineral Water	\$4.00	Freshly Pressed Apple Soda	\$5.00
Apple Carrot Ginger Tonic	\$4.00	Ginger Tulsi Tea	\$5.00
Hot Drinks			
Espresso	\$3.00	Latte	\$3.00
Cappuccino	\$3.00	Black or Herbal Tea	\$2.00

- EST. 2012 -	
FRESH FOOD	
LOCAL GOURMET	
<b>Hot Drinks</b>	
Espresso	\$3.00
Cappuccino	\$3.00
Latte	\$3.00
Black or Herbal Tea	\$2.00

# Change Component

Gallery or list changing to swipe  
Mode in touch screen



# Responsive Layouts Components

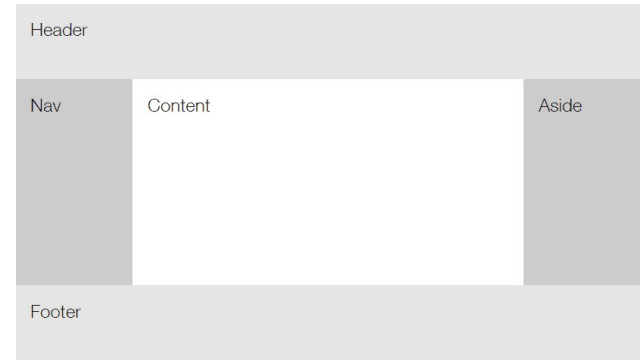
# Responsive Layout Components

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**List Layout**



**Grid Layout**



# Lists



# List Component

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A list component or a flexbox is usually a series of containers inside a main (flex) container, that can change the layout automatically without the need for breakpoints, hence the name flexbox.



## Tende

Capienza di 4-6 posti  
Sistemi di ventilazione  
Arredamento semplice e funzionale  
Confortevoli letti standard



## Bagni

WC interno, lavabo e doccia (sia interna che esterna)  
Bagno riscaldato  
Un bagno per ogni tenda



# List Component

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Episode Seven

What does it mean to be a designer?



Episode Six

AR/VR - The future of user experience



Episode Five

Leveraging your design community



Episode Four

**Preparing the next wave of designers**

# List Component

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Apr 22, 2020, Jun 30, 2020

Poetic dialogue in the  
languages of the world



May 20 ▶ Jul 01, 2020

Consultations poétiques,  
scientifiques et en  
langues étrangères pour  
les enseignants



May 30 ▶ Jun 30, 2020

Focus Italie



Jun 13, 2020

Danse élargie, une édition  
autrement



May 25 ▶ Jun 05, 2020

Radicale Vitalité, Solos et  
Duos  
Marie Chouinard



May 26 ▶ Jun 06, 2020

Un furieux désir de bonheur  
Catherine Verlaguet / Olivier  
Letellier

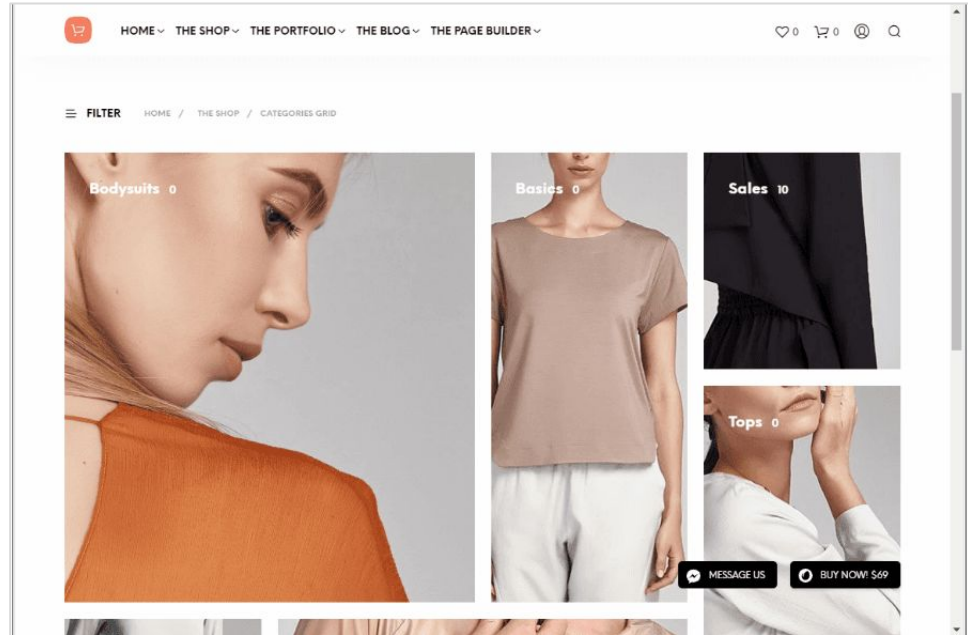
# Grids

# Grid Component

A grid is a series of intersecting vertical and horizontal lines creating cells. In a grid we change the number of columns and rows manually in different breakpoints.

A grid can also behave like a flexbox in that it will stack its cells without breakpoints.










A Cell is the inner container of a CSS grid. A CSS grid is always made of one or more cells.



**A Grid layout** - Note the order of the images between the desktop and mobile layouts. They are not the same!

# Grid Component

EXCLUSIVE: FREE DELIVERY W/ ORDERS OVER £45 IN THE UK. X

 <p>NEW</p> <p>70CL COLLECTION</p> <p><del>£78.00</del> £70.00</p>	 <p>NEW</p> <p>MARTINO BUNDLE</p> <p>£45.00</p>	 <p>NEW</p> <p>THE GARDEN COCKTAIL KIT</p> <p>£45.00</p>	 <p>NEW</p> <p>THE SEEDLIP STARTER KIT</p> <p><del>£50.00</del> £45.00</p>
 <p>SEEDLIP GROVE 42</p> <p>£26.00</p>	 <p>SEEDLIP SPICE 94</p> <p>£26.00</p>	 <p>SEEDLIP GARDEN 108</p> <p>£26.00</p>	 <p>NEW</p> <p>SEEDLIP GARDEN 108 &amp; CUCUMBER TONIC</p> <p>£28.00</p>
<p>NEW</p>	<p>NEW</p>		

# Grid Component

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The image displays a grid of six content cards. The top-left card is salmon-colored with a background image of a world map and data charts, containing text about e-commerce in South-East Asia. The top-right card is light green with a white hamburger menu icon in the top right corner and text about a CCC team event. The middle-left card is dark blue with a person's silhouette and the headline 'A 93-year-old start-up', with a quote from Christian Birk, B&O. The middle-right card is split into two sections: a dark green section for 'Sydney' in Australia and a white section for 'Telco & Media' with a smartphone graphic. The bottom-left card is light blue with a background image of a city skyline and the headline 'Creative problem-solving in Africa'. The bottom-right card is light blue with a document icon and the headline 'Working from home', with text about COVID-19 adjustments.

NOVEMBER 19, 2019

The potential for and hype about e-commerce in South-East Asia is enormous. But data shows that the climb is not as steep as predicted. In this perspective, QVARTZ and Lion & Lion look into the developments and implications of e-commerce for consumer brands in the SEA market.

CCC team arranged a month of unforgettable, fun and enlightening experiences. As a CCC partner, we are proud to have been part of such an impactful event that gives students around the world a chance to apply theory to real-life business cases.

B&O

*A 93-year-old start-up*

"Digital is not a 'thing' that lives in some corner of the company, but rather something we all need to embrace." - Christian Birk, B&O

LOCATION

Sydney

AUSTRALIA

SECTOR

Telco & Media

PUBLICATION

**Working from home**

MARCH 27, 2020

Just like our clients, the COVID-19 crisis has forced us to rapidly adjust to a work-from-home modus. Based on an internal survey, we present six actions you can do to mitigate the most pressing challenges when working from home is the new normal.

NEWS

**Creative problem-solving in Africa**

JANUARY 17, 2020

NEWS

**QVARTZ Germany wins prestigious award**

DECEMBER 19, 2019

# CSS Grid Example

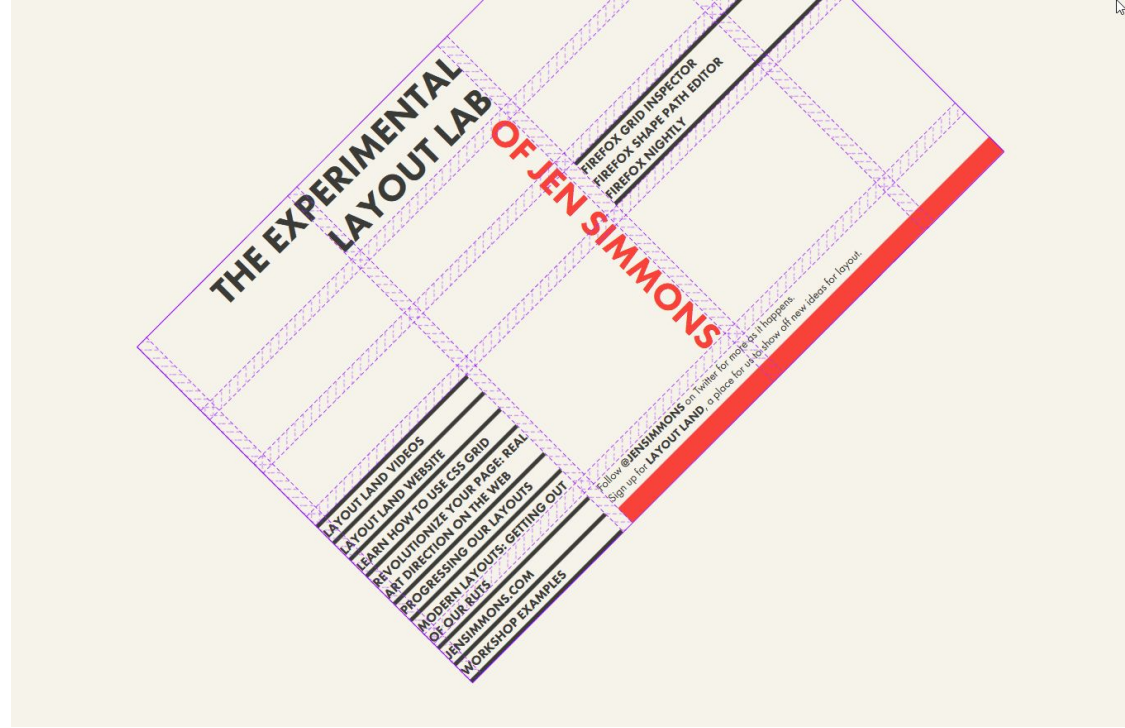
<https://labs.jensimmons.com/>





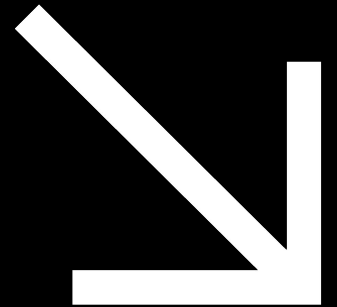
# CSS Grid Example

<https://labs.jensimmons.com/>



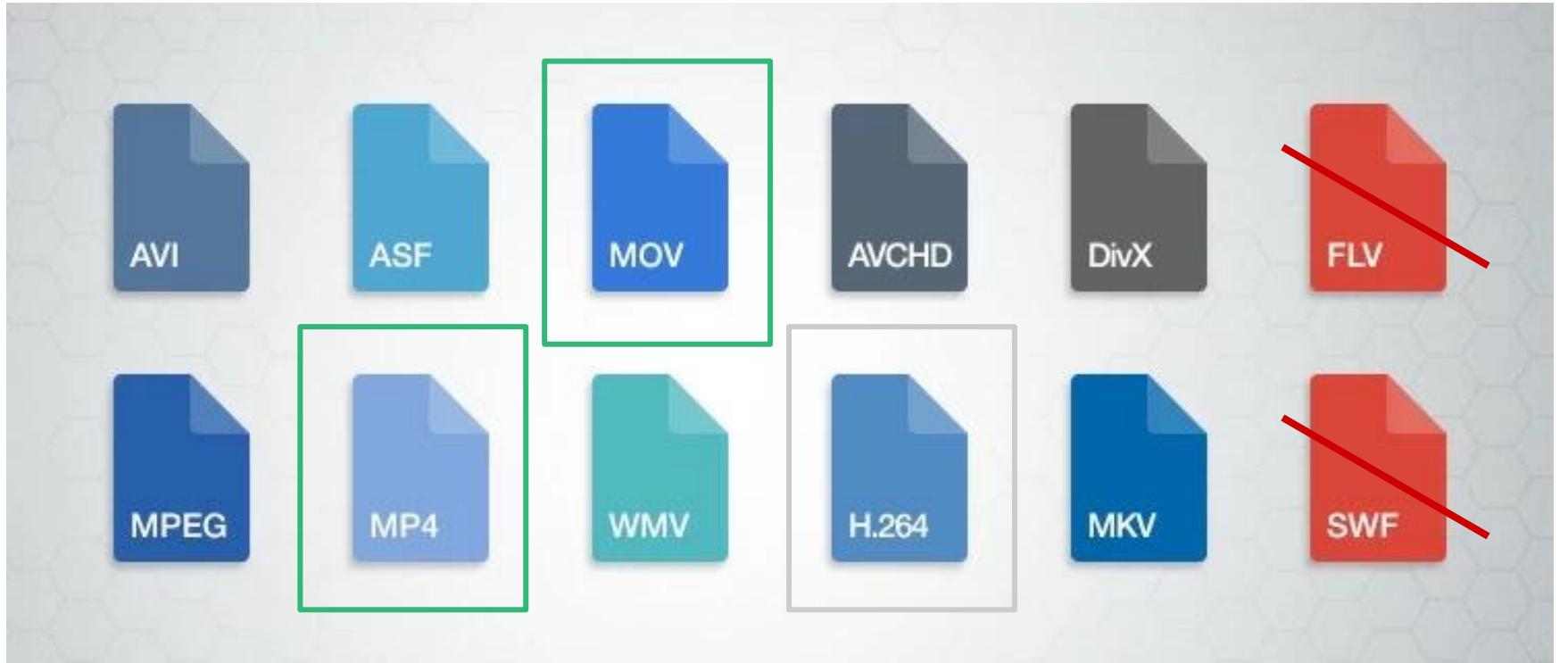
Thank you &  
**Good Luck**

# Video Formats



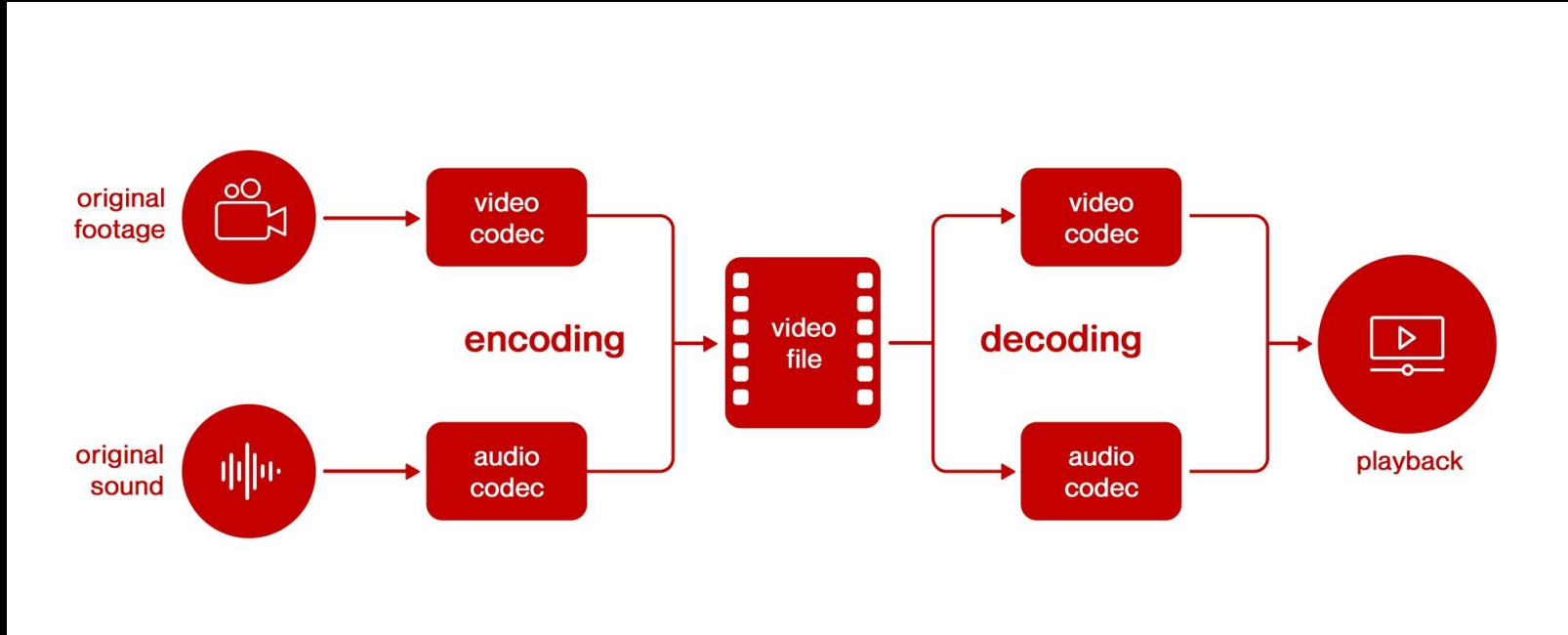
# VIDEO FORMAT





**MP4**

# Video Formats (containers) vs. codecs



# Video Formats (containers) vs. codecs



Video codec:	Audio codec:
H.264, VC-1, Theora, Dirac 2.1, H.263, etc.	AAC, WMA, Vorbis, PCM, etc.

## Formats VS Codecs



**ANY  
QUESTIONS?**

# Homework Review



*Homework from last week:*

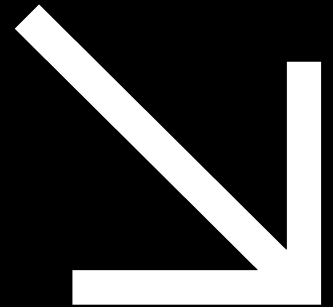
# Turn your posters into digital pieces

Choose: **Website, App, Motion Design, GIF, Game?**

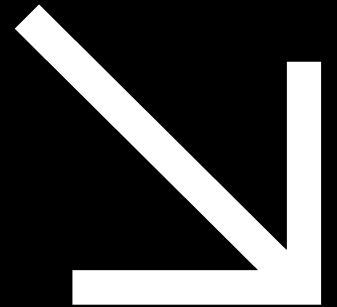
*Continue with:*

1. **Choose your digital product: Website / App / Motion Design / Gif / Game**
2. **Quickly draft your product**
3. **Look for inspirations**
4. **Don't design just yet!**
5. **Document & Write everything!**

[Present next class for feedback](#)



# Homework For next week!



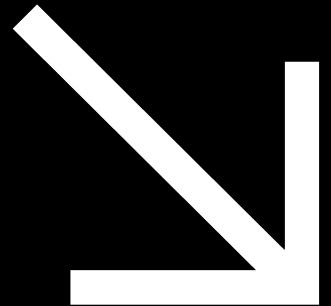
*Homework*

# Design your digital posters!

*Continue with:*

1. **Continue with your plan and move to design**
2. **Develop your concepts**
3. **Design your frame/frames/screens?**

[Present next class for feedback](#)



*Field Trip **NEXT WEEK!**:*



**October 30th**

**9:30 am**

**@Cotton Design in Manhattan.**

**Address: 291 Broadway Suite 702, NYC**

**Dress code: Black & White (optional\*)**

**THANK  
YOU!**

