

Design for Developers

Layout

Introduction

Introduction



lay·out

/'lāˌout/

See definitions in:

All

Printing

Gymnastics

noun

the way in which the parts of something are arranged or laid out.
"changing the layout of the ground floor"

- the way in which text or pictures are set out on a page.
"the layout is uncluttered and the illustrations are helpful"
- the process of setting out material on a page or in a work.
"doing layout for newspapers and magazines"

Similar:

arrangement

geography

design

organization

makeup

shape



Layout is how we arrange content on a page. That page can be physical, like a brochure, or purely digital, like a web page.

Introduction



How you arrange content on a page can make the difference between an engaged visitor who can easily read and navigate your content and someone who gets frustrated and leaves.

Introduction

A good layout:

- Makes important information readily accessible
- Makes it clear how a visitor can navigate
- Engages visitors in seconds

A bad layout:

- Frustrates and confuses visitors
- Causes visitors to leave your site

Introduction

Today we will be talking about visual hierarchy in general and using CRAP design principles to specifically talk about layout.

Remember, CRAP stands for:

- Contrast
- Repetition
- Alignment
- Proximity

We will also talk about rapid prototyping, a method of quickly designing layouts.

Visual Hierarchy

Alignment - Visual hierarchy

Visual hierarchy is the principle of arranging elements to show their order of importance.

If we treat each element as if it is equally important, suddenly every element is screaming at us for attention. If everything is important then nothing is important.

Why do we care? Because if a visitor cannot quickly locate what they're looking for, or what is important, then they will become frustrated and leave your website.

Visual Hierarchy

Pages with a clear visual hierarchy have three traits:

1. The more important something is, the more prominent it is
2. Things that are related logically, are related visually
3. Things are “nested” visually to show what’s part of what

Steve Krug, *Don't Make Me Think*

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Contrast

Contrast

[@Ransegall](#) said in one of his videos that a successful design will have something that's really big, something that's medium, and something that's small.

What that says is that contrast between elements is important.

The most important thing on your page should have the most contrast so it draws the visitor's eye.

Contrast can be achieved with colour, size, shape, and typography.

Contrast

Part of having a clear visual hierarchy is the idea that,

“The more important something is, the more prominent it is. The most important elements are either larger, bolder, in a distinctive colour, set off by more white space, or nearer the top of the page—or some combination of the above.”

Steve Krug, *Don’t Make Me Think*

What is visual hierarchy? It is the principle of arranging elements to show their order of importance and it is a part of mastering layout.

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Contrast

In our example, the first slide features elements that are all the same text size, weight, and colour. There wasn't a lot of contrast between the elements and the slide felt blah; your eye didn't know where it was supposed to look but the button did draw attention. But drawing attention to the button without first explaining the value proposition means people aren't that likely to download kanga.roo.

In the second slide, we've drastically increased the size of the value proposition and our download button (or call to action). The eye is drawn there immediately as it is the largest element on the page. The text is black so it jumps out of the page. The paragraph beneath is a dark grey and only a 16px font. It's legible but not as important as the value prop and CTA.

The links are dark grey and the smallest font size on the page because they are the least important part of the page.

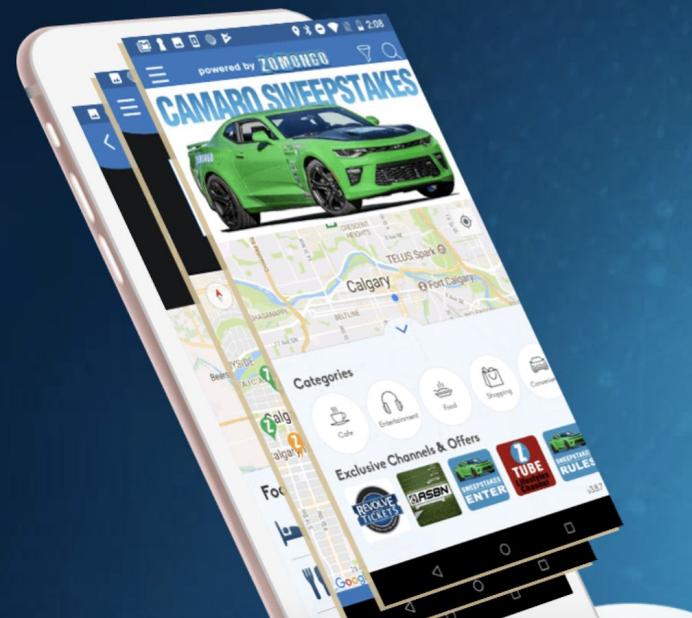
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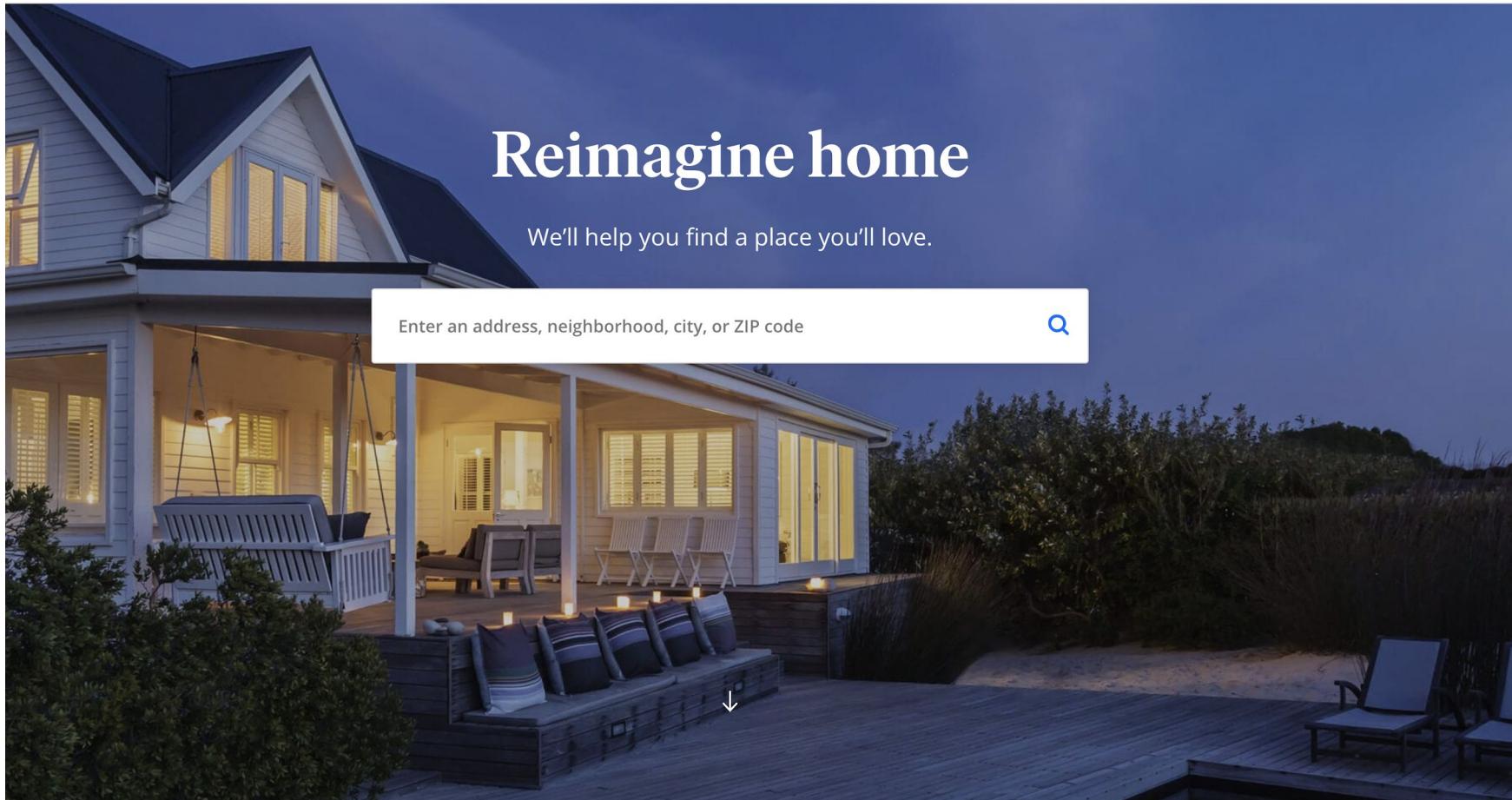
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DISCOVER

Repetition

Repetition

It is human nature to look for patterns and people expect to find them. Why do we look for patterns? Because patterns teach us about expected behaviour. If you click on blue text and it takes you to another webpage, you expect the next blue text you click on to do the same thing.

This is also where web conventions can come into play. In the introduction to this course we talked about how there are certain things that visitors expect to be true based on their experience on other web sites. Things like text with an underline should be clickable or if I want to get to the home page I can probably click on the logo in the header are repeatable across web sites.

Repetition

Across your website we want to see consistency and repetition because it reduces the cognitive load on a visitor. They don't have to think very hard about how to navigate your website or consume your content. (Hopefully they don't have to think very hard about clicking on your CTAs, either!)

Repetition gives a visitor a sense of stability and order and helps them navigate your website.

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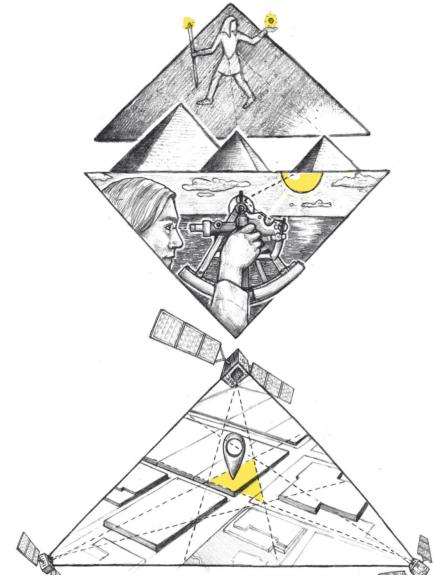
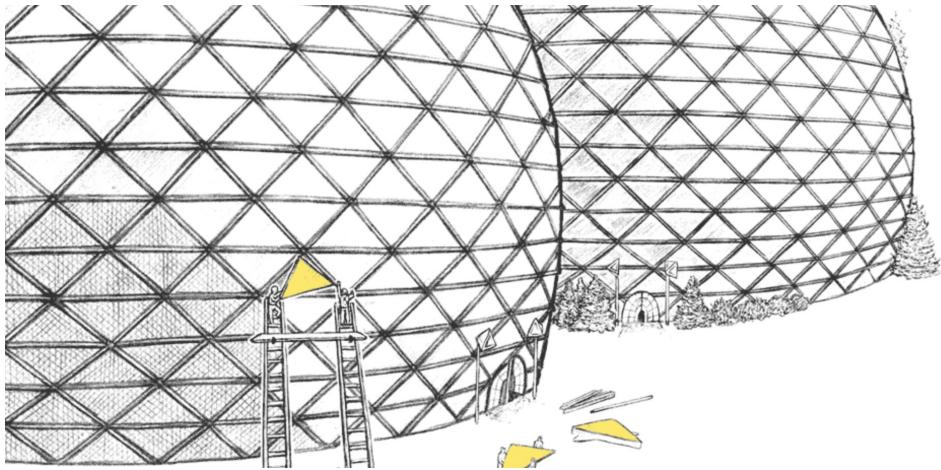
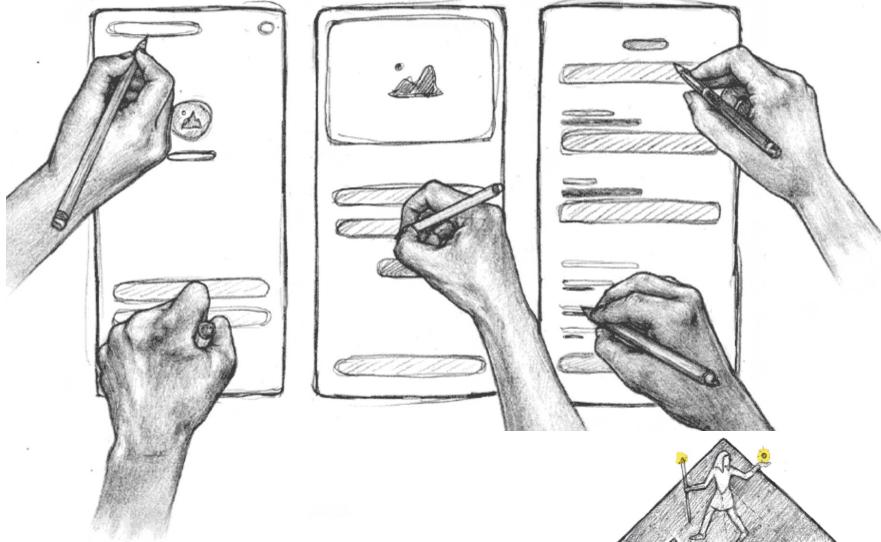
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Repetition

“If you’re not going to use an existing Web convention, you need to be sure that what you’re replacing it with either (a) is so clear and self-explanatory that there’s no learning curve—so it’s as good as the convention, or (b) adds so much value that it’s worth a small learning curve.”

“If you can make something *significantly* clearer by making it *slightly* inconsistent, choose in favor of clarity.”

Steve Krug - *Don’t Make Me Think*

Alignment

Alignment

Alignment is one of the most important CRAP principles when it comes to layouts.

How you line up elements on a page can make a page feel balanced, or unbalanced. Alignment is important to create a strong visual hierarchy. When elements are out of line it IS noticeable.

One of the best tools you can use for alignment is a grid. Grids help you create consistent, well-balanced, harmonious layouts. They help make every element seem interconnected.

Balance

Symmetry and Asymmetry

“Balancing a composition involves arranging both positive elements and negative space in such a way that no one area of the design overpowers other areas.”

Source: [Smashing Magazine](#)

Alignment - Balance

Symmetrical Balance:

- Adds stability and structure to a design and helps create emphasis
- When there is a mirror balance; one side is equal to the other
- Creates a very strong sense of structure
- Use when you want to create a sense of structure, stability, and strong balance

A grid is a great tool to help you achieve symmetrical balance.

Alignment - Balance

Asymmetrical Balance is:

- Smaller visual elements are balanced by larger visual elements on the opposite side
- Used when you want to add a dynamic, or more interesting element to a page
- Used when you want to create a modern design with movement and energy

You can use asymmetrical elements in an otherwise symmetrical design to add visual interest.

Alignment - Balance

In the physical world, balance is easy to understand because we work with it all of the time. Imagine a traditional scale or see-saw.



Alignment - Balance

When we have two items of equal weight on either side of the scale it balances. This is **symmetrical balance**.



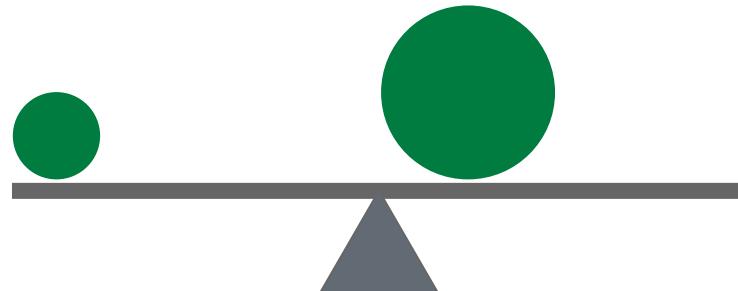
Alignment - Balance

When one item has more weight, we know if one of the balls is made of the same materials but is larger, this doesn't balance so this looks unbalanced.



Alignment - Balance

If we move the larger item closer to the center, it would look balanced again. **This is asymmetrical balance.**



Alignment - Balance

Why do we care about balance? Because humans instinctively can tell when something is unbalanced and it makes us feel uncomfortable.

You can tune into your own feelings of discomfort to help you nudge your design into balance.

Balancing a design means all points of interest will be seen by viewers, no one thing will be drawing all of the attention to it to the detriment of other things.

Yes, you still want something large to draw the eye but it shouldn't overwhelm the other elements.



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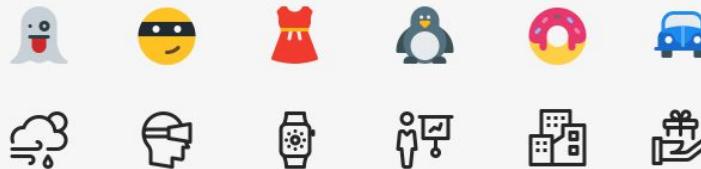
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```
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  height:184px;
  class="jedi">
    CS3 HTML5
    color:#000;
    jQuery
```

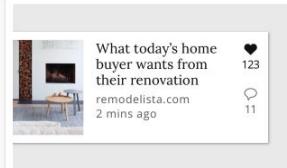
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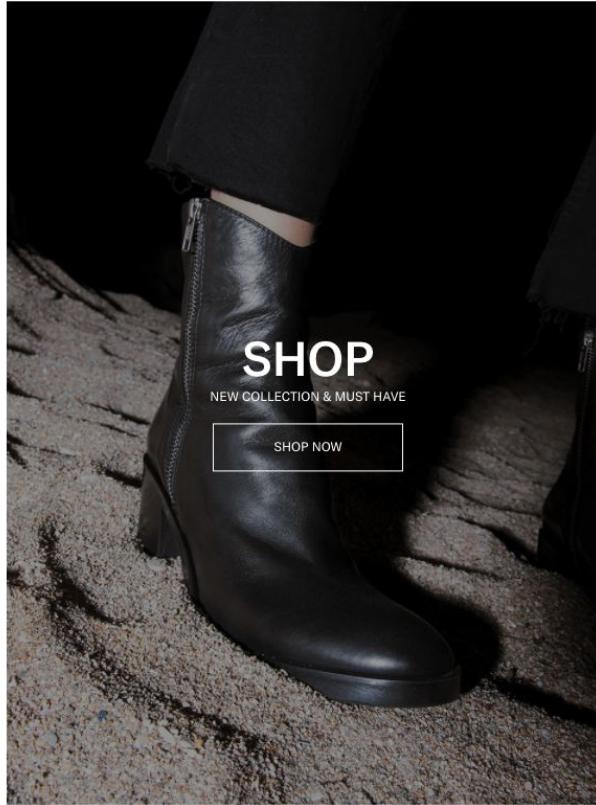
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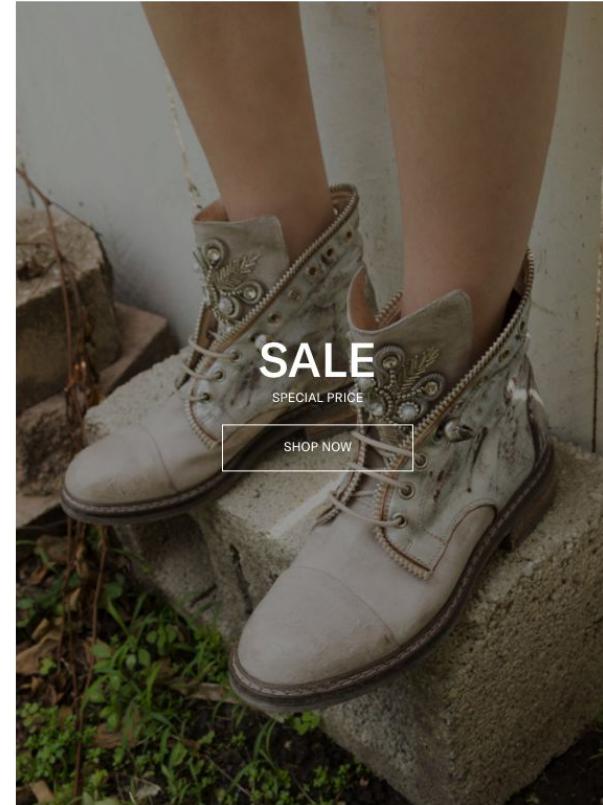
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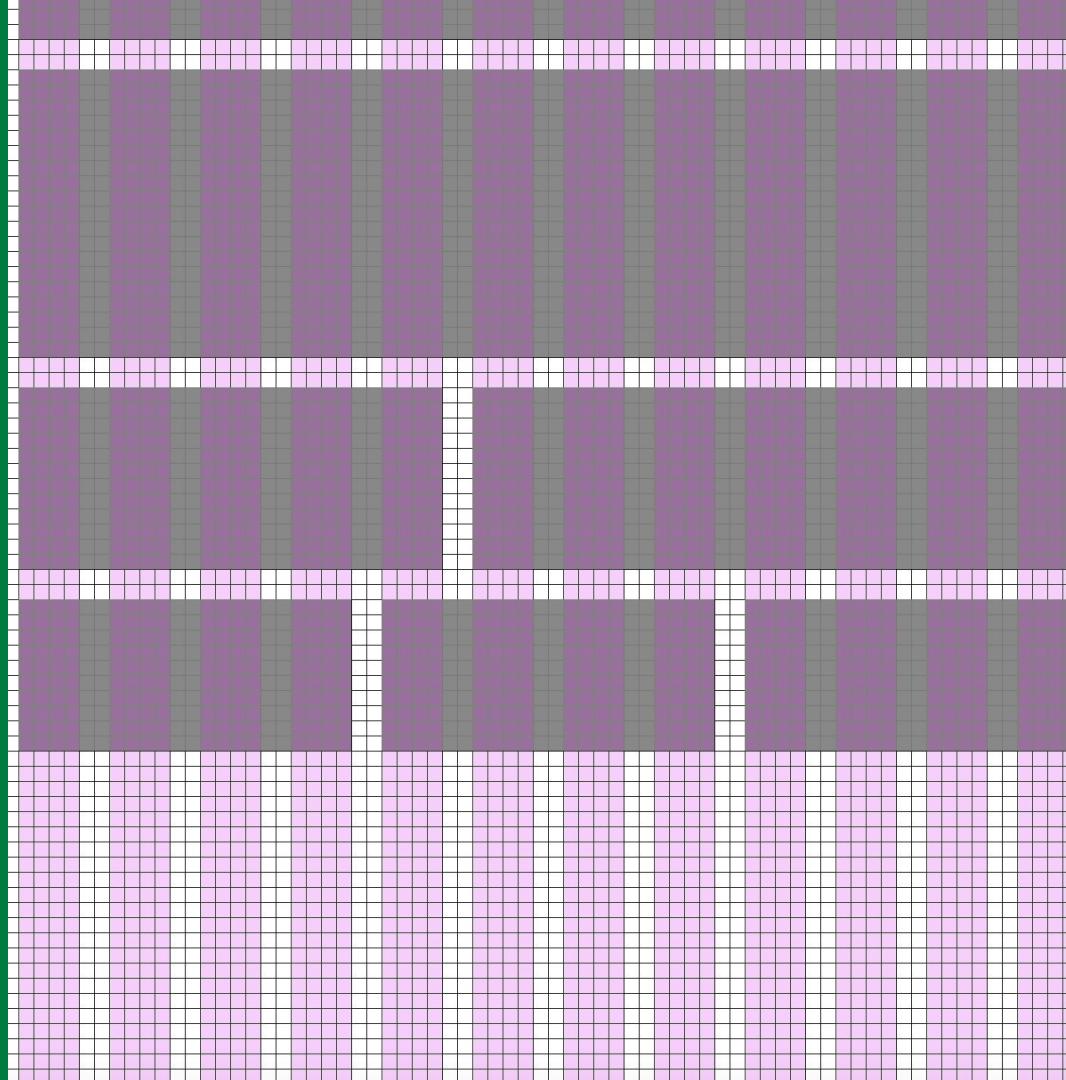
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lé^(t)

^(t)
Latin verb:
To make a
previously
unknown or
secret
information
known to others.

Grids

Alignment



Alignment - Grids

So how can we make sure our alignment looks good? One tool that is very popular is a grid! When we refer to using a grid, we are talking about a *visual grid*, not any specific technology like CSS Grid.

You have seen grids many times in your life! A bookshelf, a spreadsheet, the way a big part of Edmonton is laid out... Those are all grids!

Alignment - Grids

Grids are intersecting vertical and horizontal lines that divide a page/design/whatever into columns and rows. The structure of a grid helps us lay out elements so they line up with one another. The lines of a grid are not meant to be seen in your final design; they are just there to guide you.

Originally, grids were used in print design but it's such a useful tool that it has spread to other disciplines, like web design!

In web design, we tend to use only the columns of a grid.

Alignment - Grids

A grid won't help you out in every situation. If you have circular or curved layouts, a grid might be impossible to use.

Source: <http://vlog.it/>



Alignment - Grids

One dimensional layouts, i.e. a layout that goes only in one direction like a menu across the top of your page, may not need a grid, either. Especially if each element has to have its own width.

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Main	Certificate Achievement	Day, Evenings/Weekends, Online

Source: <https://www.nait.ca/coned/medical-office-administrator-certificate>

Let's take a look at google images. It looks, at first glance, like it is a grid because it has rows and columns, but it isn't! It's a one-dimensional layout!

All



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golden retriever



fluffy



tiny



german shepherd



yorkie



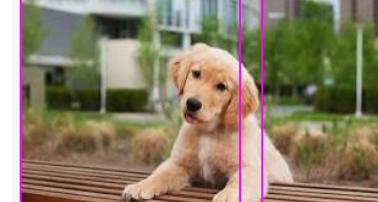
wallpaper

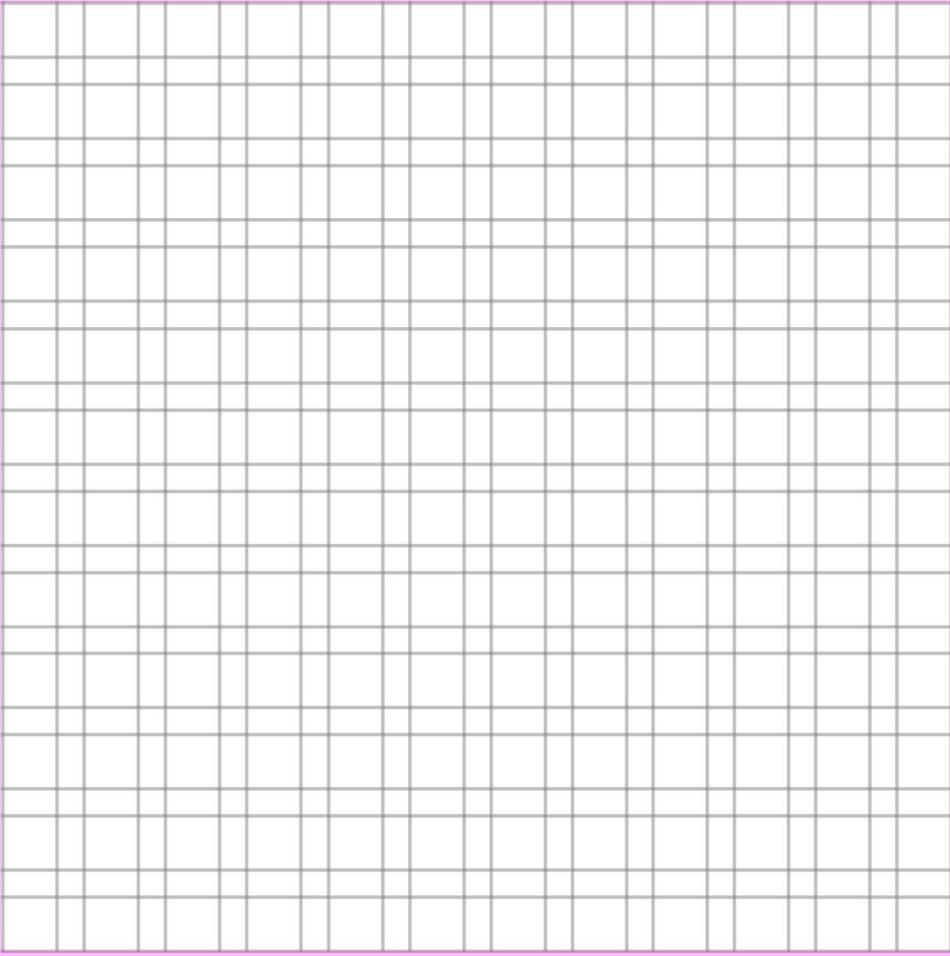


small



white

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iams.com[2-Day-Old Puppy Saved from Pipe ...](#)
people.com



Margins

The space outside of the grid columns and rows.

Sometimes, a region may break out of the grid to cross the margins like when you have an image that goes to the edge of the screen instead of stopping at the edge of the grid.

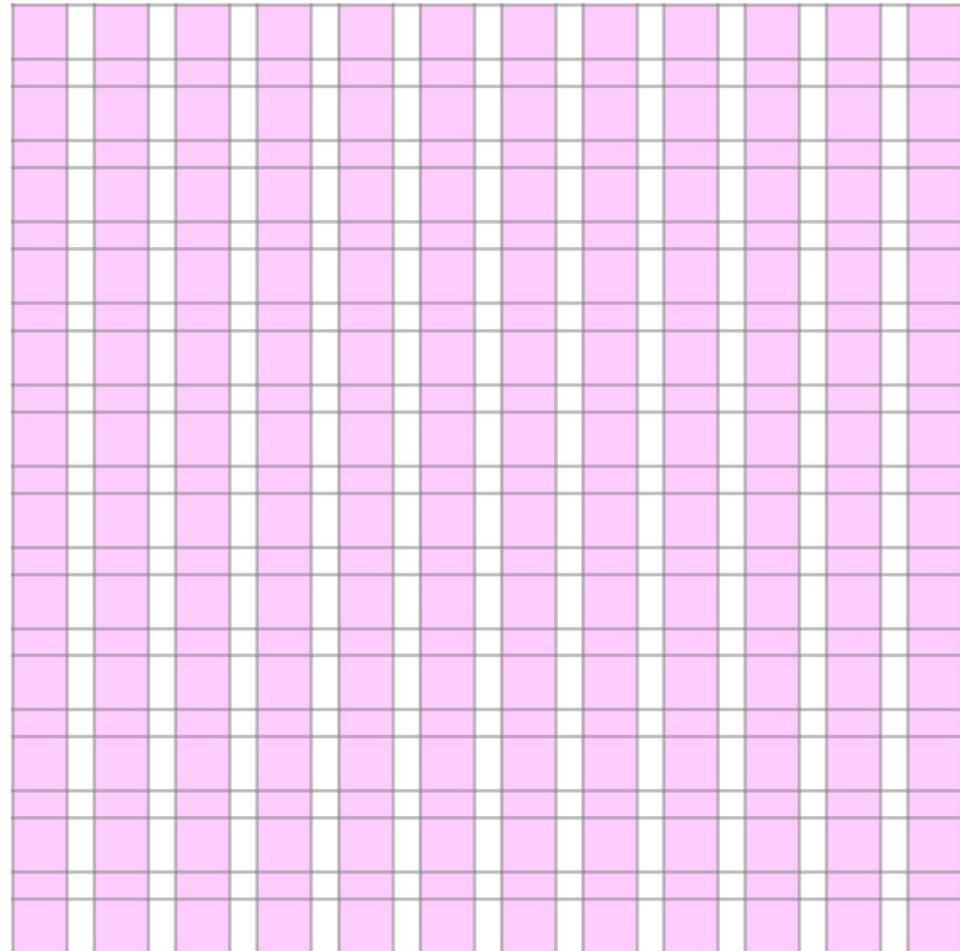
Columns

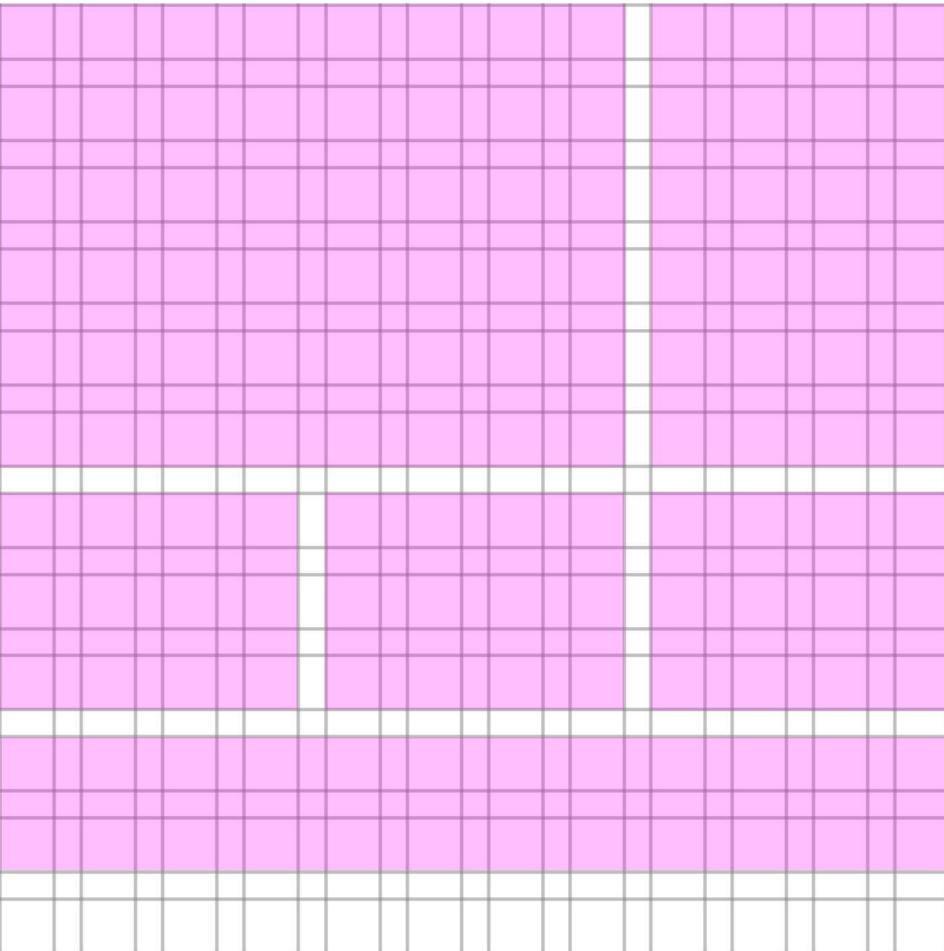
The vertical sections of a grid.

Screens have a fixed width but can have an infinite height, just like the columns in a grid.

A column-based grid is the most popular sort of grid used in web design.

The most popular size is 12 columns.





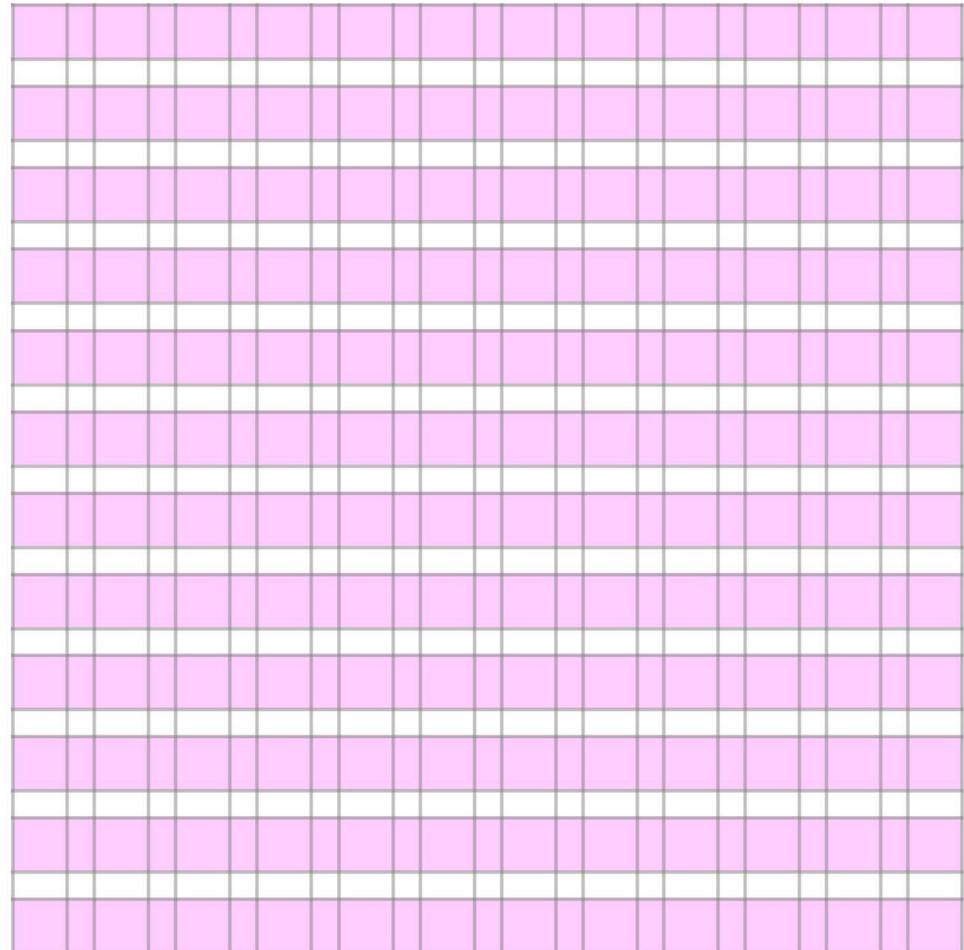
Region or field

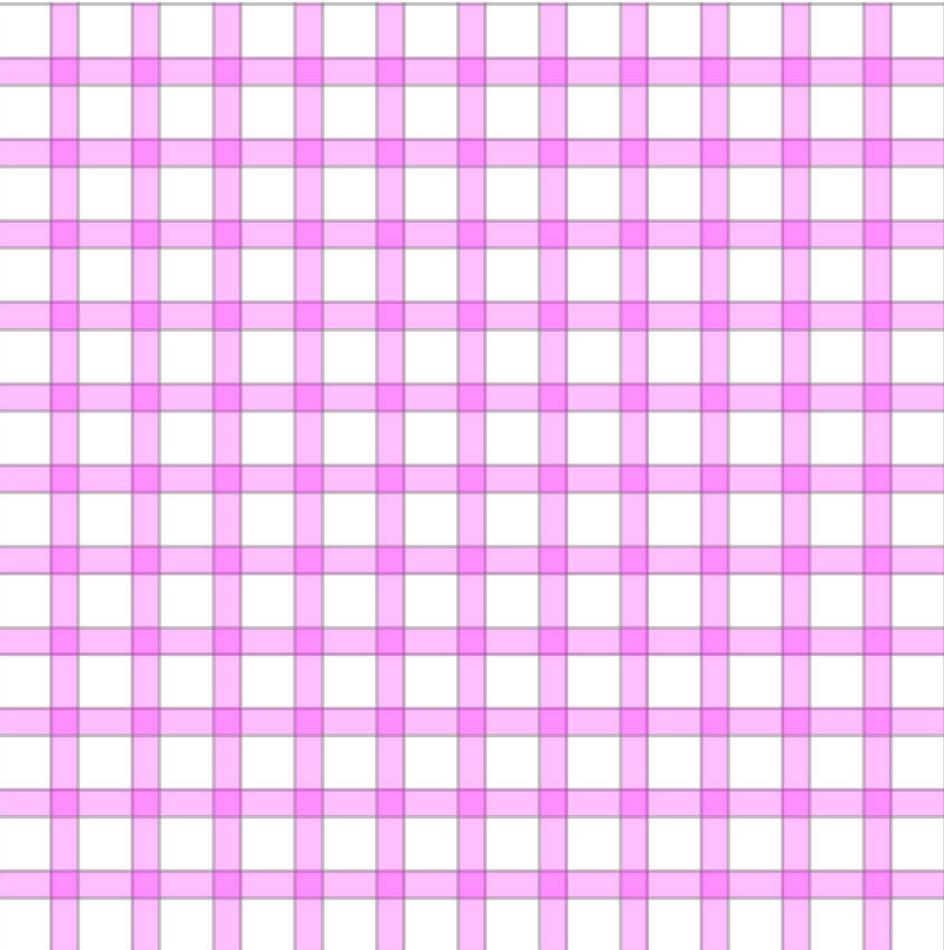
A grouping of columns or rows that form an element of a composition.

Rows

The horizontal sections of a grid.
(Often not used in web design.)

If you have a grid with both rows and columns you have what is called a modular grid.





Gutter

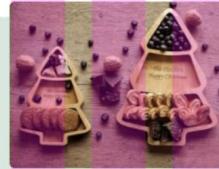
The space between columns and rows.

Both horizontal and vertical spacing, ie. gutters, need to be consistent. It makes content easier to consume and brings consistency to your design.

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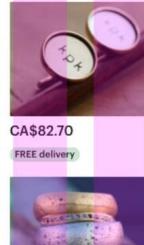
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Alignment - Grids

Benefits of using a grid:

- Faster to lay out elements and get their spacing and margins correct
- Provides structure and stability because elements line up nicely in a grid
- Creates consistency
- Makes it easier to code

Proximity

Proximity

Part of having a clear visual hierarchy is:

“Things that are related logically are related visually. For instance, you can show that things are similar by grouping them together under a heading, displaying them in the same visual style, or putting them all in a clearly defined area.”

Steve Krug, *Don’t Make Me Think*

When you have a good visual hierarchy, much of the work of processing what is on a page is done for us.

Proximity

Empty space is not wasted space. It lets the design breathe.

Space between elements helps make things more legible and creates rhythm.

Space and proximity creates natural groupings of elements.



Proximity

Economy

Edmonton is the major economic centre for northern and central Alberta and a major centre for the oil and gas industry. As of 2014, the estimated value of major projects within the Edmonton Metropolitan Region was \$57.8-billion, of which \$34.4-billion are within the oil and gas, oil sands, and pipeline sectors.

Edmonton traditionally has been a hub for Albertan petrochemical industries, earning it the nickname "Oil Capital of Canada" in the 1940s. Supply and service industries drive the energy extraction engine, while research develops new technologies and supports expanded value-added processing of Alberta's massive oil, gas, and oil sands reserves. These are reported to be the second-largest in the world, after Saudi Arabia.

Much of the growth in technology sectors is due to Edmonton's reputation as one of Canada's premier research and education centres. Research initiatives are anchored by educational institutions such as the University of Alberta (U of A) as well as government initiatives underway at Alberta Innovates and Edmonton Research Park. The U of A campus is home to the National Institute for Nanotechnology.

Economy

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Proximity

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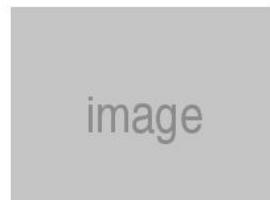
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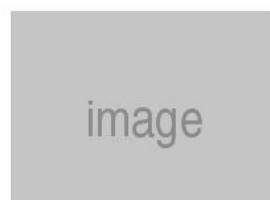
Proximity



This is a caption



This is a caption



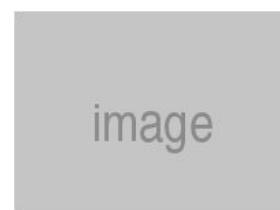
image

In this example, having equal space between the caption and the images made is difficult to tell which image the caption belonged to.

When we tightened up the space between the caption and it's image it has become more obvious which it belongs to.



This is a caption



This is a caption



image

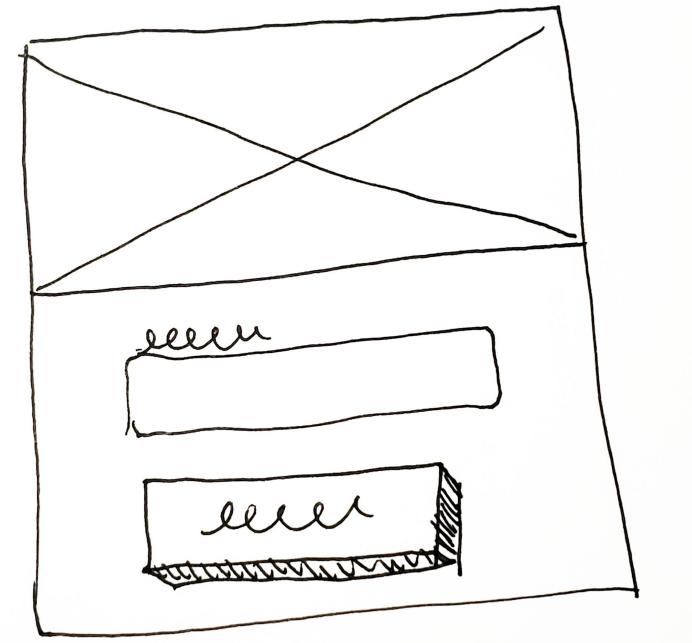
Rapid Prototyping

Rapid Prototyping

The fastest way to iterate through design ideas is with rapid prototyping.

When I design something, be it a web page or just a component, I always reach for paper and a pen before I code anything.

What are the advantages of prototyping with pen and paper?



Rapid Prototyping

Advantages:

- **Iteration is fast** - you should only take a minute or so per idea
- **It doesn't cost very much** - paper and ink isn't very expensive; unlike many digital tools that require licences
- **There isn't much commitment** - If you don't like something throw it out. You didn't invest a lot of time or effort into it so it's easier to let go of it
- **Honest feedback** - Because you didn't put a lot effort into it, people are more likely to be honest with their feedback about your layout
- **Anyone can do it** - Can you draw rectangles? Draw loops? You're good to go!

Rapid Prototyping

Drawbacks:

- You have to use your imagination because these are not fully formed designs.
This can be hard for some people to do.
- With paper designs it's hard to show people unless it's in person or...
- You have to transfer your paper designs to digital somehow

Rapid Prototyping

Some basic guidelines:

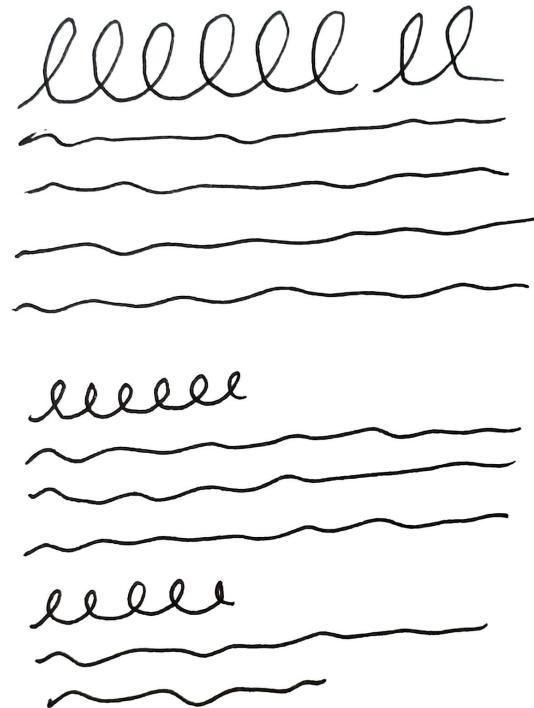
- Use a pen, not a pencil
- Do not create polished prototypes, keep it loose and rough
- Use colour sparingly but intentionally and be consistent! If you decide that links are in blue pen, all links should be in blue pen. Or perhaps you add colour with a highlighter? You don't have to get fancy.
- Use consistent imagery

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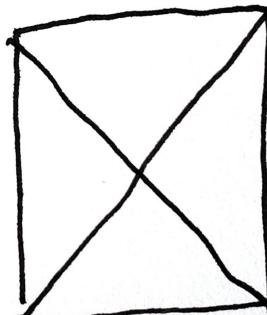
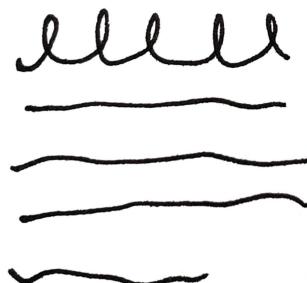
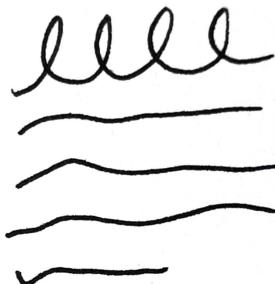
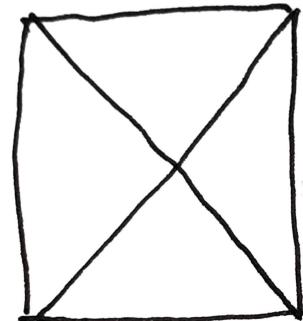
Headings and Text

Headings can be illustrated by making loopy loops. You don't want to use actual text as these prototypes are meant to be quick and conceptual.

Text can be illustrated with lines; either straight or wavy.



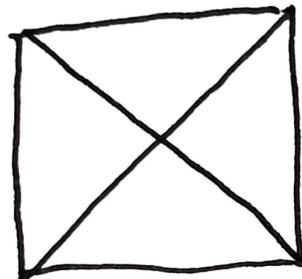
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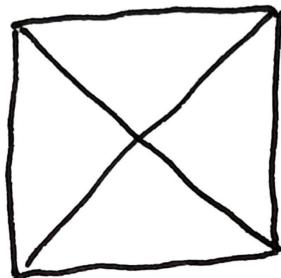
Images

Images can be represented by squares and rectangles with an X drawn through it.

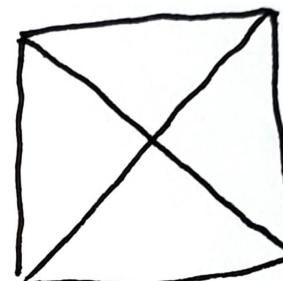
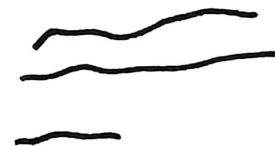
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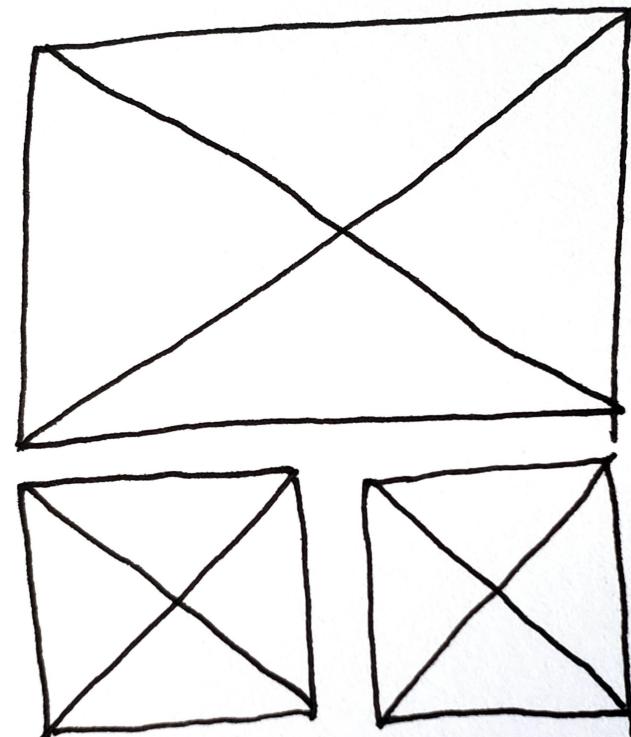
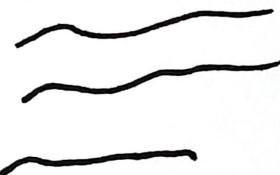
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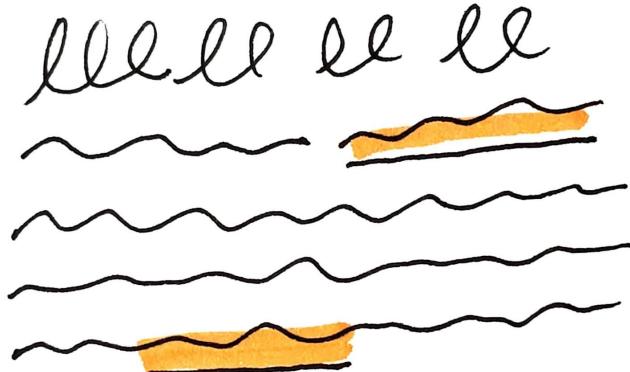
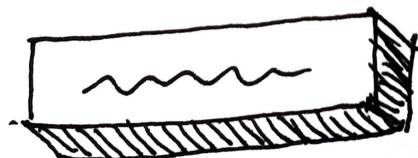
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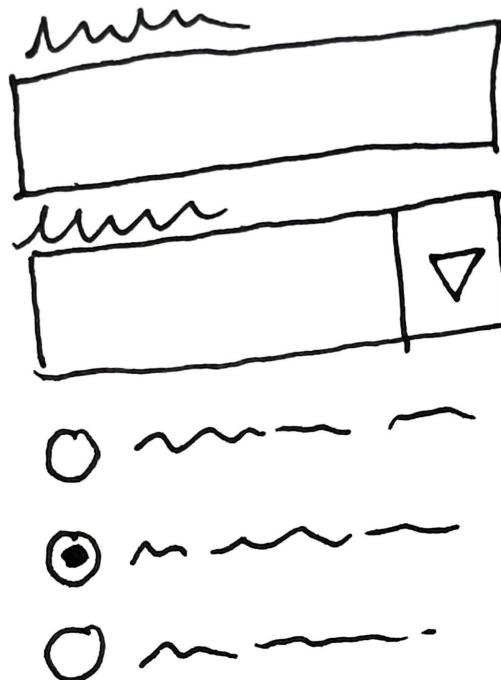
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Hyperlinks & Buttons

Hyperlinks can be underlined or highlighted. Buttons are 3-D with a squiggle of text.



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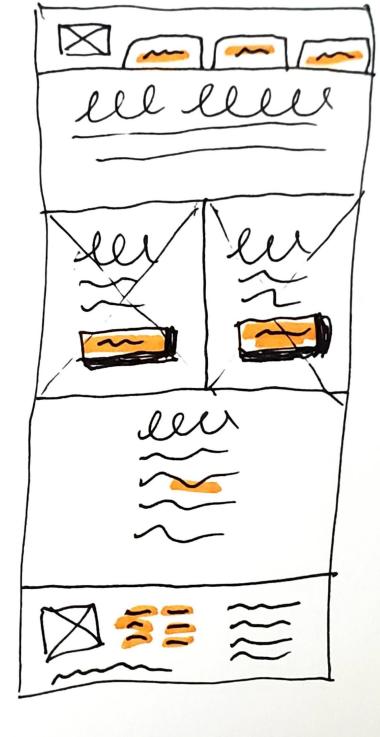
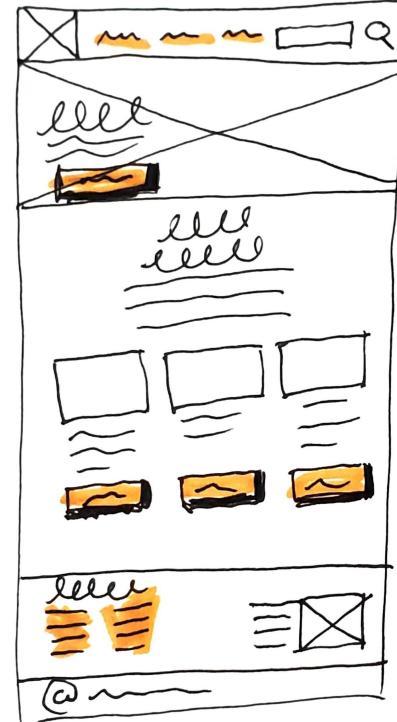
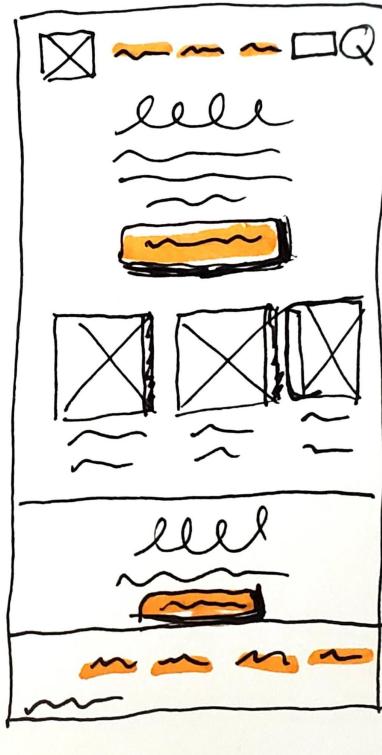
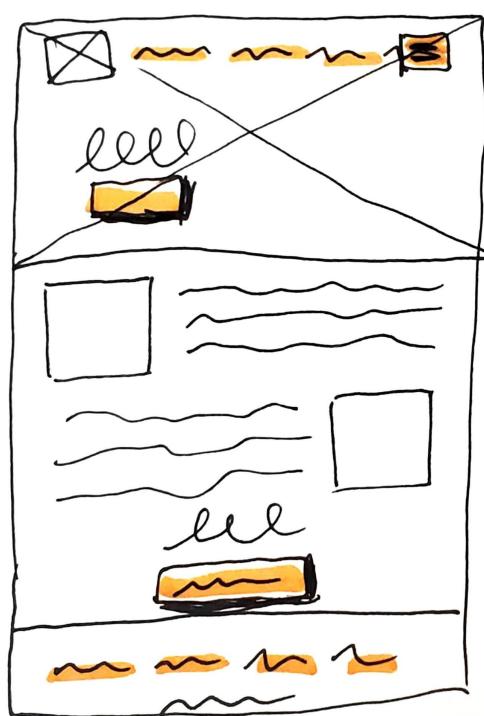


Form Fields

Labels are a squiggly line above a rectangle which represents an input field. Select boxes have a carat on the right. Radio buttons and checkboxes are either circles or squares next to squiggles for labels etc.

Think of the simplest way to represent form fields.

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Once you have a bunch of iterations, you can pick and choose the elements you liked the best and combine them into a composite layout!

